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View of the Temple of Horus at Tell Edfu
(Photo: G. Marouard, Tell Edfu Project).

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INTRODUCTION

CHRISTOPHER WOODS

May of 2019 marked the one hundredth anniversary of the Oriental Institute, commencing the year-long celebration of our Centennial. A century ago, two pivotal events in May 1919 ushered the OI into existence. The first was the May 2nd letter from John D. Rockefeller Jr. to James Henry Breasted approving an initial five-year grant for an Oriental Institute under Breasted's leadership. The second was the May 13th vote of the University Board of Trustees that made the OI a reality. We are the stewards of what Breasted created, the beneficiaries of his vision, ambition, and persistence, and his legacy of intellectual innovation lives on at the OI today. As revealed by the contributions in this 2018–19 Annual Report, our work assumes an extraordinary array of forms. We conduct fieldwork projects that shape archaeology, and we study ancient settlements and their landscapes through state-of-the-art satellite and digital imaging methods. Our linguistic research furthers the decipherment of ancient languages, and we produce dictionaries that serve as cultural encyclopedias for understanding ancient civilizations. We record, document, and preserve imperiled cultural heritage. The OI was founded with a determination to look where others did not, and we continue to offer new ways of thinking about what connects us and why, remaining resolute in advancing our knowledge of the ancient Middle East.

From 1948 to 1990, the OI conducted a robust program of archaeological and philological research at Nippur. After almost three decades of hiatus following the outbreak of the first Gulf War, fieldwork at Nippur resumed in April 2019. Abbas Alizadeh was appointed as the director of the Nippur archaeological expedition after McGuire Gibson retired in 2018. The dig house, which was largely reclaimed by the desert in the interim, was restored and furnished, and archaeological fieldwork conducted in two areas on the western mound unearthed monumental Parthian architecture and a small late Sasanian house. The 2019 season of excavations was primarily an exploratory one to assess the working conditions and feasibility for major exploration at the site. We are now poised to expand our fieldwork in 2020, which will include the new OI archaeological concessions for the nearby sites of Tell Drehem (ancient Puzrish-Dagan) and Tell Dlehem (likely ancient Tummal)—both of which were of major importance in the late third millennium BC. In Egypt, Nadine Moeller and Grégory Marouard continue the Tell Edfu Project, which provides enormous potential for increasing our understanding of ancient urbanism in Egypt. This past year, the sensational discovery of an early New Kingdom urban villa, belonging to a high-ranking elite family, offered the opportunity to investigate a fully preserved domestic shrine dedicated to ancestor worship. This shrine is one of the earliest examples of such an installation excavated so far from the New Kingdom and the first archaeological example outside of the Theban area to be discovered in many decades.

The Epigraphic Survey at Chicago House in Luxor, Egypt—internationally recognized for its detailed, highly accurate drawings of reliefs and inscriptions in Theban temples and tombs—completed its ninety-fifth season this year. This flagship field project continues its commitment to the preservation of Egypt's cultural heritage. The Chicago House team is also leading the way in the development of cutting-edge digital epigraphic recording and publication, including the launch of the [digitalEPIGRAPHY](#) website. Being completely open-ended, this website is capable of changing as quickly as the field does, with instant access to new computerized drawing methods and equipment as the team learns and tests them. Current projects of the Epigraphic Survey include the Luxor

INTRODUCTION

Temple Blockyard Fragment Database, the Luxor Temple Blockyard Photogrammetric Documentation Project, the Facsimile Documentation of Luxor Temple Imperial Roman Frescos, the Medinet Habu Graffiti Project, the Western High Gate Survey, Database, and Epigraphic Documentation, and the TT 107 Documentation Project. Also, in terms of our philological projects, the Chicago Hittite Dictionary project, led by Theo van den Hout and Petra Goedegebuure, reached an important milestone in completing the fourth and final fascicle of the letter Š.

The staff of the OI Museum, led by Deputy Director and Chief Curator Jean Evans, had a remarkably productive year focused on completing the Gallery Enhancements Project (GEP). While beyond the scope of this annual report, the GEP was completed on schedule in September 2019, and special viewings for the reinstalled galleries were offered at the OI Centennial Gala and at a subsequent public open house. Through the GEP, the OI Museum realized new ways of engaging with visitors. This included bringing some five hundred objects out of storage that had never been on display, including those for a new exhibition area devoted to the Islamic world, the return of a major relief from Persepolis, which had been on long-term loan to the Museum of Fine Arts in Boston since the 1930s, and highlighting the fact that our collection was mainly excavated by OI archaeologists. The GEP was initiated in 2014 and, over the course of the project, some fifty-five new cases as well as additional existing cases were curated, designed, and installed. The GEP was made possible through the generosity of a donor who initially wished to remain anonymous. Dubbed “Gilgamesh,” we were able to reveal the identity of the GEP donor at the OI Centennial Gala: Howard E. Hallengren, who was awarded the 2019 James Henry Breasted Medallion for his generosity and for more than four decades of philanthropic support and volunteer service.

We were deeply saddened by the loss of members of our OI community, including Miguel Civil, professor emeritus of Sumerology and my predecessor at the OI, and Lanny Bell, former Epigraphic Survey director at Chicago House, Luxor. Each will be sorely missed.

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 on the eve of our Centennial.

IN MEMORIAM

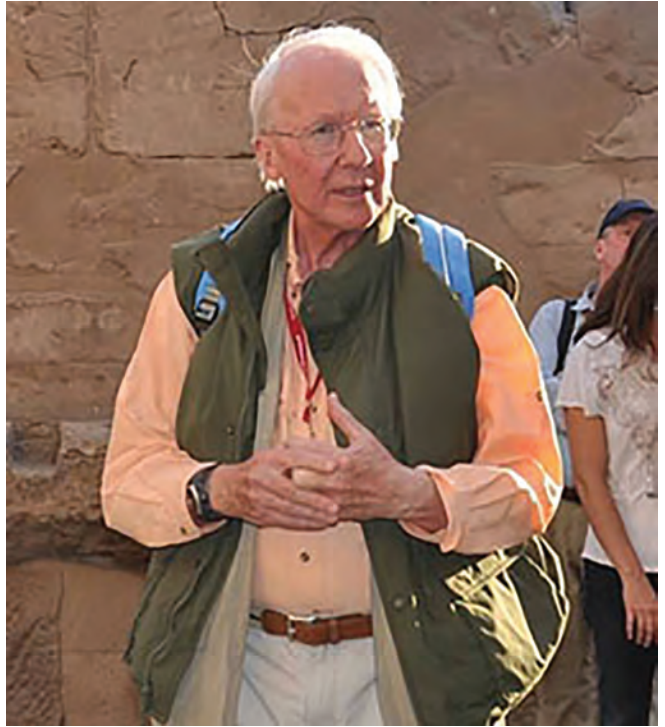
LANNY DAVID BELL 1941–2019

by Peter Lacovara

Lanny David Bell was born on April 30, 1941 in Fort Dodge, Iowa. As a student in public high school he became captivated by a class in Latin and that sparked a life-long interest in ancient languages. Egyptian hieroglyphs particularly fascinated him and after graduating high school in 1959 he enrolled in the University of Chicago to study under John A. Wilson. He continued his graduate education at the University of Pennsylvania studying under visiting professor Jaroslav Černý and David O'Connor. While working in the University Museum he met fellow student Martha Rhoads Bell whom he married in 1968. While at Penn he taught and worked on the University Expedition to Abydos, and also instituted a field project to return to the site of Dra abu el Naga, that had been first excavated by Clarence Fisher in 1921–23. He excavated and conserved a number of tombs of Ramesside officials including those of Nebwenenef (TT157) and Bekenkhons (TT35).

His dissertation for the University of Pennsylvania was entitled “Interpreters and Egyptianized Nubians in Ancient Egyptian Foreign Policy: Aspects of the History of Egypt and Nubia” and was supervised by David O'Connor, James Muhly, and George Hughes. Hughes recommended Lanny for the position of director of the Oriental Institute, University of Chicago’s Epigraphic Survey in Luxor headquartered at “Chicago House.” During his tenure in Luxor from 1977 to 1984, Lanny and Martha raised the profile of the facility welcoming and supporting scholars visiting and working in Luxor. Martha supervised the running of the house and the library along with the assistance of May Trad of the American Research Center in Egypt’s Cairo Office. He also hosted the imminent Egyptian Egyptologist Labib Habachi as resident scholar. Lanny actively fundraised to establish endowments for the Epigraphic Survey and supervised the beginning stages of two major publications on the reliefs and inscriptions of Luxor Temple. He also authored a number of important books and articles including studies on Theban temples, the cult of the deified Tutankhamun, Divine Kingship, the royal *ka*, and epigraphy.

In 1984 Lanny returned to Chicago as associate professor of Egyptology, teaching courses in ancient Egyptian literature, the literature and politics of the Middle Kingdom, wisdom literature,



Old Egyptian, Late Egyptian, and Coptic. He also supervised a number of PhD dissertations and was a popular member of the faculty. Martha was killed in a car accident in 1991 soon after finishing her dissertation on Bronze Age Aegean Pottery found in Egypt. Lanny married Jill Louise Baker in 1994 and took early retirement for Chicago in 1996.

As an independent scholar Lanny moved to Old Saybrook, Connecticut, was appointed a lecturer in Egyptology at Brown University, and also taught at the Rhode Island School of Design and Columbia University. He was sought after as a speaker, particularly by the Archaeological Institute of America, and as a tour leader bringing numerous groups to Egypt. His vast knowledge as well as his kindness and sense of humor charmed his colleagues and students as well as the general public. A *festschrift* in Lanny's honor, the knowledge of which gave him great pleasure in his final months, is being prepared now as a memorial volume.

MIGUEL CIVIL 1926–2019

by Christopher Woods

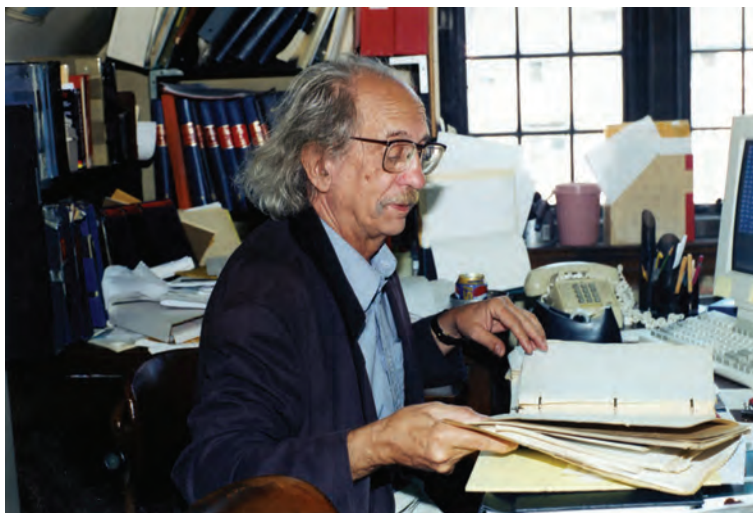
Miguel Civil's scholarly contributions are simply monumental—more than any other scholar, he shaped the modern, post-WWII study of Sumerology. Our understanding of Sumerian writing, lexicography, grammar, literature, agriculture, and socio-economic institutions all bear his deep imprint. He was a mentor, teacher, and friend to two generations of Sumerologists, Assyriologists, and archaeologists. It remains the greatest honor of my career to have come to Chicago to replace Miguel after he retired in 2001.

Born outside of Barcelona in 1926 and trained in Paris, Miguel came to the US in 1958 to take the position of associate researcher under Samuel Noah Kramer at the University of Pennsylvania. He joined the faculty of the University of Chicago in 1964. Even after retiring in 2001, Miguel remained the field's leading light, publishing two books (*The Early Dynastic Practical Vocabulary A* [Archaic HAR-ra A] [Rome: Missione archeologica italiana in Siria, 2008], and *The Lexical Texts in the Schøyen Collection* [Bethesda, Maryland: CDL Press, 2010]), as well as a raft of seminal articles during these years.

Up until relatively recently, it was not uncommon to see Miguel in the halls of the OI. He would invariably appear late in the day to check references before the archives closed, and catch up with Professor Matt Stolper and me in our neighboring third-floor offices, eager to hear the latest OI news and, always, to talk about his research and his most recent breakthrough.

The article he published in 2013 on the so-called Tribute List in the *Journal of Cuneiform Studies* represents a highlight not only of his post-retirement period but of his entire career, a culmination of his thinking on two of his great intellectual passions: Sumerian lexicography and writing. It is a work of stunning insight and erudition—a *tour de force* that at once exemplified his brilliance and showed Miguel to still be at the very pinnacle of his intellectual powers as he approached ninety.

I remember clearly the genesis of that article. A couple of years before its appearance in print, he stopped me in the halls and had one cryptic sentence for me—uttered without preamble or context, as was often his custom—and intoned in his distinctive, thickly-accented gravel voice, “I’ve found Semitic in the Uruk texts,” and then he walked away. For those of us who do this work, it was a truly profound statement, full of linguistic, social, and cultural implications for our understanding of early Mesopotamia at the time of the world's first cities. He did not mention this again to me, and it was only when the article appeared two years later that I fully understood what he meant. Encounters like this were not uncommon with Miguel and, in fact, were a defining characteristic of our interactions together, and I’m sure the same is true for others as well.



It is important to point out that Miguel's greatness was not simply in the mastery of the material, but in what he was able to do with the same material and data we all have access to. He just had this unfathomable ability to know more than the data at hand allowed—he somehow knew more than he had any right to know. Time and again I would ask myself, "How can he possibly know that?" This ability was something of perpetual amazement to me—it seemed like an almost

magical or supernatural power. But in the end, I think it was simply that quality we call genius.

Certainly, every Sumerologist should read his entire oeuvre, paying close attention to even the smallest statements and details. Miguel was never one to belabor a point. And so often his most profound insights—a conclusion perhaps worthy of a monograph in itself—could be stated in the most laconic terms and buried in a footnote, leaving you thirsting for more. And his conversation about the work could be much the same—with a single sentence, he could change the course of an idea you had been working on for months.

As I remarked to his obituary writers, for the *Washington Post* and elsewhere, Miguel quite literally knew Sumerian better than anyone since the early centuries of the second millennium BC. And it was always hazardous to your mental health to disagree with him. Doing so could leave you spiraling into self-doubt no matter how deeply entrenched your position was. There was always the fear that somewhere quivering on the horizon was the realization that he was right after all.

Miguel was supremely confident and self-assured in his knowledge, but at the same time he was utterly uninterested in self-promotion and had little use for accolades. Consequently—and quite unfortunately—he was vastly underappreciated in the field and even here at the University of Chicago. His work was highly technical, detailed, complex, and written for the Sumerologically initiated. Even to many Assyriologists in our field who focus on the later periods, it can be difficult to explain and convey the massive significance of his contributions.

But it is easy to focus exclusively on his brilliance, to be dazzled by it and lose sight of the entirety of the man. Miguel was unstintingly generous and kind; he was a great raconteur; he was funny and had a searing wit, which could often be irreverent. He enjoyed the simple things—casual conversation with friends over a few beers or even discussing power tools, a topic of which he curiously had an advanced knowledge—but which I always figured must somehow be connected to his interest in Sumerian material culture.



PROJECT REPORTS

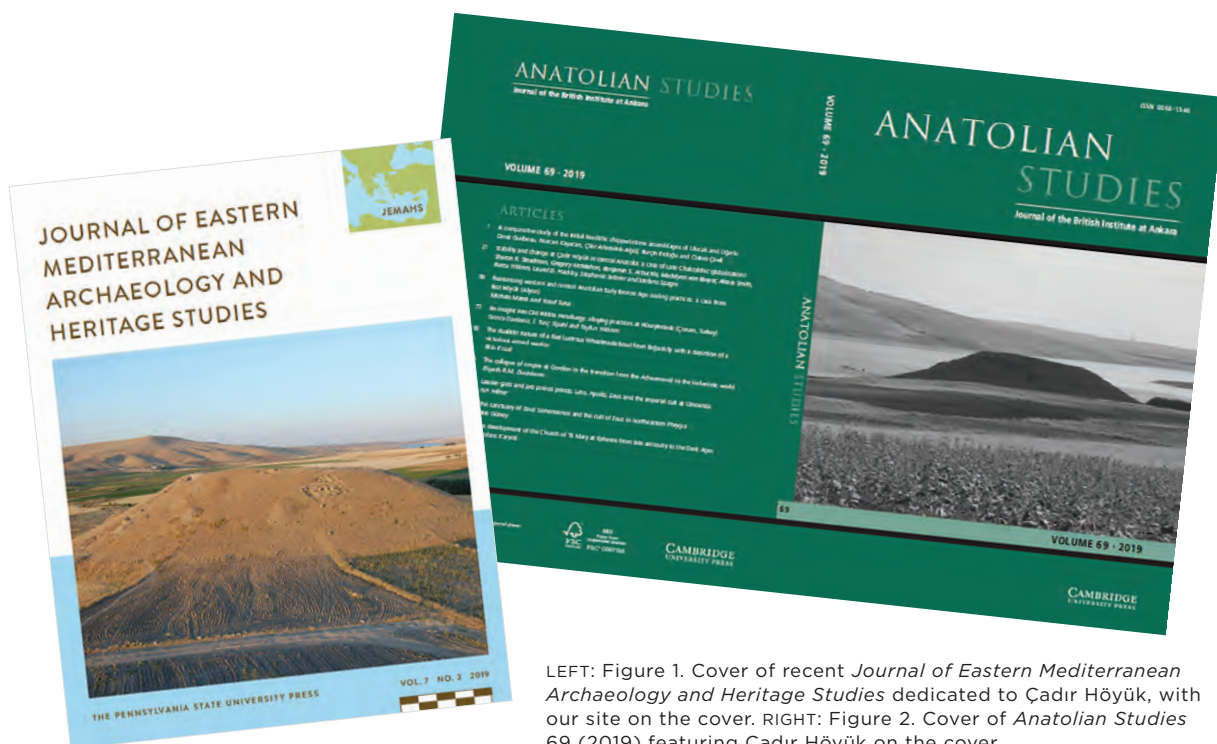


OVERLEAF: Image from
the Oriental Institute
Nubian Expedition (OINE)
Publication Project report.

ÇADIR HÖYÜK

GREGORY McMAHON

The 2018 season marked twenty-five years of research at Çadır Höyük. The season saw forty-seven researchers working in eighteen 10 × 10 m trenches, spanning the Late Chalcolithic through the Byzantine periods. With this much work taking place over a nearly two-month season, it would take many pages to describe the terrific research and discoveries from the 2018 season. A very brief summary here includes the successful phasing of the Late Chalcolithic expanse, the discovery of a Byzantine chapel on the mound summit, and the continuation of the Hittite period major casemate wall, discovered on the eastern slope Step Trench in years past, now revealed on the northern slope. Fortunately, the Çadır team had many publication opportunities to report, in detail, on the 2018 season. Readers can turn to these for details on the team's exciting discoveries. These include "The 2017–18 seasons at Çadır Höyük on the North Central Plateau," in *Anatolica* 45 (forthcoming); "Chalcolithic, Iron Age, and Byzantine Investigations at Çadır Höyük: The 2017 and 2018 Seasons" in *The Archaeology of Anatolia, Volume III*, eds. McMahon and Steadman (to be out by December 2019), and an entire issue of the *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 7, no. 3 (fig. 1, Çadır on the cover). In addition, an important publication about the Chalcolithic occupation at Çadır was recently published in *Anatolian Studies* 69 (2019). Especially exciting about this publication is that Çadır Höyük was also featured on the front cover of this journal (fig. 2)! We hope readers will turn to these publications to learn about our numerous activities and discoveries in the 2018 season.



LEFT: Figure 1. Cover of recent *Journal of Eastern Mediterranean Archaeology and Heritage Studies* dedicated to Çadır Höyük, with our site on the cover. RIGHT: Figure 2. Cover of *Anatolian Studies* 69 (2019) featuring Çadır Höyük on the cover.

The 2019 Çadır season was devoted to study. A small team spent five weeks carrying out material culture analyses and a field survey in order to answer some of the questions remaining from the 2012–18 seasons.

One of the season's goals was to thoroughly catalog and photograph our massive ground stone and glass collections. Gregory McMahon and Sharon Steadman took on the ground stone project, spending many afternoons in the depo examining and classifying the enormous ground stone collection (fig. 3). These were then individually photographed by Gregory (fig. 4). The result is an invaluable database that was featured in a recent presentation at the American Schools of Oriental Research. After the ground stone, Gregory took on the glass project himself. While these had been recorded in our registry, much of the glass had not been sufficiently described or photographed. Gregory compiled a complete database of all our glass and photographed all diagnostic and many non-diagnostic pieces. As our compilation of Byzantine occupation data proceeds for publication, this database will prove enormously valuable.

Sharon Steadman carried on with her study of Late Chalcolithic ceramics in an effort to fine-tune the descriptors for this millennium-long assemblage. Another project was carried out by Emrah Dinç, from Bilkent University, on Çadır's collection of spindle whorls and loom weights. Once again, the data from this work was presented at the recent ASOR conference, aiding in our understanding of

work areas across the settlement and periods.

Two other projects were carried out by undergraduate students who have been part of the Çadır team in previous years. Katie Titus, a senior at the University of New Hampshire, won a grant at her university to carry out a photogrammetry project on Çadır's human remains. She examined ten skeletons and was able to build complete photogrammetry profiles of three of them. She also engaged in physical anthropological research with Dr. Yılmaz Erdal (Hacettepe University), our team's physical anthropologist.

The other student project was carried out by Ryan Robinson, whose mentor is Stephanie Selover, who earned her PhD from the Oriental Institute. Ryan completed his BA in anthropology at the University of



TOP LEFT: Figure 3. Sharon Steadman and Gregory McMahon cataloging ground stone in the Çadır Höyük depot. BOTTOM LEFT: Figure 4. Gregory McMahon preparing to photograph diagnostic examples of ground stone.



Figure 5. Laurel Hackley and Tony Lauricella surveying fields surrounding Çadır Höyük.

Washington, where Stephanie has a tenure-track appointment. Ryan completed a database of all Çadır's chipped stone assemblages, which can now be used to examine lithic presence and practices all over the site.

A final exciting project was carried out by Laurel Hackley (Brown University) and Anthony Lauricella (Oriental Institute, CAMEL Lab). Laurel won a grant to carry out a survey of the Çadır mound "skirt" to examine the ebb and flow of occupation over time off the mound (fig. 5). The data from this project are being compiled for future presentation.

Both the 2018 and 2019 seasons were exceedingly productive, allowing us to plan and prepare to launch new projects in the upcoming 2020 season.

CHICAGO DEMOTIC DICTIONARY (CDD)

BRIAN MUHS and JANET H. JOHNSON

The Chicago Demotic Dictionary continues to prepare for the final publication of the first phase of the CDD, both as PDF files available online and as hard copies.

During the 2018–19 academic year, the CDD staff continued the migration of text and images from the old Microsoft Word files to the new Adobe InDesign files, which will be used to produce these final PDF files and hard copies. Previously, Sandy Schloen and Miller Prosser of Ochre Data Services had converted all of the old Microsoft Word text files to the Unicode font named Gentium Plus, so they could be inserted into the new InDesign files. Meanwhile, the CDD staff extracted all of the images from the old Microsoft Word text files, gave them unique names, and saved them as high-resolution PNG files, so that they too could be inserted into the new InDesign files. The CDD staff is now in the process of migrating the Unicode texts from the old to the new files, inserting the new PNG images, and reestablishing the correct formatting.

The staff of the CDD this year consisted of professors Jan Johnson as editor and Brian Muhs as associate editor, as well as Egyptology graduate students Ariel Singer, Brendan Hainline, Theresa Tiliakos, and Joseph Cross. Ariel spent the winter of 2018–19 at Chicago House in Luxor, Egypt, but continued to work on the CDD from there, primarily on migrating the texts and images and reestablishing the formatting for the new InDesign files. Brendan and Theresa worked in the CDD office in the OI. Brendan also worked on the migration and reformatting and was joined by Theresa after she completed relabeling the images from the old text files. Joey worked from North Carolina on checking and updating the references to Northwest Semitic vocabulary. He completed this task, and the corrections are now being incorporated in the new files as they are migrated. The CDD staff proper was assisted by Tom Urban and Alex Cornacchia in the Publications Office, who are also working on migration and reformatting. Together with Ariel, they have developed an InDesign template that automates much though not all of the reformatting, which has greatly expedited the process.

As of May 2019, over half of the forty-one text files had been migrated to InDesign. We hope that the migration can be completed in the coming 2019–20 academic year. Once the migration is completed, the CDD staff can begin the final round of proofreading the new files, after which the first phase of the CDD will be publication ready.

CHICAGO HITTITE DICTIONARY (CHD)

THEO VAN DEN HOUT

When you read this, the final fascicle of the letter Š will be out. With this fourth installment we have completed our fifth and largest letter to date: L, M, N, P, and Š. During the past year we went through several rounds of painstaking proofreading, and the Publications Office with its usual meticulous professionalism turned it into the well-known two-column format and guided it to press. In honor of our deceased colleague and cofounder of the CHD, we have dedicated the Š-volume as a whole to the memory of Harry A. Hoffner.

Now, we will embark this fall on the new (and even larger!) letter T. We will take this opportunity to review our practices and make a number of changes to our *modus operandi*. In close consultation with and with essential input from our graduate students Thalia Lysen, Robert Marineau, and Emily Smith, we have already taken steps to change and better document the workflow in order to speed up the actual dictionary-making process. This fall we will finalize all this, and editors van den Hout, Goedegebuure, and Beal will start the actual editing of all words starting in t-.

Over the past year we started work on the Proceedings of the 10th International Congress of Hittitology, which we organized in 2017. All manuscripts are being read through, and first proofs should be sent to all individual authors this academic year.

This past year we also changed the layout of the CHD office (see photo). Formerly, we had all file cabinets in the center of the room, but following up on an idea of grad student Robert Marineau, all cabinets are now lined up along the walls freeing up a large center space for two big tables where students can work, where our Anatolian Circle can have its quarterly lectures, and where we can have our CHD meetings.

We had several visitors: Professor Amir Gilan from Tel Aviv University; Dr. Susanne Görke from Germany; Dr. Peter Raulwing from Saratoga, CA; and Dr. Valeria Zubieta Lupo from Los Angeles. Professor Gilan attended the OI postdoctoral conference, and Drs. Görke and Zubieta Lupo consulted our files, the latter for her work on Hittite medical texts.

This spring we said goodbye to Antonio Cruz Uribe, former MA graduate student, who worked for the CHD since 2016, and we welcomed Naomi Harris, another MA graduate student, to our team. We also took leave of Barbara Jillson, volunteer and OI



Chicago Hittite
Dictionary room,
2018.

Advisory Council member, who worked on our digital bibliographical database for the past years. We are deeply grateful to all of them for their work on the CHD!

Last year our long-time junior editor Dr. Oğuz Soysal went back to Turkey and Germany and we can happily report that the Deutsche Forschungsgemeinschaft approved his new project “Unpublished Boğazköy-Fragments: Edition and Research.” The research will be lead and carried out by Soysal in cooperation with his Turkish and German colleagues at the Philipps-Universität Marburg, which is still one of the important centers for Hittitological studies, and he is taking this opportunity to work together with his colleagues there in conjunction with other projects like the *Corpus der hethitischen Festrituale* and *Kayalıpınar Ausgrabungen*.

Finally, we gratefully acknowledge the ongoing wonderful and loyal support of Mr. Philip Elenko, 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.

Projects members include ten faculty and graduate students from three institutions: **Hervé Reculeau** (assistant 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); Émilie Sarrazin (PhD candidate, University of Chicago); and Katie Whitmore (PhD candidate, Purdue University).

CEA 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 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.

In accordance with the strong focus on collaboration and collaborative practices promoted by the Humanities Without Walls consortium, academic year 2018–19 saw the realization of one of the project’s key components: a joint two-quarters (or one-semester) seminar, which was offered in the winter and spring quarters of 2019 to graduate students at the three partner institutions, using video conferencing and shared online pedagogical resources. Each week of the academic year between January and June 2019, the participants gathered in a seminar room at their home institution, and a virtual discussion room uniting all three institutions was created using the Cisco Webex Meetings software. For three hours, students and instructors presented and discussed a common selection of readings, starting with a series of methodological sequences on modern and ancient climates in the areas under study, and how the latter are reconstructed by palaeoclimatologists from a series of proxy data (ice cores, tree rings, fossil pollens, lake and ocean sediments, stalactites and stalagmites, etc.). The seminar then focused on theoretical approaches that have defined the analysis of (past) societies in relation to climate in the academic literature. These include the anthropogenic and (neo) deterministic paradigms in the study of human-environment relationships; the specific methods and theories developed in environmental anthropology and archaeology; the booming field of resilience theory and the contribution of complex systems theory to the elaboration of the concept of Social-Economic Systems (SES); and the problematic use, in Ancient History, of notions such as “collapse,” “dark age(s),” or “intermediate period(s).” The second part of the seminar was then devoted to a series of case studies, in which the current state of research was presented (and critically analyzed) for the following historical episodes in all three areas that are the focus of the project: the beginning of the Early Bronze Age circa 3000 BCE and its demise around 2200 BCE (the so-called 4.2k event); the end of the Late Bronze Age circa 1200 BCE (the so-called 3.2k event); and the Early Iron Age, from the so-called Dark Age of the twelfth to tenth centuries BCE to the rise of *poleis* in Greece during the eighth century BCE, the rise and demise of Assyria between the ninth and seventh centuries BCE, and those of the Third Intermediate Period in Egypt. The seminar closed on a discussion of the concept of the Anthropocene, and its implication for the studies of climate change and human interaction with their environments in the past.

At the junction of research and pedagogy, the seminar was predicated on the idea that, in such an interdisciplinary endeavor, every participant (students and faculty alike) could disseminate their advanced knowledge and mastery of the data, methods, and literature of their respective field or subfield to the group, from Assyriology to bioarchaeology. The seminar’s syllabus was thus established collaboratively by all the project members and discussions brought to the tables (both physical and virtual) expertise and insights, but also questions, from a very diverse set of perspectives. The ambition was to develop a common language among project members with very different academic backgrounds, and with the students who partook in the seminar. This allowed for true collaboration, rather than simply juxtaposing research conducted in the three different areas of the project. This gives 3CEA a truly interdisciplinary and collaborative dimension that is rarely attained in such endeavors, and the insights gained from the seminar have already impacted the way research is being conducted within the three subprojects on Egypt and Nubia (Buzon, Moeller, Sarrazin, Whitmore), Anatolia and the Eastern Mediterranean (Beckman, Kearns, Leonard, and Lysen), and Mesopotamia (Crisostomo and Reculeau). While the results of these investigations are set to be presented during 3CEA’s final conference in the fall of 2020, some preliminary results of the Mesopotamia subproject have been presented by Jay Crisostomo and Hervé Reculeau during the 2019 Annual Meeting of the American Oriental Society (held in March 2019 in Chicago), in a paper titled “Assyrian Sources and the Assumed Climatic Crisis at the End of the Late Bronze Age (twelfth to tenth centuries BCE).”

Michele Buzon and Katie Whitmore presented their work on skeletal data from Tombos (Sudan) at the 46th Paleopathology Association Annual Meeting (Cleveland, March 27–29, 2019), in a paper titled “Pathological Changes Associated with Resorption of a Proximal Femur from New Kingdom Tombos, Injury or Disease?” Catherine Kearns presented a paper titled “Weathered Things: Climate and Environment in Mediterranean Landscape Archaeology” at the Conference Environmental Entanglements: Climate and Physis in the Ancient World (University of Western Ontario, September 21, 2019) and published an article titled “Discerning ‘Favorable’ Climates: Science, Survey, and the Cypriot Iron Age,” in a volume she coedited with S. Manning, *New Directions in Cypriot Archaeology* (Ithaca, NY: Cornell University Press, 2019), 266–94.

Additional elements on 3CEA can be found in a joint interview of Catherine Kearns and Hervé Reculeau for *Tableau*, the journal of the Humanities Division of the University of Chicago (tableau.uchicago.edu/articles/2019/05/two-perspectives-ancient-climate-change), and in the latter’s interview for the OI Oral History Project (www.youtube.com/watch?v=albBUlAielc).

EPIGRAPHIC SURVEY

W. RAYMOND JOHNSON AND J. BRETT MCCLAIN

In this historic centennial year of the Oriental Institute, Chicago House officially resumed archaeological fieldwork in Luxor, Egypt, on October 15 in collaboration with the Egyptian Ministry of Antiquities (MoA) and the Supreme Council of Antiquities (SCA). The Chicago House Library opened about a week later. State security clearance came several weeks late again this year, now a problem for all missions, but by November we were able to resume our documentation, conservation, restoration, and training activities at our three current sites: Luxor Temple, Medinet Habu, and Theban Tomb 107. We gratefully acknowledge here a grant from USAID Egypt that supported the bulk of the work at Medinet Habu this season. Work finished on April 15, and what follows here is a report on our activities site by site.



Epigraphic Survey photographer John Hartman in the Ramesses III mortuary temple second court, Medinet Habu, ca. 1926.



Full Chicago House staff photo, January 2019. Photo: Sue Lezon.

LUXOR TEMPLE

EPIGRAPHY

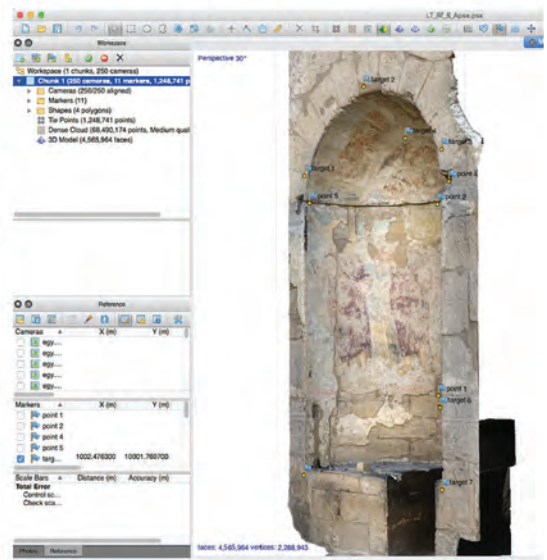
Work in Luxor Temple currently involves two main areas of focus overseen by site manager Jay Heidel. The first is the cataloging and wholesale digital photography of the fifty thousand fragments in the Luxor Temple blockyards, as well as digital drawing and collation of selected fragment groups. The second area of focus is the facsimile copying of standing-wall decoration in the temple proper, including the Late Roman fresco paintings in the Imperial Cult Chamber by senior artist for digital drawing Krisztián Vértés and, in the adjoining Hall of Offerings, by Jay, with assistance from digital photographer Owen Murray in creating photogrammetric background imagery in both chambers.

Ministry of Antiquities (MoA) inspectors with whom we worked at Luxor Temple during the 2018–19 season were Kerolos Wagdi Shafiq, Mohamed Abdel Rehim Mohamed, Saoudi Salah Saied Hossein, Ramadan Ahmed Aly Ahmed, Ahmed Mahmoud Araby Mohamed, and Mahasen Abdel Hamid Ahmed.

This year Krisztián finished digitally drawing the four colossal frescoed figures and Roman eagle in the great apse in the Roman Imperial Cult Chamber, thereby completing the herculean task of total facsimile documentation of the Roman frescos in that chamber. His extraordinary drawings as well as staff photographer Yarko Kobylecky's complete black-and-white and color photography of the chamber will be published in the first volume covering this section of the temple and mark a major milestone in our Luxor Temple documentation program. In future seasons Krisztián will continue digitally drawing the chamber's Amenhotep III reliefs for publication in a second, separate volume. Owen used photogrammetry to create a 3-D model of the western and northern walls and the apse from which he generated drawing enlargement TIFFs for Krisztián's digital drawings. This revolutionary technique is also being used for modeling and creating drawing TIFFs for the chamber's pharaonic reliefs.



ABOVE: Krisztián drawing Roman apse frescos, February 12, 2019. Photo: Ray Johnson. BELOW: Luxor Temple Apse 3-D digital deroule. Image by Owen Murray.





LEFT: Owen using total station for photogrammetric recording of wall reliefs, Luxor Temple, November 7, 2018. MIDDLE: Lotfi preparing the east wall of the Hall of Offerings for photogrammetric photography and drawing, November 7, 2018. RIGHT: Owen doing photogrammetric photography in the Hall of Offerings, February 6, 2019. Photos: Ray Johnson.

This winter Krisztián continued to refine our digital drawing techniques and tools, and coordinated training sessions with the entire epigraphic team of artists, photographers, and epigraphers—individually and in groups—to make sure that everyone’s tools and techniques were up to date and consistent. Krisztián also continued to update and expand our webpage **digitalEPIGRAPHY**, which can be accessed here: <http://www.digital-epigraphy.com>.

The website now features many additional tutorials, case studies, and articles about new digital drawing equipment and techniques, but also articles by colleagues in Egypt who are utilizing a variety of new digital drawing methodologies. Among the more recent articles are “Documenting the Amenhotep III wall scene LD177 at Luxor temple (Part 2): Digital ‘Inking’ and Collating on the iPad Pro,” “The Main Chapel at the Amarna Workmen’s Village and Its Wall Paintings,” “The Tomb of Amenmose (TT89): Modern Epigraphy in the Footsteps of Nina and Norman de Garis Davies,” and “Let’s Talk about . . . Ears: Stylistic Attributes and Visual Representation Guidelines Based on Carved and Painted Examples,” as well as an array of reports on new tools, software, and equipment. Krisztián regularly updates this webpage, so it definitely bears checking often!



LEFT: **digitalEPIGRAPHY** webpage, tutorials section, by Krisztián Vertés.



LEFT: Hall of Offerings, Luxor Temple, detail of Amenhotep III-period wall relief. Photo: Ray Johnson.

BELOW: Jay digitally penciling in the Hall of Offerings, December 8, 2018. Photo: Hilary McDonald.



As a result of the successful LD177 test, digital photography and drawing of the adjacent offering chamber immediately to the south of the Roman chamber (and north of the bark shrine), Nelson Number LE VIII, was initiated this season by Owen and Jay. At the beginning of the season, Owen photographed the eastern wall, created a photogrammetric 3-D model, and generated drawing enlargements for the lowest register of decoration (LE 69–72). Jay finished the digital penciling of most of those scenes and is digitally inking them over the summer. This room will be the first in the history of the Epigraphic Survey to be documented completely digitally, and our plan is to include a 3-D component of the entire chamber, including the pillars, as well. Stay tuned!

Under Jay's oversight, the work in the Luxor Temple blockyard continues to focus on developing the Luxor Temple Fragment Database and the digital documentation of the entire blockyard holdings. The field checks proceed *mastaba* by *mastaba* and will continue until all fragments have been added to the database. Digital photographer Hilary McDonald, assisted by chief 3-D-model/digital-data engineer and field assistant Gina Salama and conservator Hala Mohamed Ahmed continued our digital photography and photogrammetry of the blockyard holdings. Photography this season focused on Akhenaten-period Karnak *talatat* blocks stored in the locked Luxor Temple western *talatat* magazine (Nelson numbered rooms LE IX, X, and XXIII), to which Gina and Hala affixed aluminum inventory number tags beforehand. Altogether, since we began the project, approximately six thousand *talatat* in the blockyards and western *talatat* magazine have been photographed by Hilary using the photogrammetric technique where multiple 2-D digital shots of each block surface are taken first, and then later digitally stitched together using Agisoft Photoscan/Metashape software to produce completely square, orthogonal, aspective images of carved fragment surfaces that can be used for reference, study, drawing, and publication. Processing has been completed for about 2,227 *talatat* with another 1,438 in progress. In addition to the winter fieldwork, Gina builds models and creates rectified digital images for five months each summer, and also uses the time to enter those that have been processed



Conservator Hala and inspector Kerolos, Luxor Temple west *talatat* magazine, December 1, 2018. Photo: Ray Johnson.

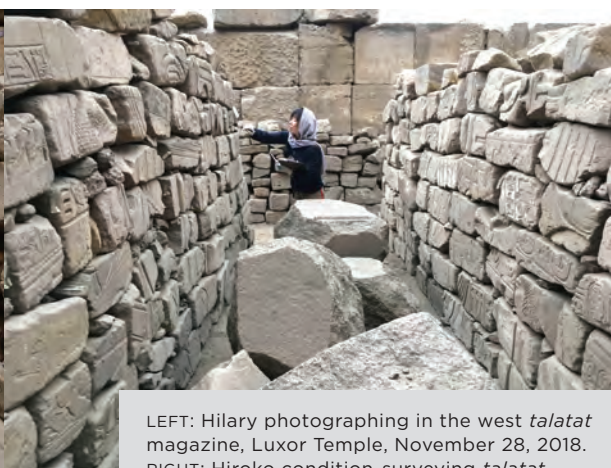
into the Luxor Temple Fragment Database. Once finished, the data for the *talatat* (the field photography, 3-D models, high-resolution TIFFs, and low-resolution JPEGs) are all turned over to Alain and Emmanuelle Arnaudès for storage in the Chicago House Digital Photo Archives Database where they will be accessible to all.

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 39. Of the 39 fragments in this group, 30 have now been collated and analyzed; it is anticipated that the remaining eight fragment drawings will be collated in 2019–20, with one fragment (0740) remaining to be drawn.

This season conservator Hiroko Kariya condition-inspected all of the fragments in the western *talatat* magazine, consolidated the surfaces of a small group of them, and moved others to more protected parts of the magazine. She also did her annual condition survey of the blockyard and open-air museum holdings.

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 another review next winter.

This season Chicago House was pleased to offer assistance to our Antiquities Ministry friends at Luxor Temple in re-erecting the last and easternmost colossal statue of Ramesses II in front of the Luxor Temple pylon. The two colossal seated statues of Ramesses II that still guard the great pylon doorway were originally flanked by two sets of equally colossal standing statues of the king, all but one of which were pulled down in the medieval period and broken into pieces for reuse. Hundreds of fragments of the sculptures were excavated between 1958 and 1960 by Egyptian archaeologist Mohamed Abdel Qader Mohamed beneath the buildings in front of the temple pylons, and in 2017 and 2018 the ministry restored and re-erected two of them. Chicago House consulted with our colleagues on the reassembly and even provided a few pieces we noted in the blockyard for restoration.



LEFT: Hilary photographing in the west *talatat* magazine, Luxor Temple, November 28, 2018. RIGHT: Hiroko condition-surveying *talatat* blocks, February 6, 2019. Photos: Ray Johnson.



TOP ROW, FROM LEFT: Seated Ramesses II toe join, November 28, 2018. Ramesses II cartouche restoration, November 29, 2018. Ramesses II granodiorite cartouche reattached, November 29, 2018. Photos: Ray Johnson.

MIDDLE ROW: Luxor Temple façade and base (on left) of easternmost colossus. Photo: Ray Johnson. SCA secretary general Mostafa Waziri (seated), standing from left, chief conservator Mohamed, chief inspector Ahmed, Luxor Temple director Ahmed Araby, Ray, Luxor director Mohamed Yahia, and Luxor PR director Ahmed, November 12, 2018. Photo: Jay Heidel.

BOTTOM ROW: Luxor Temple engineer Abdel Razk and inspector Nadia documenting colossus fragments, December 6, 2018. Statue restoration team, Luxor Temple, December 27, 2018. Photos: Ray Johnson.



A third and final colossus in red granite remained to be restored—the easternmost—and in conversations with SCA secretary general Dr. Mostafa Waziri in November of 2018, Chicago House agreed to help with the necessary materials and supplies. The actual restoration work was undertaken by the ministry under the supervision of Dr. Waziri, Luxor Temple director Ahmed Araby, and

the chief engineer for restoration Ahmed Mohamed Ali (Abdel Razk), who supervised the re-erection of the other two statues. The U.S. Embassy in Cairo kindly provided a grant that covered half of the cost of the project, while Chicago House covered the rest. Restoration of the 12 m tall red-granite colossus was completed and the statue inaugurated on April 18, 2019, with some tweaking of details later. Luxor Temple is now the only temple in Egypt where one can view all of the original colossal statuary of the entrance. It is a dramatic sight.

ABOVE LEFT: Easternmost colossus going up, April 14, 2019. ABOVE RIGHT: Easternmost Ramesses II colossus, June 30, 2019. BELOW: Luxor Temple façade with easternmost (far left) colossus in place, June 30, 2019. Photos: Ray Johnson.



MEDINET HABU

EPIGRAPHY

The epigraphic team under the supervision of Brett and senior artists Margaret De Jong, Susan Osgood, and Krisztián continued documentation work in the small Amun temple of Hatshepsut and Thutmose III, primarily on the drawings for *Medinet Habu XI* and *XII*. Tina Di Cerbo and Richard Jasnow continued their digital documentation of the many layers of Coptic graffiti in the northern Ptolemaic annex, and also Demotic graffiti in the stairwell of the Ramesses III first pylon. Tina was occasionally assisted by Aleksandra Hallman, who is studying the reliefs in the Twenty-fifth and Twenty-sixth Dynasty God's Wives Chapels across the way. Epigrapher Ariel Singer continued collating in the small Amun temple with the team, while artist Dominique Navarro started digital drawing of the small Amun temple bark sanctuary inscribed ceiling. Our work on the site was supervised by MSA inspectors Montasser Mohammed Mohammed, Fatma Ahmed Salim Hussein, Ismail el-Sayid Abu el-Fatouh, Mahmoud Hosni Mahmoud Abd-Allah, Hassan Youssef Mohammed Ahmed, Gaber Mohammed Loutt, Dalia Mohammed, Bahaa el-Din Sabet, Marwa Nabil Rashid, Esraa Ahmed Mohammed Ibrahim Awad, and Al-Shimaa Mohammed Mahmoud Mohammed.



Margaret penciling Ptolemaic lintel scene, December 10, 2018. Photo: Ray Johnson.



LEFT: Tina using D-Stretch software to tease out faded graffiti, January 5, 2019. Photo: Ray Johnson. ABOVE LEFT: Sue Osgood digitally drawing bark sanctuary exterior, small Amun temple, December 10, 2018. Photo: Ray Johnson. ABOVE RIGHT: Tina and Aleksandra copying in the northern annex, December 27, 2018. Photo: Amanda Tetrault.



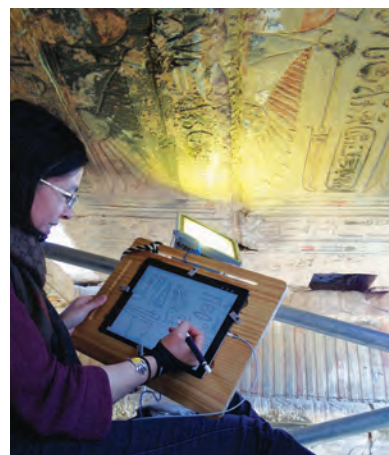


FROM LEFT TO RIGHT: Brett and Sue discussing digital drawing, small Amun temple, Medinet Habu, February 7, 2019. Inspector Shima practicing drawing and collation of Ptolemaic texts, March 14, 2019. Krisztián digitally drawing in the small Amun temple, March 14, 2019. Photos: Ray Johnson.



Ariel collating Pinudjem inscription, small Amun temple, Medinet Habu, February 23, 2019. Photo: Ray Johnson.

Epigrapher Jen Kimpton, assisted by Anait Helmholz, continued to supervise the cataloging and analysis of blocks and fragments from the destroyed Medinet Habu Western High Gate, with artist Keli Alberts continuing her facsimile drawing of fragments and joined groups. Ariel is helping to collate some of those drawings and is also experimenting with photogrammetric 3-D renderings of a group of blocks that we are reassembling on the site of the great gate for public view. The scene, from an upper-story room inside the gate, depicts a seated Ramesses III drinking with a princess, who is offering him a bouquet, and gives a preview of many more reassembled groups to come. Jen and Keli continue to make joins with the material, filling gaps and clarifying the decorative program of the gate, inside and out, as well as its



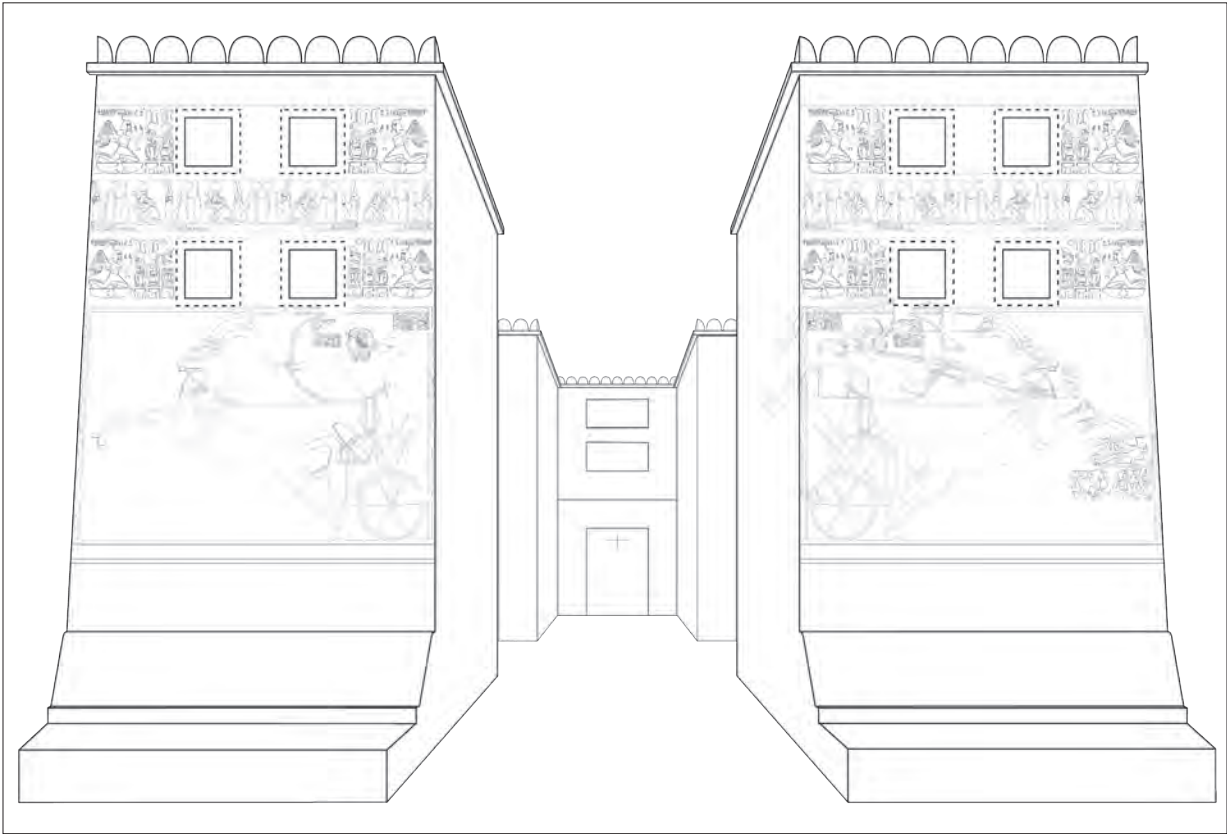
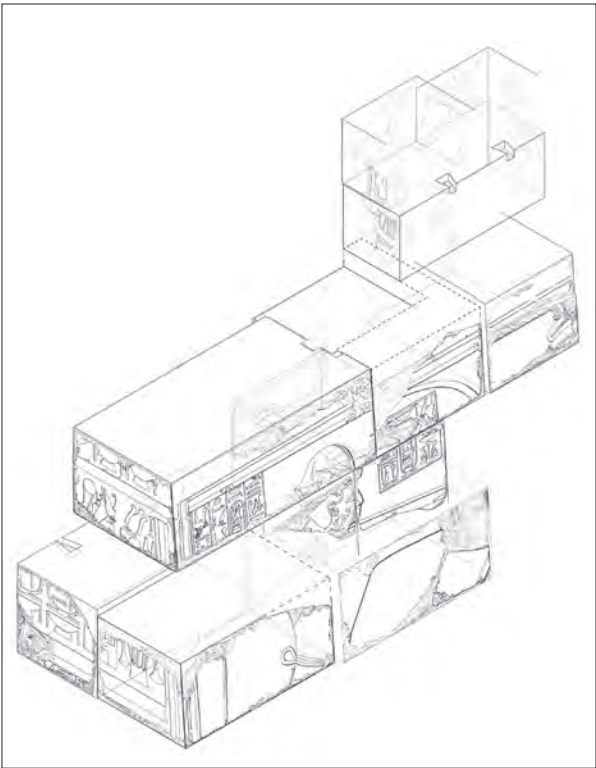
Dominique drawing ceiling Nekhbet, small Amun temple bark sanctuary, March 25, 2019. Photo: Ray Johnson.

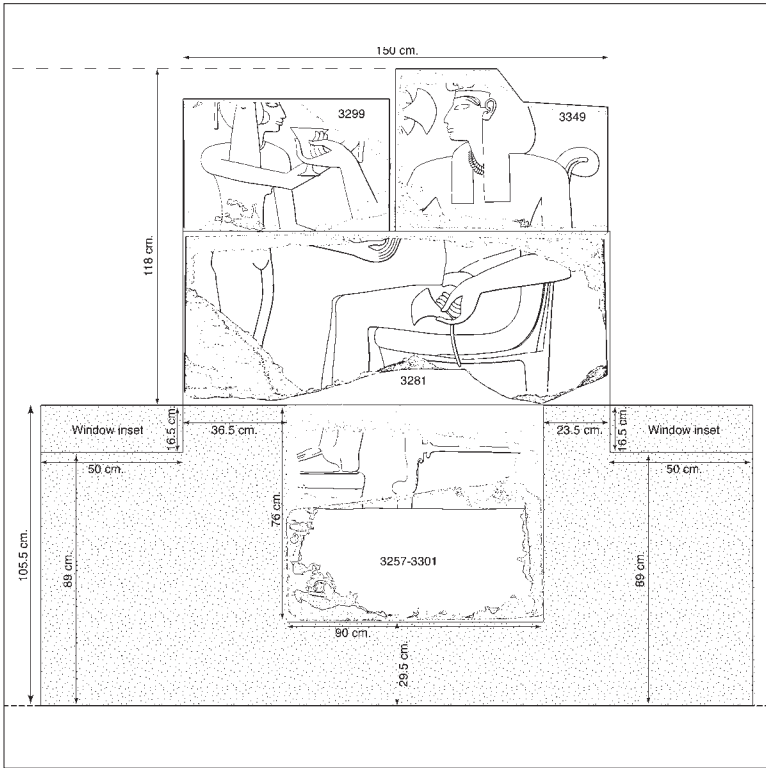


ABOVE: Lotfi, Jen, and Frank discuss block moving and reconstruction. January 30, 2019. Photo: Ray Johnson.

RIGHT: Medinet Habu Western High Gate reconstructed group by Keli Alberts and Jen Kimpton.

BELOW: Western High Gate reconstruction by Keli Alberts and Jen Kimpton. Drawing by Keli Alberts.

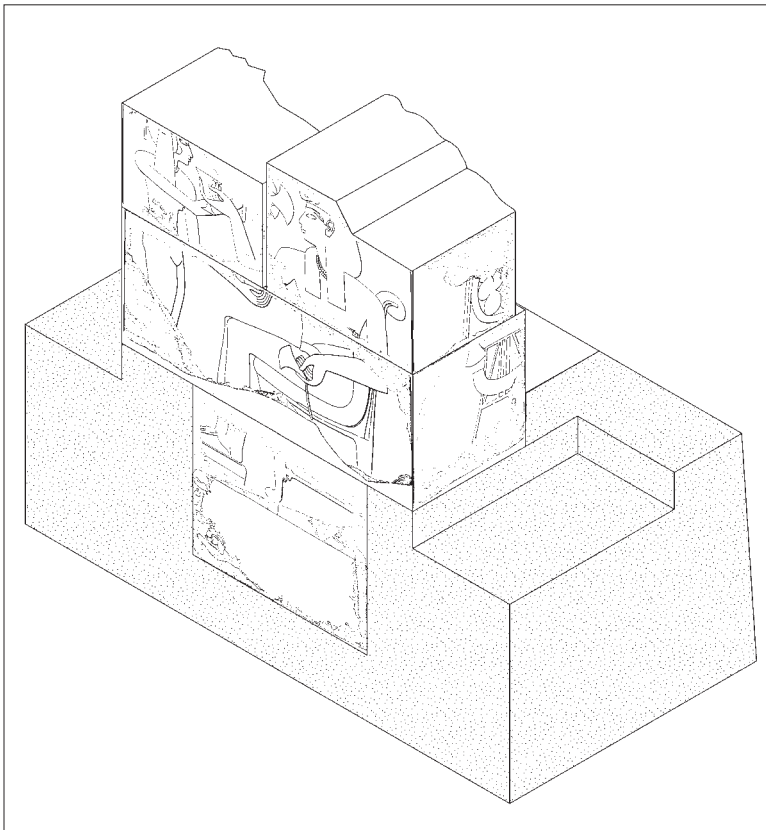




Western High Gate block detail, interior drinking scene. Photo: Ray Johnson.



Western High Gate block group being assembled, March 25, 2019. Photo: Ray Johnson.



Ray digitally collating High Gate block group, March 23, 2019.

TOP LEFT: Western High Gate group elevation. Drawing by Jen Kimpton and Keli Alberts.

BOTTOM LEFT: Western High Gate proposed isometric rendering of restored block group. Drawing by Jen Kimpton and Keli Alberts.

architectural components.

The Western High Gate block catalog currently contains 1,477 entries representing 1,376 separate objects (some are inscribed on more than one face; some even preserve parts of interior and exterior scenes). All inscribed fragments and blocks included in the database are numbered and photographed for reference, with dimensions and descriptions entered. Photographer Yarko continued to take large-format film and digital photographs of the inscribed material that were also entered into the database. Owen Murray continued his digital documentation of the western and northern areas for photogrammetric mapping.

Yarko, assisted by Photo Archives registrar Ellie Smith and assistant photographer Amanda Tetreault, also generated large-format film negatives of the funerary reliefs in the Twenty-fifth and Twenty-sixth Dynasty God's Wives Chapels for their publication, starting in the chapel of Amenirdis I. Seamless overlapping of photographs of entire registers of the beautiful offering scenes inside the chapel are the result of an innovative "rail" system created by Yarko on which he mounted his large-format field camera. Aleksandra Hallmann, current Oriental Institute postdoctoral fellow, joined us this season to continue her documentation and study of the chapels. I am very pleased to report that she and assistant stonemason Johannes Weninger were married this January, and she will be joining the epigraphic team this fall. Welcome to the Chicago House family, dear Aleksandra!

What follows is a tally of the drawing enlargements that passed through all stages of the Chicago House method during the course of the 2017–18 season:

Penciling completed: 83 drawing enlargements
 Inking completed (including summer 2018): 59
 Collation completed: 25
 Transfer check completed: 19
 Director check completed: 23



LEFT: Yarko photographing in the chapel of the God's Wife of Amun Amenirdis I, December 27, 2018. Photo: Amanda Tetreault. RIGHT: Aleksandra Hallmann at work. Photo: Dominique Navarro.

CONSERVATION and RESTORATION

This season Medinet Habu senior conservator Lotfi Hassan continued to oversee all of the components of the Medinet Habu conservation work, including the cleaning and capping of the mudbrick walls bordering the stone pavement around the Ramesses III mortuary temple on the western and northern sides. Lotfi also supervised this year's Egyptian conservation-student training program; ten Egyptian conservators participated in the grant-funded work, two supervisors and eight conservation students. During that time Lotfi coordinated up to a hundred additional seasonal workmen who, under his watchful eye, assisted us in all aspects of the conservation and restoration work, including brickmaking, transporting materials and supplies, and the cleaning of the ancient walls prior to restoration.

In the House of Butehamun at the back of the precinct, Lotfi and his team finished stabilizing the four slender white columns of the main hall and laid compressed mudbrick paving slabs and protective rope fencing around the house. This will allow visitors to view the house from the outside on the southern and eastern sides without touching the fragile plastered columns. As a finishing touch for this season, Lotfi and Chicago House carpenter Sami Tawdros built a balustraded wooden bridge across an open foundation trench in front of the house, allowing safe visitor access to the site.



Butahamun House pavement installation, January 2019.
Photo: Lotfi Hassan.



ABOVE, FROM TOP TO BOTTOM:

Conservation team working on mudbrick restoration, March 2019. Photo: Lotfi Hassan.

Restoration brickmaking, Medinet Habu, December 10, 2018. Photo: Ray Johnson.

Lotfi and the conservation students, December 2018. Photo: Sakina Oraby.

Conservation students working on mudbrick restored wall, west area Medinet Habu, March 14, 2019. Photo: Ray Johnson.



LEFT: Bridge nearing completion, March 23, 2019. RIGHT: Completed bridge, April 11, 2019. Photos: Ray Johnson.

Master mason Frank Helmholz, assisted by stone mason Johannes Weninger and the stone team, continued to supervise the restoration of the Ramesses III-period paved stone walkways on the western and northern sides of the mortuary temple with thick new sandstone slabs, allowing safe, public access to the Medinet Habu western precinct. The restored pavement now extends along the entire western side, and Frank's teams also started restoration of the pavement on the northern side, western end. This season 212 paving stones were laid with a path length of 60 m and an approximate surface area of 215 sq. m, which includes newly laid and partially historic pavement completed with new stone. Under Lotfi and Frank's supervision, Chicago House carpenter Sami also built a balustraded wooden viewing platform halfway up the southern stone walkway, which overlooks the Ramesses III southern well and allows visitors to see the ongoing conservation work in the area. Our teams have worked very hard, and it shows; the quality of their work is extraordinary.

We are happy to acknowledge here a grant from USAID Egypt for the development and restoration of the southern and western sectors of the Medinet Habu precinct that has supported the work for the last four years. This season marked the last year of the grant, but I am very pleased to report that, thanks to the generosity of our USAID friends in Egypt, an extension of the grant will allow us to continue our site development and restoration work for another four years in the northern and eastern sectors of Medinet Habu. Sincerest thanks to USAID Egypt for the gift that is supporting this project, and for making this important work possible.



LEFT: House of Butehamun complex, April 2019. Photo: Lotfi Hassan. BELOW: Conservation students and assistants from the 2018-19 season, April 1, 2019. Photo: Frank Helmholz.





LEFT COLUMN, FROM TOP TO BOTTOM:

Pavement laying by Saber, Mohamed, Johannes, and Tayib, January 2019. Photo: Frank Helmholz.

(LEFT) Western pavement before restoration, November 14, 2018; (RIGHT) Sylvia Atalla, USAID review of completed western area work, March 14, 2019. Photos: Ray Johnson.

Stone team, April 1, 2019. Photo: Frank Helmholz.

RIGHT COLUMN:

Medinet Habu group photo of the conservation, stone, and documentation teams and workmen, 2017-18 season, March 2018. Photo: Frank Helmholz.

Medinet Habu epigraphic, conservation, and restoration teams, April 1, 2019. Photo: Frank Helmholz.

Pavement and brick work on the northern side of the Ramesses III mortuary temple, March 2019. Photo: Frank Helmholz.

Wooden viewing platform, southern walkway, Medinet Habu. Photo: Lotfi Hassan.





TT 107 from above, January 2019. Photo: Ray Johnson.

THEBAN TOMB 107

ARCHAEOLOGY

Archaeological cleaning of the inscribed portico of TT 107, the Theban tomb of Nefersekheru, the steward of Amenhotep III's palace at Malqata, was supervised by Boyo Ockinga and Susanne Binder for the Epigraphic Survey at the beginning of 2019 for just a few days. Their work in 2018 included the recovery of many inscribed fragments of the destroyed limestone doorjambs and portico wall that continued to be consolidated and

joined by conservator Hiroko for photography, digital drawing by Sue Osgood, and eventual restoration. The tomb's pillared broad hall has never been cleared and is filled with flood-washed debris that goes up to the ceiling in most places. This past season Boyo and Susanne were able to start the



TT 107 archaeological team headed by Boyo Ockinga and Susanne Binder (second and third from right), January 17, 2019. Photo: Ray Johnson.



removal of the debris at the entryway and discovered that the front right column just inside the doorway is fluted, as are the columns in the portico of the court. Our work at TT 107 this season was supervised by MSA Inspectors Ibtihag Ahmed Ali Ahmed and Amany Hassan Abd el-Rahim.

EPIGRAPHY

Following this year's campaign, the first and second collations of the wall scenes (with the exception of the recently discovered standing figure on the reveal of the doorway) are completed, discussions/wall checks are underway, and recording and collation of the fragments and fragment groups are also well underway. We expect the drawings and collations of the wall scenes to continue during the 2019–20 field season, along with ongoing documentation of the fragments and additional material as new discoveries warrant; the excavation of the tomb is still far from complete.

TT 107, ABOVE FROM LEFT TO RIGHT: New steel gate, March 23, 2019. The reis of the Assasif, Brett, and inspector Amani. Hiroko and Brett reassembling broken doorjamb fragments, February 14, 2019. Doorjamb texts coming together, February 14, 2019. Photos: Ray Johnson.

TT 107, BELOW FROM LEFT TO RIGHT: Sue digitally inking wall fragments, February 4, 2019. Inspector Ebtahag, Brett, and Sue at work, February 14, 2019. Ariel and Brett collating, February 4, 2019. Photos: Ray Johnson.





Chicago House full-time local staff, administrator Samir (left) beside finance manager Essam; Reis Badawy and assistant administrator Samwell (far right). Photo: Ray Johnson.

CHICAGO HOUSE

In addition to closing up and securing Chicago House every season after the staff departs in mid-April, Tina Di Cerbo arrives in September every year to open and clean the entire facility before the team arrives, and to do whatever maintenance work may be necessary. This year Tina, chief engineer Nashet, and our workmen continued repairs and painting in the main house; completely replaced the water tanks in both the main residence and Healey House with new, much larger and more efficient tanks; completely replaced the floor tiles in the residence courtyard (an enormous and onerous job) including the water and all of the sewer pipes; and had the place completely ready by the time the team arrived on October 15. Kudos and sincerest thanks to her and our amazing workmen for their extraordinary efforts on our behalf. It is easy to take their efforts for granted because we don't see their work in progress, but what they do behind the scenes makes all of our preservation work at the temple and tomb sites possible. Bless them all.

The Chicago House Marjorie M. Fisher Library was deftly supervised this past season by Head Librarian Anait Helmholz, assisted by Assistant Librarian Martina Roshdi. Over a thousand patrons used the library during the season, including numerous Egyptian graduate students working on advanced degrees, Antiquities Ministry inspectors and colleagues, and foreign-mission members. We added 190 new titles to the library collection, including 32 journals and 40 periodicals, and work continues apace on the digital library catalog, with approximately 1,200 more titles entered this season. 168 volumes were sent to Cairo for binding last summer, and another 187 were sent this summer as we address the backlog of books requiring binding. Thirty-five of the new titles were gifts from Peter Lacovara, Kathleen L. Sheppard, Nadine Moeller, IFAO, Tom Hardwick, Giacomo Cavillier, Campbell Piece, Vincent Rondot, Rupert Wace, Jadwiga Iwaszczuk, Olga Białostocka, Emily Teeter, the Roemer-und Pelizaeus-Museums Hildesheim, Regine Schulz, Boyo Ockinga and The Australian Centre

for Egyptology, Christian Bayer, Christian Loeben, Heba El-Kareem, Susanne Binder & Leonie Donovan, Jeffrey Spier of the J. Paul Getty Museum, The Getty Conservation Institute, Piers Litherland, Jacobus van Dijk, The British Museum, and Tine Bagh. Sincerest thanks to all for helping us to expand our holdings. Sharing the Chicago House Library facility—the only Egyptology library of any size in southern Egypt—with our friends and colleagues is a great joy. I am pleased to report that a growing section of the library is made up of completed masters and PhD dissertations produced by our Egyptian graduate student patrons, a testament to the value of sharing this resource.

This past season Tom and Linda Heagy Chicago House Photo Archives registrar Ellie Smith numbered 266 new large-format film negatives generated and scanned by Yarko and Amanda from the God's Wives Chapels and Western High Gate and entered them in the Chicago House large-format film database. She and Tina also continued to process data from the Ted Brock Photographic Archives, donated to Chicago House by Lyla Brock after Ted's death. In addition to working with Ellie and Tina on the Brock archives during December and January, photo archivist Sue Lezon worked with Brett and Yarko in December and January tweaking the final photographs for *Medinet Habu Volume X*. Sue regularly condition-surveys our large-format negative holdings and this past year culled several hundred deteriorating nitrate negatives for Yarko and Amanda to duplicate, scan, and store in isolation.

Each season Alain and Emmanuelle Arnaudies are with us in November and again in March/April entering data into the new Chicago House Digital Photo Archive cataloguing and storage system. For complete and balanced documentation and safe archiving of the images of Luxor's cultural heritage sites, Chicago House utilizes film photography as well as digital photography, with separate databases for each. Digital photography is being utilized by the Epigraphic Survey more and more in our documentation programs, including drawing, and the Arnaudies archive the enormous amount of data being generated.

We enjoyed the visits of many colleagues and friends this season, including Marianne Eaton-Krauss, who consulted with us on our Luxor Temple statue program; Margie Fisher and Janet Richards with their friends on a Univer-

TOP: Chicago House Chief Librarian Anait, February 5, 2019. MIDDLE: Ellie organizing and numbering Amenirdis Chapel images, January 2, 2019. Photo: Ray Johnson. BOTTOM: Assistant Librarian Martina and husband assistant administrator Samwell, March 30, 2018. Photos: Ray Johnson.





sity of Michigan tour; Tom and Linda Heagy and their friends (who have very kindly contributed toward the purchase of a much-needed new minivan); and a special visit by the son of former chief engineer John Healey: Val Healey and his wife Sheila, who regaled us with stories about growing up in Luxor at Chicago House and whose brains we picked about who was who back then: former Chicago House epigrapher Hratch Papazian; Christian Bayer from the Roemer- and Pelizaeus- Museum, Hildesheim; the Getty Conservation Institute and Getty Trust teams, including directors Tim Whalen and Jim Cuno, respectively; and a host of others. It was a great winter for visitors!

Finally, as you all know, in May of this year the Oriental Institute turned one hundred, and in November 2019 the Epigraphic Survey turns ninety-five. James Henry Breasted was passionate about the need to preserve our increasingly threatened ancient cultural heritage and equally passionate about how modern technology could be utilized toward that end. We at the Oriental Institute continue to live by and build upon the precepts and highest standards that Breasted developed so long ago, and I believe that he would be particularly pleased to see how the Epigraphic Survey is utilizing new and innovative technological tools in our preservation work in Luxor today. In honor of the OI's centennial and to James Henry Breasted and his farsightedness, here's to the next hundred years of the Oriental

Institute, a living testament to the vision of our extraordinary founder.

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, and Ariel Singer as epigraphers; Boyo Ockinga and Susanne Binder as archaeologist/epigraphers; Margaret De Jong, Susan Osgood, and Krisztián Vértés 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 Hala Mohammed Ahmed as Luxor Temple data assistant; Yarko Kobylecky as chief staff photographer; Owen Murray, Hilary McDonald, and Amanda Tetreault as photographers; Susan Lezon as photo archivist and photogra-



James Henry Breasted at Karnak, 1935(?)
(University of Chicago Photographic Archive,
apf1-02230, Special Collections Research
Center, University of Chicago Library).



FROM OPPOSITE LEFT:
Yarko and Sue taking
staff photo, February
12, 2018. Alain, Jay, and
Emmanuelle going over
Dropbox protocols,
March 30, 2019. Sue
Osgood, Emily Teeter,
and Linda Heagy at
Medinet Habu, February
23, 2019. Margie Fisher,
Salima Ikram, and
Peter Lacovara at Edfu
Temple, February 2019.
Former chief engineer
John Healey's son Val
Healey and wife Sheila,
November 27, 2018.
Photos: Ray Johnson.

pher; Elinor Smith as photo archives registrar and photography assistant; Carlotta Maher as assistant to the director; 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; Frank Helmholz as master mason; Johannes Weninger as mason; Lotfi K. Hassan as Medinet Habu conservation supervisor; Skina Oraby and Al Azab Ahmed as Medinet Habu conservator assistants; and Hiroko Kariya as Luxor Temple conservator. Alain and Emmanuelle Arnaudies worked on the Chicago House Digital Archives database. Special thanks must go to Nadine Moeller and Gregory Marouard for their oversight of our archaeological work, and special thanks as always must go to our forty full-time Egyptian workmen, who make everything possible.

Sincerest thanks to the Egyptian Ministry of Antiquities and the Supreme Council of Antiquities (SCA), Minister of Antiquities Dr. Khaled el-Enany, SCA secretary general Dr. Mostafa Waziri, and all of our friends and colleagues in Egypt for another productive collaboration this year. Heartfelt thanks as well to the many friends of the Oriental Institute, whose generous support allows Chicago House to maintain 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 Charge d'Affaires of the U.S. Embassy the Honorable Thomas Goldberger; to former U.S. ambassador to Egypt R. Stephen Beecroft; to former U.S. ambassador to Egypt, the Honorable Anne Patterson; former U.S. 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, USAID Egypt; Curt Ferguson and Coca Cola Egypt (Atlantic Industries); to David Rockefeller Sr.† and Marnie Pillsbury; to Ward and Diane Zumsteg for launching our new endowment campaign; Dr. Marjorie M. Fisher; David and Carlotta Maher; O. J. and Angie Sopranos; Misty and Lewis Gruber; 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; Nancy N. Lassalle; Tom and Linda Heagy; Shafik Gabr, ARTOC Group, Cairo; Judge and Mrs. Warren Siegel; Barbara Breasted Whitesides and George Whitesides; Miriam Reitz Baer; Andrea Dudek; Beth Noujaim; James Lichtenstein; Jack Josephson and Magda Saleh; Priscilla



Professional staff photo, January 2019. Photo: Sue Lezon.

Back row, from left: Owen Murray, Colleen Kinder, Ariel Singer. Second row, from left: Mohamed Sayed, Al Azab Ahmed, Soher Guindy, Richard Jasnow, Tina Di Cerbo, Dominique Navarro, Gina Salama, Brett McClain, Jen Kimpton, Johannes Weninger, Samwell Maher. Third row down, from left: Sakina Oraby, Marwa El Nager, Hanaa Al Azab, Lotfi Hassan, Samir Guindy, Jay Heidel, Ray Johnson, Anait Helmholz, Frank Helmholz, Yarko Kobylecky, Aleksandra Hallmann, Hilary McDonald. Front row, from left: Eman Mostafa, Shiama Salah, Hala Mohamed, Amanda Tetrault, Sue Osgood, Ellie Smith, Kristián Vertés, Keli Alberts, Martina Roshdi Maher.

(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. William Kelly Simpson†; Dr. Ben Harer; Dr. Roxie Walker; Tony and Lawrie Dean; Mr. Charles L. Michod Jr; Jane Zimmerman, 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 to you all!

LANNY BELL (1941–2019)

Just as this report was going to press, we received sad word of the passing of former Chicago House director Lanny Bell. A few (very few) of us old-timers started work with the Epigraphic Survey when Lanny was director. He and Martha made Chicago House a welcoming place, a tradition we strive to maintain. We will miss his infectious enthusiasm, his encyclopedic knowledge, his unstinting encouragement, and most of all his laughter.

ADDRESSES OF THE EPIGRAPHIC SURVEY

October—March:

Chicago House
Nile Corniche, Luxor
Arab Republic of Egypt

tel. (011) (20) (95) 237-2525
fax. (011) (20) (95) 238-1620

April—September:

The Oriental Institute
1155 East 58th Street
Chicago, IL 60637

tel. (773) 702-9524
fax. (773) 702-9853

The Epigraphic Survey homepage is located at:
<http://oi.uchicago.edu/research/projects/epigraphic-survey>

GIZA PLATEAU MAPPING PROJECT

MARK LEHNER | ANCIENT EGYPT RESEARCH ASSOCIATES

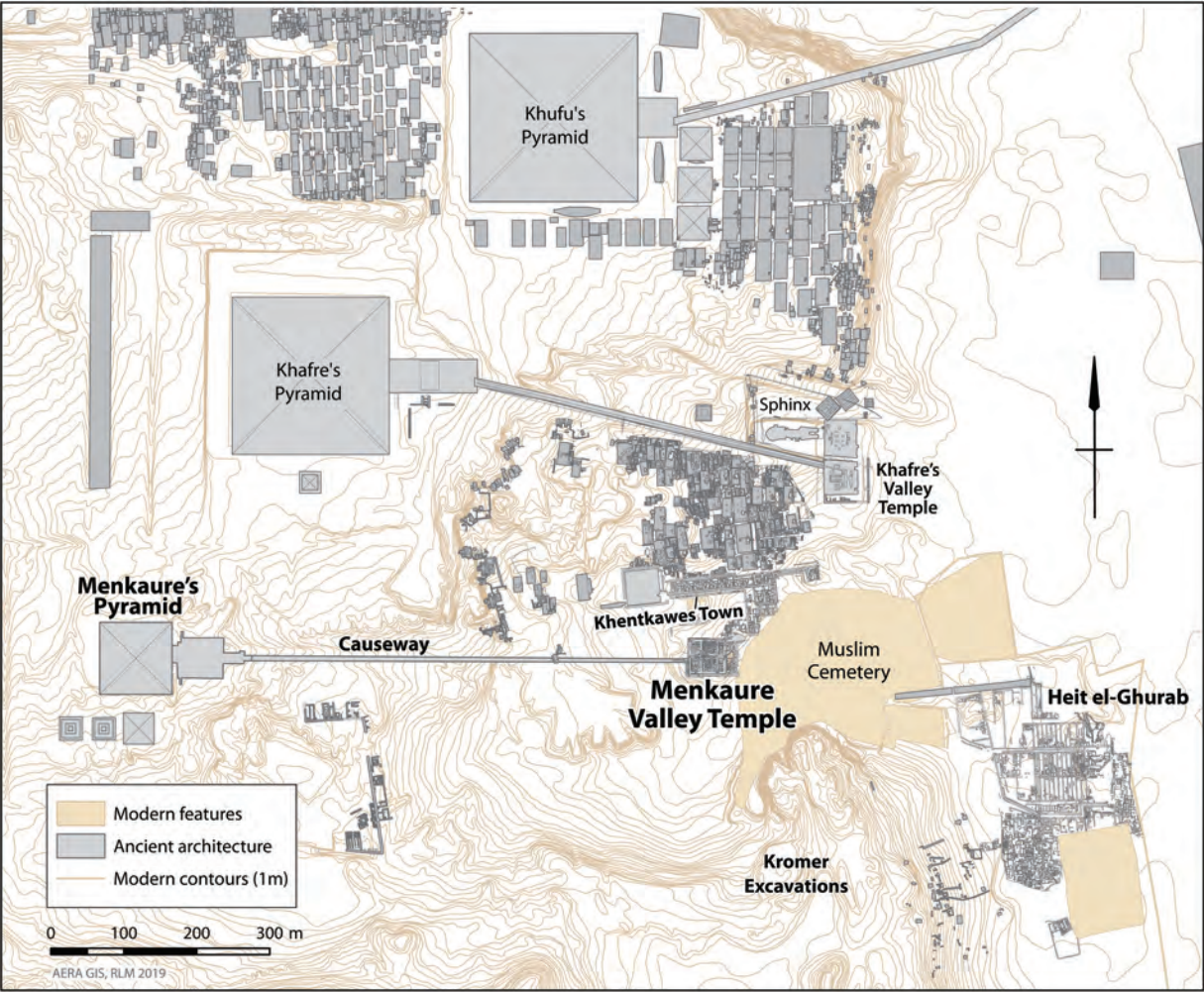
During field season 2019 (February 3–April 11), Ancient Egypt Research Associates (AERA) returned to the Menkaure Valley Temple (figs. 1–2), where George Reisner excavated on behalf of Harvard University and the Museum of Fine Arts, Boston, between 1908 and 1910, and where we conducted fieldwork in 2008, 2011, and 2012.

Our aims this season were to re-excavate and document the MVT with the systematic MoLAS-derived method,¹ which we have honed for AERA's overall archaeology program at Giza, because, like the Khentkawes Town (KKT), the MVT and its occupation are a major component of the context of our main site, the Heit el-Ghurab (HeG), in the overall settlement archaeology of the Giza Plateau. Our interest includes chronology, the development of settlement and its structures, the transfer of people through these sites, and concomitant changes in material culture. We hypothesize that as people abandoned the HeG, they settled near the KKT and MVT, and perhaps also near the valley temples of Khafre, nearby, and Khufu, some distance to the northeast. The nature of the sites changed from infrastructures for large royal works to service centers for the cults of the deceased kings.

We had planned to focus on the western part of the MVT, so as to avoid the complexities of the occupation in the court. We wanted to reserve re-excavation of the court settlement for future seasons. We also wanted to avoid retrieving large quantities of material culture, so as to allow the team in the field lab to catch up processing the backlogged material from last season's (2018) excavation of the Kromer site, a massive dump of Fourth Dynasty settlement waste and demolition debris.² Ironically, we did retrieve large quantities of material culture this season in the MVT from Reisner's original excavation of the southern MVT court, because he dumped spoil from this excavation, which was still rich in material culture, back into the western parts of the temple. For this reason, we were able to examine only the southwestern quadrant. Also, the somewhat unexpected depth and volume of his backfill, and the size of a deep pit that Reisner called "Thieves' Hole" in this quadrant, made it tractable to clear and document only the southwestern quarter of the temple.

I directed the overall program of season 2019. Daniel Jones supervised excavation and recording on site, assisted by Ashraf Abd el-Aziz (Ministry of Antiquities, MoA), Virág Pabeschitz (Katholieke Universiteit Leuven), Martina Bardonova (Czech Institute of Egyptology, Charles University), Gregory Viessman (University of Memphis), and M. Victoria Almansa-Villatoro (Brown University). Sayed Salah Abd el-Hakim (AERA) served as archaeologist and foreman of forty workers. Mohamed Helmy (MoA) carried out all survey work and coordinated remotely with AERA's GIS director, Rebekah Miracle.

Dr. Claire Malleson (American University of Beirut) served as director of AERA's field lab and storeroom and as archaeobotanist; Dr. Richard Redding, Eleuterio Luther Sousa (University of Manitoba), and Mohamed Hussein (MoA) analyzed animal bone; Sarah Hitchens (University of Liverpool) acted as lab manager and textile analyst; Samar Mahmoud (MoA) and Dr. Elizabeth Hart (Metropolitan Museum of Art) studied lithics; Mahmoud el-Shafei (MoA), Aisha Montaser Ali (MoA), and Dr. Anna Wodzinska (University of Warsaw) recorded and analyzed pottery; Emmy Malek curated and studied objects; David Jerábek (Czech Institute of Egyptology, Charles University) and Ali Witsell (AERA; working remotely from the USA) studied clay sealings; Dr. Philip La Porta (Center for the Investigation



ABOVE: Figure 1. Map of the central and southeastern part of the Giza Plateau showing the location of the Menkaure Valley Temple where AERA worked during season 2019. Map by Rebekah Miracle from AERA GIS.

LEFT: Figure 2. The southwestern quarter of the Menkaure Valley Temple (MVT) re-excavated by AERA team members in 2019, 109 years after George Reisner excavated the MVT from 1908 to 1910. View to the northeast with the Khafre Valley Temple and Sphinx in the background.

of Native and Ancient Quarries) studied geological and cultural attributes of ground stone tools and other objects; Dr. Martin Odler (Czech Institute of Egyptology, Charles University) studied metals; and Manami Yahata (AERA) documented and analyzed remains of roofing and plaster. Abdel Latif Ibrahim directed flotation and heavy fraction processing and, with Mohammed Hassan, supervised three workers for sorting and filing different classes of micro-material culture.

REISNER'S WORK IN THE MVT

Reisner never saw the whole MVT in phase, so his plan (fig. 3) of the temple is largely a reconstruction pulled together from separate exposures. After he excavated the upper temple of the Menkaure pyramid from 1906 to 1907, he began to excavate the MVT between July 7 and 28, 1908. Then he left for sixteen months to excavate in Nubia and Palestine. He worked at the MVT again from December 3, 1909, to April 12, 1910. He excavated the temple in parts before he had exposed the entire ruin surface across the width and breadth of the temple. He back-filled the first parts he excavated as he proceeded roughly from back to front, west to east.

Reisner started in 1908 at the middle of the back, western side, where the causeway running from the upper temple comes to the MVT back wall. After finding the connection of the causeway to the temple, he “began cutting out the mud debris from the rooms”³ numbered 1 through 8 (see fig. 3 for room numbers). Right away, he found royal statues or parts of statues. On the fourth day, July 10, in corridor 4 (fig. 5), he found four triad sculptures.

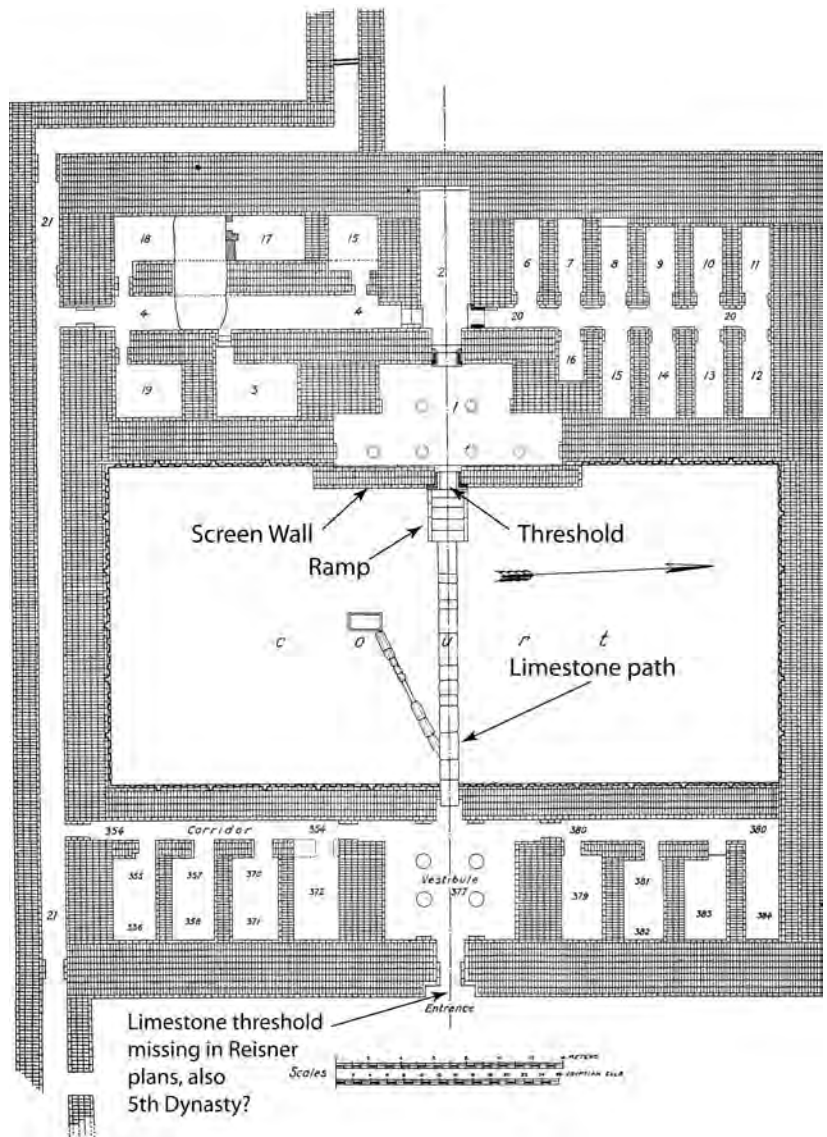


Figure 3. Reisner's (1931, plan IX) reconstructed plan of the MVT "First Temple" as completed in mudbrick by Shepseskaf upon a platform of huge limestone blocks laid down by Menkaure's builders. Reisner never saw the whole temple in phase, so the plan is largely a reconstruction pulled together from separate exposures. Reisner's (most consistent) numbers identifying the rooms appear in this map (Reisner 1931, plan VIII). North is to the right.

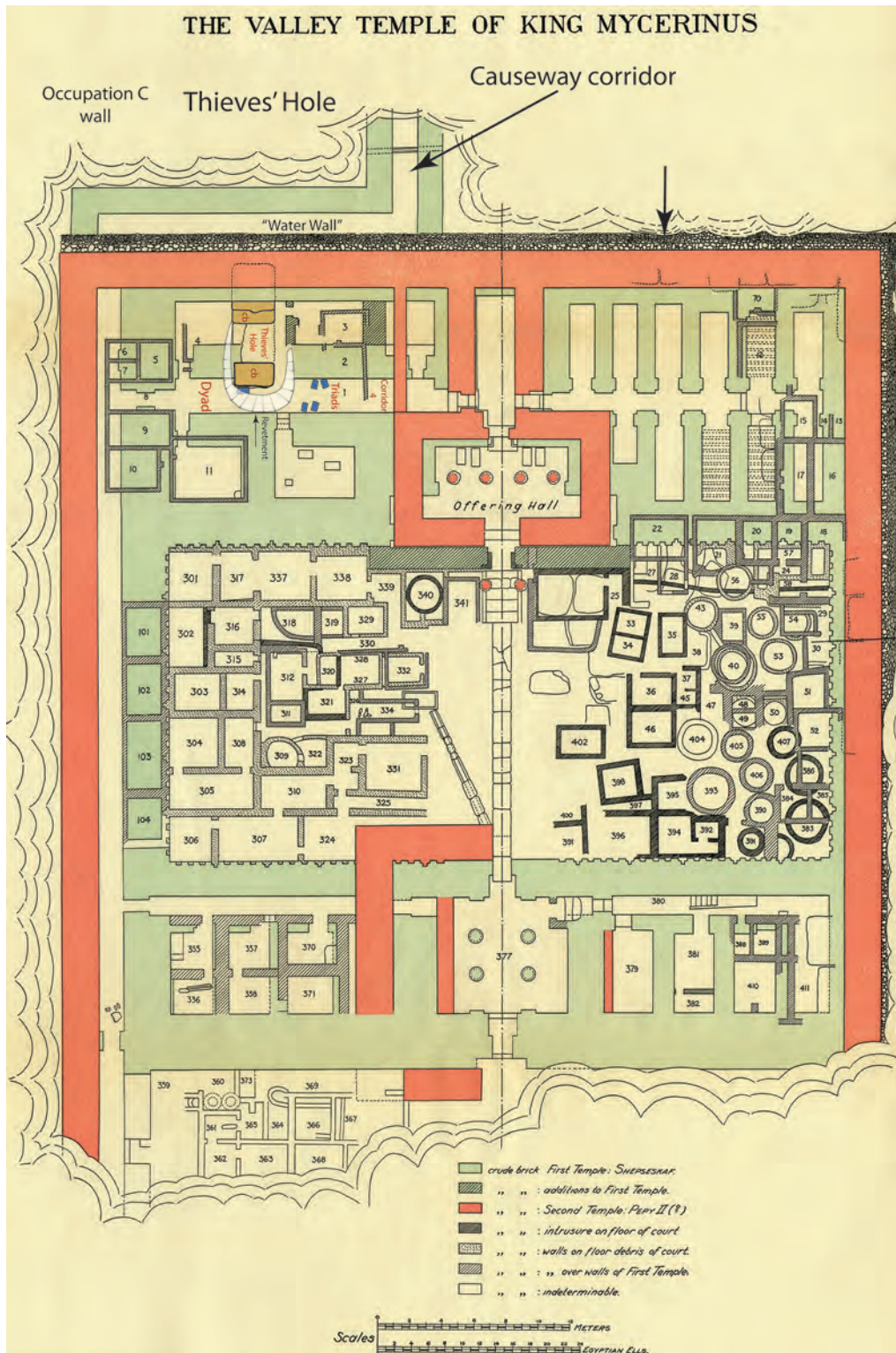


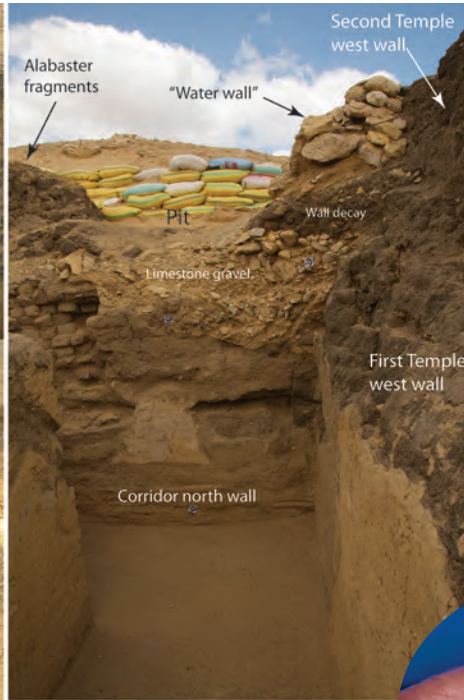
Figure 4. Reisner's (1931: plan VIII) multi-phase map of the MVT. Light green: "First (Fourth Dynasty) Temple." Orange: "Second (Sixth Dynasty) Temple." Hachured gray: an intermediate phase (Fifth Dynasty). Black: latest domestic structures. Reisner found the Menkaure triads in corridor 4 and the dyad in "Thieves' Pit," which cut corridor 4; cb = "core block" of limestone. North is to the right.

Right away, it was clear to Reisner that he had two major periods, a later temple rebuilt upon an earlier one. He reconstructed the ground plan (fig. 3) of a “First Temple.” It was most probably Menkaure’s successor, King Shepseskaf (2441–2436 BC),⁴ the last king of Fourth Dynasty, who completed this first temple in mudbrick. In his multi-phase map (fig. 4), Reisner showed in orange the walls of a “Second Temple,” built over two hundred years later, probably under King Pepi II (2216–2153 BC), the last king of Sixth Dynasty. The Second Temple was built upon the walls of First Temple, which Reisner colored green. In order to compose the map shown in figure 4, Reisner’s workers sometimes trenched down through the whole stratified sequence, from above the Second Temple, to find the baselines of the walls of the First Temple.

Reisner’s backfill and the windblown sand that accumulated over the 109 years since he finished left no visible trace of the central and western part of the MVT. AERA’s work on the eastern side of the MVT in 2011 and 2012⁵ established the eastern MVT corners, making it possible to geo-rectify Reisner’s multi-phase map of the temple into our GIS. By combining these results with the AERA survey grid, we were able, with a fair degree of certainty, to locate the west (back) wall of the MVT and its sanctuary on February 9, 2019 (fig. 5).



Figure 5. Multi-phase Reisner plan of the MVT geo-rectified (corrected for position with respect to the Giza Plateau Mapping Project grid). Red-shaded polygon indicates limit of excavation (LOE) in season 2019. Corridor 4, where Reisner found the triads and pit with the dyad, outlined in red. A shallow clearing exposed the top of the northwest corner of the temple (red-shaded rectangle upper right). Map by Rebekah Miracle from AERA GIS.



LEFT: Figure 7. (LEFT) Ashraf Abd el-Aziz surveys at the turn of the causeway corridor to the south, along the back western wall of the Menkaure Valley Temple; (RIGHT) the section cut by Reisner up against the back western wall shows the corner between the north causeway wall and the original west wall of the First Temple.

BELOW: Figure 6. Fragment of an Egyptian alabaster (travertine) inscribed with the top of a cartouche and sun disk (Ra), probably the top of a cartouche of Menkaure, from the ruin surface behind the Menkaure Valley Temple.



BACK WALL AND CAUSEWAY CORRIDOR

To the west of the western wall, we retraced Reisner's first excavations at the MVT after he came down onto the temple in the easternmost of a series of trenches on the axis of the causeway, which he determined from its upper, western end near Menkaure's upper pyramid temple.⁶ Taking away the sand overburden, we soon exposed the western wall of the Second Temple.

In order to follow the causeway corridor running to the temple from the west, Reisner had cut through a domed mass of mudbrick debris collapsed from the Second Temple west wall.

Just here Reisner excavated alabaster statue fragments.⁷ A short distance north of the path of his excavation, we found, on top of (probably the same) mound of mudbrick debris, a concentrated deposit of Egyptian alabaster (travertine) mixed with the sand overburden. This deposit extended north beyond our limit of excavation. We retrieved nearly 100 kg of fragments along with pottery, stone bowl fragments, two flint knives, pieces of diorite (gneiss, probably), and fragments of metal. Some of the alabaster fragments bear parts of hieroglyphic texts. Some show blue paint. At least one fragment with text shows the outlines in black of hieroglyphs later etched (fig. 6). This deposit might remain from Reisner's workers sorting the material they found. In one of his expedition photographs (HUMFA_C_2320_NS) dated February 13, 1910, we can see wooden boxes and piles of material (Egyptian alabaster?) on the mound where we found the alabaster fragments.⁸

We could see the history of deposits under this domed mud mass in the south-facing section that Reisner left above the northern wall of the causeway (fig. 7). Later in his excavations, Reisner found evidence that a flash flood streamed down the northern side of the causeway and washed out the center of the First Temple west wall, destroying the portico and offering hall (rooms 1 and 2 in fig. 3), and reducing the north causeway wall to the height that we still see in his section (fig. 7). After this event, people abandoned the MVT. Gravelly sand accumulated against the Second Temple west wall. Eventually, people returned and rebuilt the outer wall of the Second Temple roughly on what

survived of the outer wall of the First Temple. Late in the occupation of the Second Temple, people built a fieldstone revetment against the base of the wall as protection against flash floods. Reisner called this the “Water Wall” (figs. 4, 7). Eventually, the Second Temple wall collapsed, leaving that domed mass of broken mudbrick on which we found the alabaster fragments.

FINDINGS IN REISNER’S BACKFILL

A good part of our work went into removing deep sand and spoil that Reisner dumped into the back of the MVT as he excavated the central court. He began in the northwest corner of the court by removing debris from the domestic structures, here mostly bins and granaries. These structures had been built over time, one upon another, across the court and up and over the “First Temple” walls.⁹ Between January 28 and 31, he started clearing the substantial sand overburden on the southern side of the court where he would uncover apartments.

On February 8, in order to save time and protect the architecture at the back of the temple, Reisner moved his railway lines into the west part of the temple to backfill with the sand overburden. On the day he made the decision, he wrote this in his diary:

With regret, I have determined to cover up all the back or western part of the temple. It would be well if it could be left open for exhibition, but our experience as to the damage done by rain in 1908–9 proves that if the walls are allowed to stand exposed there will be nothing to see in one or two years. *Perhaps in another century some archaeologist may wish to test the accuracy of our work or to settle questions*, which may come up later. At the same time, it will cheapen greatly the expense of excavating the forecourt—where we have far more work to do than I anticipated. (highlight and emphasis mine)¹⁰

Once Reisner had removed the sand overburden from the southern part of the court, he repositioned the railway lines and had his workers dump by hand the dark, silty spoil (35,589) from occupation structures in the court over his dumped clean sand in the southwestern quadrant. We found yet another layer of clean sand and two more deposits of silty settlement material from Reisner’s excavation down through the sand and silt sequence in different parts of the southern court (fig. 8). We infer that the lowest and largest amount of silty settlement material that Reisner excavated from the southern court would be the uppermost and largest silty layer (35,589) that we re-excavated.

We dry-sieved 100 percent of the spoil layers from Reisner’s backfill. We wet-sieved and washed material that could not go through the dry sieves and sorted it. These spoil deposits were rich in pottery, flint tools or parts of tools, animal bone, ash, charcoal, worked stone, pigment, wood, bits of metal and clay sealings, including at least one with Menkaure’s cartouche (fig. 9). Worked stone pieces from sieving Reisner’s backfill included a gneiss or greywacke beard from a royal statue (fig. 10), possibly from one of the Menkaure triads,



Figure 8. Clean sand and dark, dense, silty material that Reisner’s team dumped in 1910 from their excavation of the settlement in the MVT court. View to the east down the axis of the Second Temple offering hall (room 2). March 2, 2019.



LEFT: Figure 9. Sealing fragment impressed with a seal that included the cartouche (oval) name of Menkaure, picked out in 2019 from dry-sieving Reisner's 1910 dumps when he excavated the MVT court settlement. Inset: Menkaure's cartouche name excerpted from a sealing found in the HeG site. RIGHT: Figure 10. Diorite (gneiss) or greywacke beard from a statue, possibly one of the Menkaure triads, found in 2019 from sieving Reisner's backfill.

and possibly triad JE40678 in the Egyptian Museum, for on this one the king is missing his beard. This is one of four complete, or in this case nearly complete, triads found in corridor 4 (see fig. 4). Each shows Menkaure flanked by the goddess Hathor and a personification of an Egyptian Nome, in this case Nome 4 (Thebes). However, Dr. Florence Friedman tells me that another dark-stone beard of similar size, orphaned from its statue, exists in storage in the Museum of Fine Arts, Boston.

We have yet to process most of the material that we retrieved from Reisner's backfill. However, animal bone and flint tools, or flint pieces from making tools, appear to be, by far, the most abundant material (fig. 11), and if this came from the apartments in the southern side of the court, people who stayed there cut a lot of meat.

When faunal analyst Mohamed Hussein took a look at the bones in one *makhtuf* (basket) from the many *makhtufs* of bone from sieving Reisner's backfill, he said it is mostly from cattle. Mostly, he saw distal ends of long, meat-bearing cattle bones. When faunal analyst Dr. Richard Redding joined us after a tour in Upper Egypt, he confirmed Mohamed's findings.

The fact that we were finding *ends* of meat-bearing bones was immediately intriguing, because last season (2018), we found baskets and baskets of bones from Kromer's Dump, and many of *those* bones are meat-bearing long bones that are *missing their ends*.¹¹ Last season we framed the hypothesis that people broke off the ends to make "knuckle-bone soup" or "gelatin soup," *shorbet kawara* (شوربة كوار) in Arabic. With nerve endings and collagen, knuckle



Figure 11. Bones and blades, and a bit of copper, from sieving dark, silty material from the MVT court settlement, material that Reisner discarded and dumped 109 years ago.

bones and end bones are full of fat and protein. Local soccer teams consume *shorbet kawara* to literally “beef up,” and we can imagine *shorbet kawara* would be as good for those who needed to beef up for building pyramids. We might also imagine that knuckle-bone soup would have been a good use of lesser animal parts for lesser folk, while higher-status people received the choicest cuts.

However, two facts show that the Kromer long bones and the MVT end bones match in neither place or time. First, the long bones from the higher, later phase of the Kromer dump are mostly from sheep and goat. Second, all royal name sealings from the Kromer dump, from both the higher/later and lower/older phases, name Khufu or Khafre. So, the Kromer dumpers might have come from the area of the Menkaure Valley Temple, but that temple did not yet exist, and so neither did the settlement within its court.

We must weigh these preliminary findings against the possibility that these remains are the material-culture correlate of royal decrees that endowed the Menkaure Pyramid temples with people and provisions, in particular one issued by Shepseskaf,¹² probably when the First Temple was inaugurated, and another by Pepi II,¹³ when the temple was rebuilt and its service renewed. Are we finding the remains of foodstuffs ritually offered to Menkaure, that is, Menkaure’s corporate continuance in the service of his temple staff, and then consumed by those people?

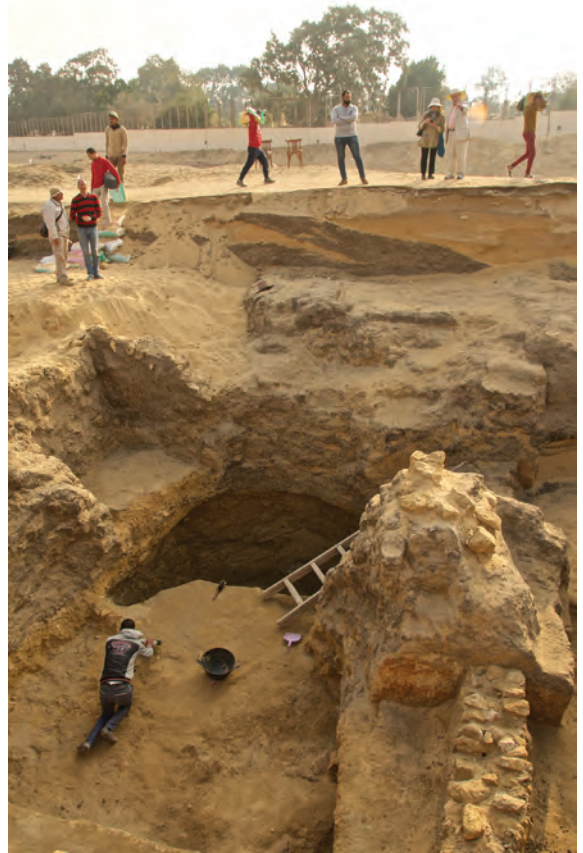


Figure 12. Work in Thieves’ Hole, showing Reisner’s 1910 retaining walls. A worker lying down is clearing the top of the limestone core block in front of which Reisner found the dyad of Menkaure and a female, probably a queen. Team members stand on AERA’s 2019 section through Reisner’s backfill. Clean sand layers intercalate between dark silty material from Reisner’s excavation of the settlement in the temple court.

THIEVES’ HOLE AND THE DYAD

When he decided on February 8, 1910, to backfill the western part of the temple, Reisner did not want to bury his chances of finding more statues in what he called Thieves’ Hole, where he found the dyad. He wrote in his diary,

A gang were set to work to bail out the water and penetrate deeper in the hole where the pair-statue was found in III-4 [corridor 4]. They got down about a meter below the present ground water level and took out 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.¹⁴

Reisner’s workers built the retaining walls on the north, east, and south of the great pit with material readily at hand—the dark silt from disintegrated mudbrick and limestone pieces (fig. 12).



Figure 13. Thieves' Hole, after removing Reisner's 1910 backfill and after excavating sondages (trenches) 142 and 143. Reisner's excavations conjoined two separate pits, or cuts. AERA team members assigned feature number 35,618 to the cut of the earlier, lower eastern pit, and 35,627 to the later, higher western pit, which Reisner first designated as Thieves' Hole. Views to the west (LEFT) and northwest (RIGHT).

But he never did get back to Thieves' Hole that May 1910. He must have backfilled Thieves' Hole, now with only clean sand, sometime before he stopped all work at the MVT April 12–14, 1910.¹⁵

As our workers descended into Thieves' Hole, removing Reisner's backfill, we were astounded by the great depth of this part of the temple, and the massiveness of the First Temple walls. Given limited time and resources, we focused on removing Reisner's fill within his retaining walls to reach the bottom of Thieves' Hole, which gave a valuable cross-section of the stratified architecture of the temple (fig. 13).

As we descended into Thieves' Hole, down the eastern face of the western wall, north of where the causeway corridor meets the temple, we came onto two large limestone "core blocks," one upon another (fig. 13, left), so called because they were meant to form the cores of the walls, which the builders would sheath in hard granite (fig. 4, "cb"). Menkaure wanted to build a stone temple like Khafre's Valley Temple, 250 m to the northeast (figs. 1–2), but the stonework stopped, apparently when he died, and the temple was completed in mudbrick.

A little short of 2.5 m to the east, Reisner found, and we re-found, another large limestone core block (fig. 13, right). At the front of this block, Reisner found, standing upright and nearly undamaged (except for a chip off the king's beard), the famous dyad statue of Menkaure and a woman, probably



Figure 14. The outline of the dyad statue of Menkaure and a woman, probably the queen mother, in the approximate position where George Reisner's team found it standing upright and practically undamaged on January 18, 1910. View to the west. The dyad is scaled 1.39 m tall, while it might measure closer to 1.42 m tall.

the queen mother.¹⁶ The dyad is one of the most magnificent sculptures in world art history, but it is not quite finished and so lacks any identifying inscription. In figure 14, I superposed the outline of the dyad onto its find spot, near to scale with the core block.

AERA team members, including Dr. Florence Friedman, who has written more about Menkaure's sculptures than any other scholar, and Dr. Walter Gilbert, whose grant made possible our 2019 season in the MVT, have thought long about this find, and its every detail. Reisner's explanation that Thieves' Hole had been "dug by treasure-hunters of the Moslem Period; two meters below floor of corridor 4 (III-4) . . ."—where the triads were found (see fig. 4)—". . . in sand and debris with feet at water level" and that the dyad was "apparently thrown into the hole by the treasure-hunters before they began the next hole on the west"¹⁷ just does not add up in our estimation as we look at the evidence 109 years later.

Why would robbers leave the dyad until later? Why would robbers sink the statue so deep under the temple floor level? How did the dyad remain so complete and relatively undamaged? Is it possible that the dyad stood at this level from the time the temple was under construction, before Menkaure died? Did Menkaure's successor, Shepseskaf, plant the statue when he finished the MVT in mudbrick? Or did people plant the statue in the time of Pepi II (Sixth Dynasty), or his predecessor Merenre, as

they renewed the temple service after a desert flash flood ruined the temple and it lay abandoned? It appears to us that we can negate the first two questions, because mostly likely someone deliberately stood the dyad upright, just here.

About the possibility the dyad stood here from the time of work on the stone temple, the fact that Reisner found at least twenty unfinished or uninscribed statues in the MVT could suggest that sculptors shaped statues in the active construction site, that building and stone craftwork happened in proximity.¹⁸ From our work onsite, we can also note the following.

What appears to be an upside-down, cup-shaped cutting that shows in Reisner's photographs of the dyad in situ turned out to be a hole cut through the upper, eastern edge of the block. We found this out when our workers carefully scraped and cleaned the limestone surface of adhering silt and sand (figs. 12–14). I am not sure that Reisner's workers ever cleared the hole all the way through. This "Tethering Hole," just to give it a name, aligns with a boss, which we will call "Hitching Post," cut into the east face of the large core block in the western wall (figs. 13–14). The thought crossed our minds that soon after Menkaure died, his masons, now in the charge of Shepseskaf, carved signals

into the limestone core blocks where the temple designers wanted to bury the dyad, so as to “seed” this temple with an image of the king and his queen mother. The dyad find spot is just slightly south of the center axis of Menkuare’s causeway, upper temple, and pyramid, the MVT axis being pushed slightly north of that axis.¹⁹

Against the idea that the dyad stood where Reisner found it from the time of the First Temple is his report that when he excavated deeper than the level at which he found the dyad, just before

groundwater stopped him, he found at least one (possibly more) piece of (a) broken triad(s). Dr. Florence Friedman directed us to this detail in Reisner’s reports, including his diary entry for February 8, quoted above.²⁰ Broken statues found under the dyad certainly argue against it being in situ from the time of the First Temple. But did Reisner mean that his workers found the broken triad pieces buried exactly below the dyad or just deeper in the bottom of the hole?

Like Reisner, Dan Jones, Vicky Almansa-Villatoro, and Greg Viessman excavated Sondage 142 deeper into the bottom of the hole than the dyad discovery spot. They excavated down through a dark silty layer—feature 35,730—about level with the top of a deeper core block (35,622) on which the “dyad core block” (35,642) rested (fig. 15). The silty layer passes just above this lower core block, and just above another low core block (35,747) exposed on the north side of Sondage 142. On the opposite side of the sondage, just under the spot where the dyad stood, layer 35,730 thickens and includes limestone fragments that Reisner’s workers probably stuck here when they incrementally lifted the dyad up and onto the core block to extract it from the temple.²¹ In one of Reisner’s photographs (fig. 16) of the dyad fully cleared, do we see this silty layer spread out from the base of the dyad? The possibility arises that the dyad stood upon, or close to, this silty layer, and that this layer remains from a working surface during Menkaure’s



Figure 15. LEFT: In Sondage 142, a layer of dark Nile silt (35,730) with limestone fragments abuts the base of the “dyad core block” (35,642) and the top of the low core block (35,622) on which the “dyad core block” rests. Emad Abu Shenab cleans the surface at the exact spot on which the dyad stood. View to the southwest. RIGHT: The silt layer (35,730) runs over a low core block (35,747) exposed in the north side of Sondage 142 and to the top of core block 35,622. View to the north.

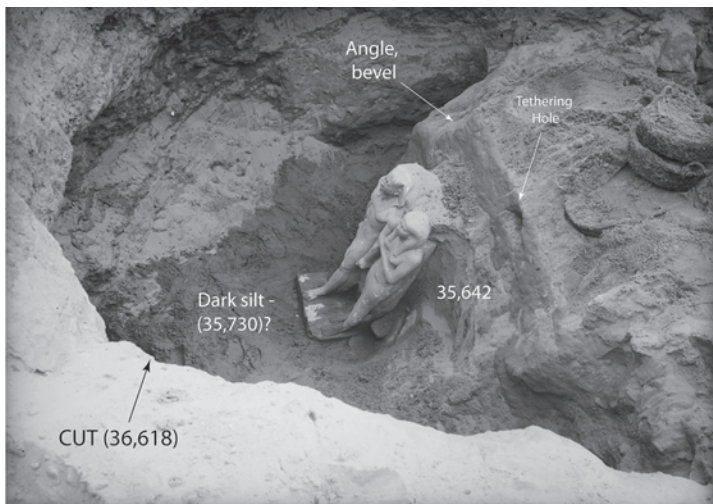


Figure 16. Photograph HUMFA_B481_NS from the Reisner archive showing the dyad fully exposed in situ, January 19, 1910. View to the south. The darker soil spreading out from the dyad could be the dark silt noted in AERA 2019 Sondage 142 (see fig. 14a–b), or it could be sand that is wetter, close to the water table.

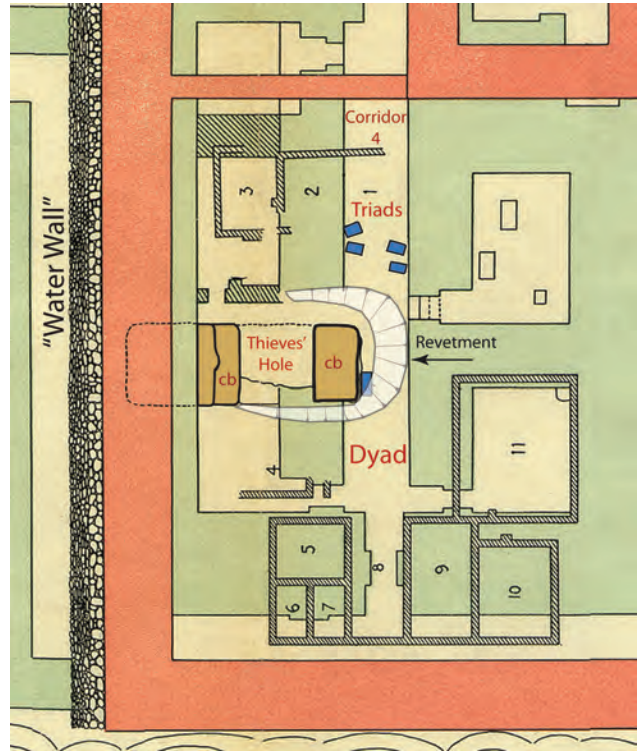


Figure 17. LEFT: Photograph A247_NS from the Reisner archive, view to the north of corridor 4 and the top of the stone rubble revetment lining the east side of Thieves' Hole on July 10, 1908, before Reisner removed the triads. Reisner already excavated the debris away from the back side of the revetment. RIGHT: Excerpt from Reisner's 1931, plan VIII, with the Thieves' Hole revetment drawn in its approximate position. The revetment was built against debris that buried corridor 4.

time, a surface on which his workers were pushing and sliding core blocks into position on wet clay. On the other hand, did Reisner's workers lay down this silty layer when they built their silty retaining walls and moved the dyad?

Against the first scenario stands the fact that Thieves' Hole came down right onto the dyad. Does it not strain credibility that this was just chance?

In fact, Reisner did not find the dyad in Thieves' Hole, but in a deeper, older hole that someone dug in ancient times a little farther east. Dan Jones came up with this important finding from a meticulous review of Reisner's published report, his unpublished diary, and, in particular, his archived photographs, now all online and open access.²²

Reisner found Thieves' Hole in his very first month of work at the MVT, June 1908, when he located where the causeway corridor met the western wall.²³ At the top, before Reisner excavated deeper and farther east into the older hole, Thieves' Hole measured nearly 3 m wide (north to south) and 6 m long. One of its salient features: a skin of loose, broken stone against the downward sloping, eastern curvature of the hole, which cut through the western wall and floor of corridor 4. The skin of loose stones leaned back east, against the curve of the pit, holding back the debris behind and under it. Reisner called it a "rubble lining," or "rubble revetment." He published one of his several photographs showing the revetment free-standing, like a wall, after he removed all the fill of the hole and the debris that the retaining wall held back.

Already by July 1908, in his first stint of excavation in the MVT, Reisner had begun to dig away the debris behind the revetment (fig. 17). Thieves' Hole diggers made that revetment to shore up that debris, as they sunk the hole down to the space between core block 35,636 on the west and 35,642

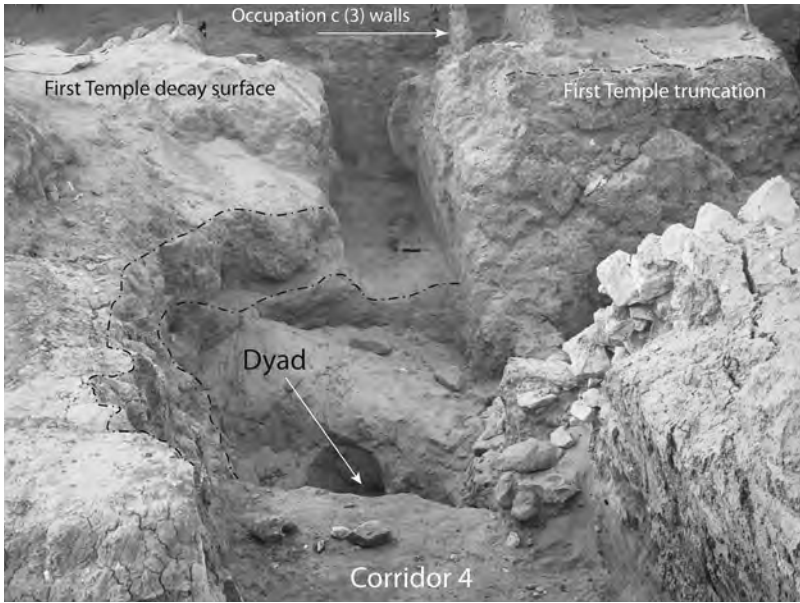


Figure 18. Photograph B486_NS from the Reisner archive, taken January 19, 1910, the day Reisner's team removed the dyad; view to the south down corridor 4, partially excavated, showing the hole in which Reisner's team found the dyad. The cut of the "dyad hole" appears to have been started from the level of the "surface of decay" of the First Temple. Someone dug the hole as or after the First Temple fell into ruin. Remains of the retaining wall that stood above the dyad hole, and retained debris that buried the dyad, can be seen at lower right.

on the east (see fig. 13 above). They founded the revetment on core block 35,642, as they exposed the *western* side of that core block.²⁵ But the dyad stood buried against the eastern side of core block 35,642. That is why his team did not see the dyad until January 18, 1910. Reisner only found the dyad after removing this revetment and digging behind and underneath it. Someone had buried the dyad in an older hole, long before someone dug Thieves' Hole, either in the temple foundation when Shepseskaf finished the First Temple, or later, after ruination and abandonment of the First Temple

Reisner realized he was dealing with two holes. On January 16, 1910, the last day

of work before his team found the dyad late in the afternoon of January 18 (January 17 being a day of rest), he wrote in his diary, "Next to the thieves' hole in room of slate triads opened 1908, there is another hole filled with such debris (yellow gravel) that it also must be a thieves' hole. This is now being cleared."²⁶

Once Reisner removed the revetment of loose irregular limestone pieces against the eastern curve of Thieves' Hole and cleared all the deposits that the revetment had restrained, the two holes became one big oblong pit, and in his subsequent reporting, Reisner conflated the two conjoined holes, which happened to be in line and made one long trench, as "Thieves' Hole."

A couple of key Reisner photos show the top and outlines of the older hole (fig. 18). Photograph B486_NS shows the lower hole, in which Reisner's team exposed the heads of the dyad, on the next day, the day before he removed it. As Dan Jones surmised,²⁷ the lower hole—I think we can properly call it the dyad hole—appears in this photo to have been started *from the surface of the ruins of the First Temple*. That is, someone dug the dyad hole down into the crushed limestone foundation (fig. 15) of the First Temple during or after Reisner's Phase II.9, the phase of decay *and then* deluge, as the First Temple fell into ruin, perhaps soon after that flash flood destroyed the sanctuary. Someone might have buried the dyad in Reisner's phase III, "the second crude-brick temple."²⁸ The fact that the Second Temple builders placed their new walls and floors above the First Temple ruins on the south and north of the MVT, while leaving the temple floor along its central axis at or close to the First Temple floor level,²⁹ obviates the strain in credulity that Thieves' Hole hole diggers just chanced upon this fabulous buried statue. Rather, the older hole could have been intentional, dug expressly for placing the undamaged dyad upright, for safe keeping, deep in the temple foundations. Why someone would do so, and who and what the dyad represents, must await further discussion, perhaps with more news from AERA's forthcoming season 2020, when we plan to return to the deep end of the MVT.

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NOTES

¹ Museum of London Archaeology Service (MoLAS), 1994.

² *OI 2017-18 Annual Report*, 87-98; Witsell 2018.

³ Reisner 1931, 35.

⁴ Hornung, Kraus, and Warburton 2006, 491.

⁵ *OI 2011-12 Annual Report*, 63-66.

⁶ Reisner 1931, 34-35.

⁷ Reisner 1931, 35. Until further analysis, I use the crude term "alabaster," whereas the material could be calcite, calcite alabaster, travertine, or gypsum.

⁸ The photo was pointed out by Dan Jones in Jones et al. 2019, 49-50.

⁹ Reisner 1931, 37.

¹⁰ Reisner 1909-10 Diary, vol. 1, February 8, 1910, 20.

¹¹ *OI 2017-18 Annual Report*, 93.

¹² Shepseskaf decree: Reisner 1931, pl. 19b, d; Urk, I, 160; Strudwick 2005, 97-98, no. 160; Goedicke 1967, 16-21; Papazian 2012, 108, 127-262. Shepseskaf's may be the earliest known example of such decrees.

¹³ Pepi II decree: Reisner 1931, 38, pl. A; Goedicke 1967, 148-80, abb. 12; Strudwick 2005, 106-7, no. 23; *Urk. I*, 277-78; Museum of Fine Arts, Boston 47.1654.

¹⁴ Reisner Diary, February 8, 1910 (ED10_02_020), on the same page and two sentences before the quote about backfilling (note 7).

¹⁵ Reisner wrote in his diary that he departed Giza for work at Girga and Mesaeed on April 14, 1910. He returned April 25 "and took up photography, packing and map making of the winter's work there" (Reisner Diary, vol. 2, 46). His account of work in his publication ends April 12; Reisner 1931, 38.

¹⁶ Arnold 1999, 67-68; Friedman 2008, 135-44.

¹⁷ Reisner 1931, 110.

¹⁸ Reisner 1931, 108-15, listed as many as twenty unfinished or uninscribed stone statues from the MVT. Some, like the dyad, were close to being finished. At least three of these unfinished statues show hints of haste, a haste that could reflect those couple of years, or less, when Shepseskaf switched from stone to massive mudbrick works in order to complete Menkaure's cult engine (Friedman 2018, 119-20).

¹⁹ Reisner (1931, 42) thought the dyad might have stood originally in the one long room 15 (he sometimes calls room 15 room 5) of the southwestern magazines (see fig. 3). This room was later divided into rooms 15-17-18. If the dyad stood in room 15, or the northern end of the long magazine, the dyad would have been nearly on the axis of the pyramid, upper temple, and causeway.

²⁰ See note 11. Friedman (personal communication) further pointed us to Reisner's reference in his 1931 publication, p. 110, twenty-one years later, to the find spot of the broken triad, his no. 14 = MFA 12.1515: "large fragment from the left, lower part of the back of a triad, seated figure in middle, and standing male figure on left of seated figure . . . Found in thieves' hole in room (III-4) in sand below the water-level, about 50 cm below base of the slate pair" [=dyad]. See for illustrations of this piece and discussion, Friedman 2011a, 27-28, fig. 5; 2011b, 93-96, figs. 2-3; 2015a, 95, fig. 1; 2015b, 19, figs. 2.1, 2.5.

²¹ Reisner (Diary January 19, 1910, 10) described each step of the dyad extraction in his diary entry for January 19, 1910: "The statue had to be lifted up about 2 meters onto the big foundation stone behind it. This was done by tilting from side to side and shoving stones under it . . ."

²² We thank Peter Manuelian and the Museum of Fine Arts, Boston, for making the Reisner Giza archive accessible: <http://www.gizapyramids.org>; <http://giza.fas.harvard.edu>.

²³ Reisner 1931, 35.

²⁴ Reisner 1931, pl. 30.

²⁵ Jones et al. 2019, 25-26.

²⁶ Reisner Diary, January 17, 1910, (ED10_01_009). Also, Reisner 1931, p. 52 referring to walls of Occupation c (3) wrote of "rooms (I-1) to (I-3), which were over room (III-17) and corridor (III-4); but the connecting masonry had been destroyed by the two enormous holes dug by Arab treasure-hunters."

²⁷ Jones et al. 2019, 21, fig. 31.

²⁸ Reisner 1931, 53-54.

²⁹ In the central, eastern part of the MVT, in room 377 (which I have called Vestibule 1), the floor level probably remained the same through three periods of occupation and during the time of both the First and Second Temples (Lehner 2015, 237-38). Reisner indicates that the floor level in the sanctuary, portico, and offering hall was raised by only 20-30 cm between the First and Second Temples (Reisner 1931, 45-46). On the other hand, Reisner described how the court had been buried by up to 1 m of debris (see his profile along the center axis of the temple—Reisner 1931, 48, plan x, center, section C-D) by the end of the occupation of the Second Temple. From the beginning of the First Temple, the original portico and offering hall were raised above the court, and a ramp was installed to *ascend up to these spaces* from the path across the court. By the end of the Second Temple, with the build-up of debris in the court, the path to the portico and offering hall now sloped *down to them from the east*. On the north and south of the temple's east-west axis, people built their occupation structures upon the truncated walls and debris filling the rooms of the First Temple, a much higher level than the entrance vestibule, the path between houses and bins and granaries in the court, and the sanctuary.

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KERKENES PROJECT

SCOTT BRANTING | kerkenesproject.org

In 1926–28, Erich Schmidt and Hans Henning von der Osten from the Oriental Institute conducted the first surveys and excavations at the late Iron Age site of Kerkenes in central Turkey. In 1993, investigations of this important site were continued, and April through July of 2018 marked the project's twenty-sixth year of renewed exploration (fig. 1). Wide-ranging financial sponsors of this work included the Merops Foundation, the National Science Foundation, and the National Endowment for the Humanities. During this season, the project completed over 12 ha of electrical resistance survey, revealing the buried walls and structures around the Water Gate and the Gözbaba Gate. We also undertook additional geophysical survey on the later Byzantine castle. Excavations were conducted in two different urban blocks in the northern part of the city, within Urban Blocks 7 and 8. Samples from these excavations and from prior years of excavation were prepared and exported in order to assist us in gaining a better understanding of daily life and production practices in the ancient city.

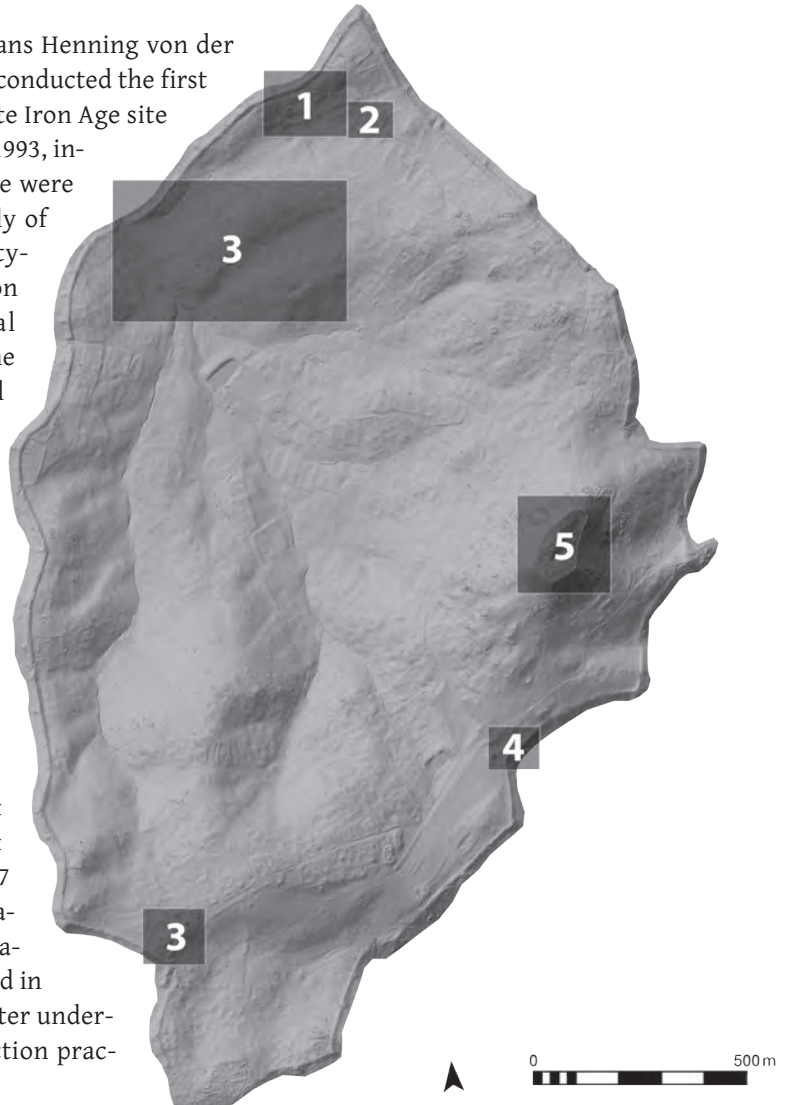
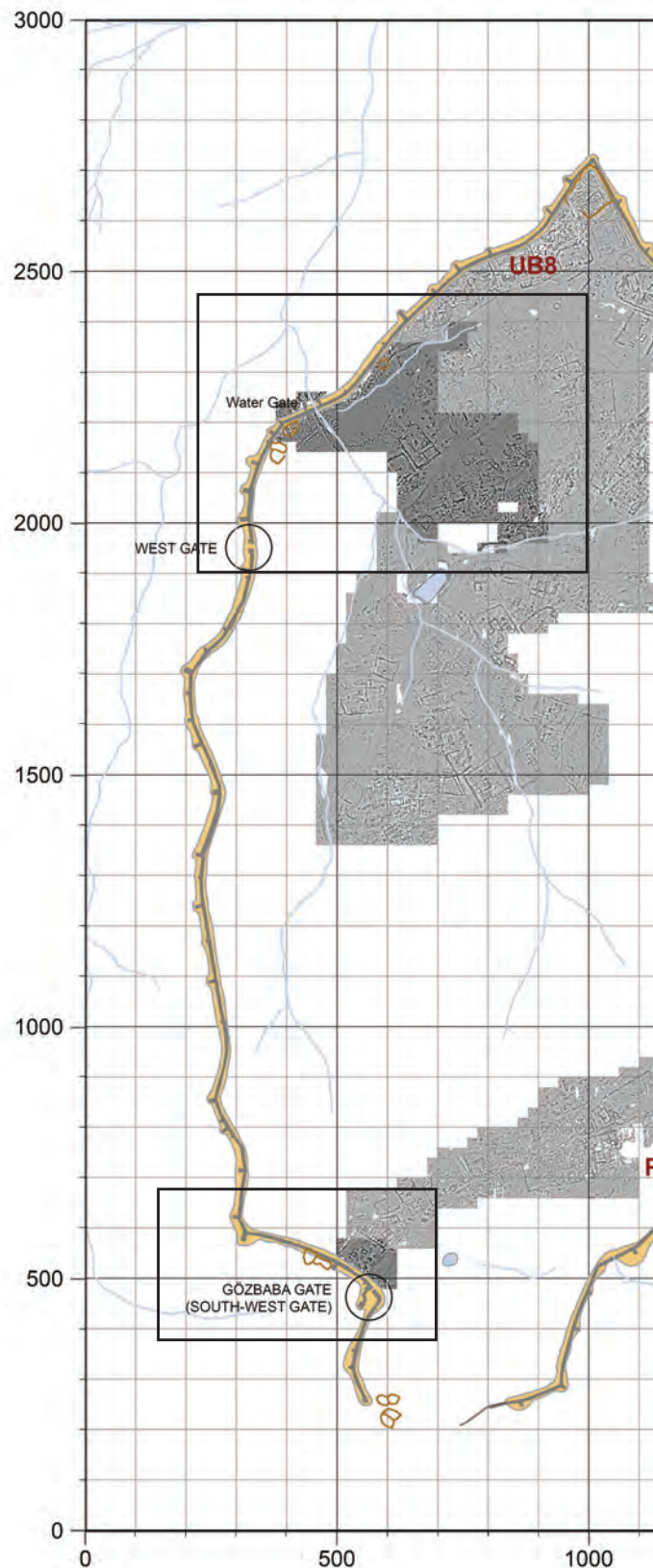


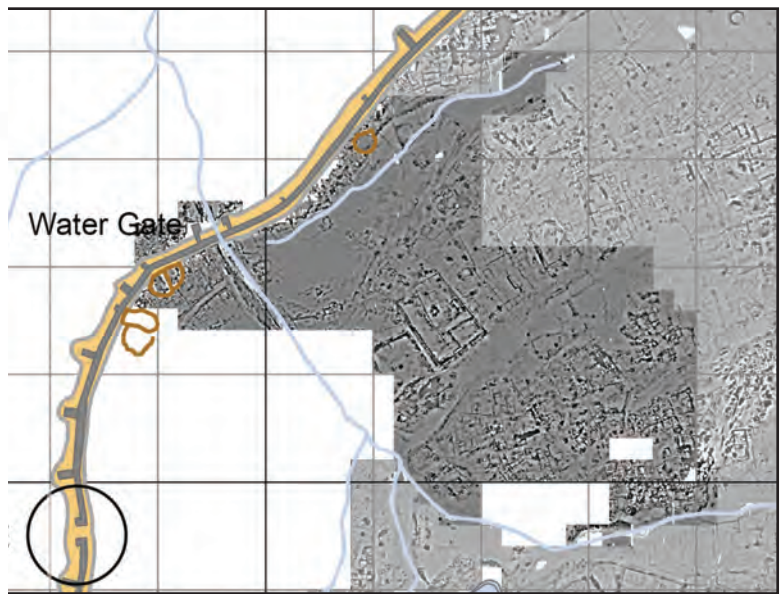
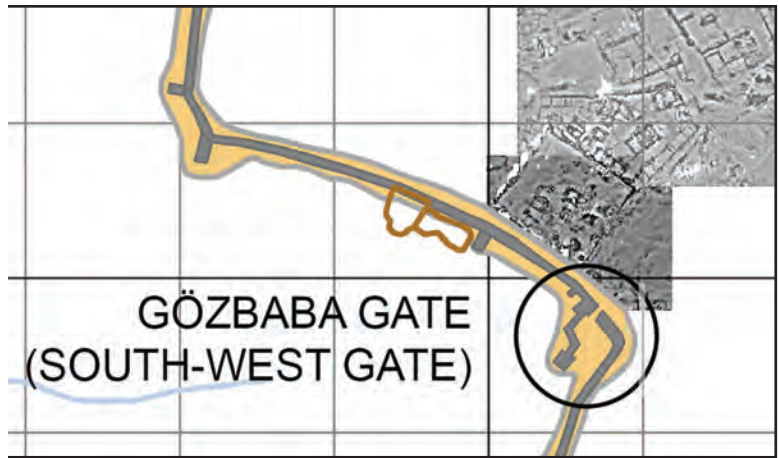
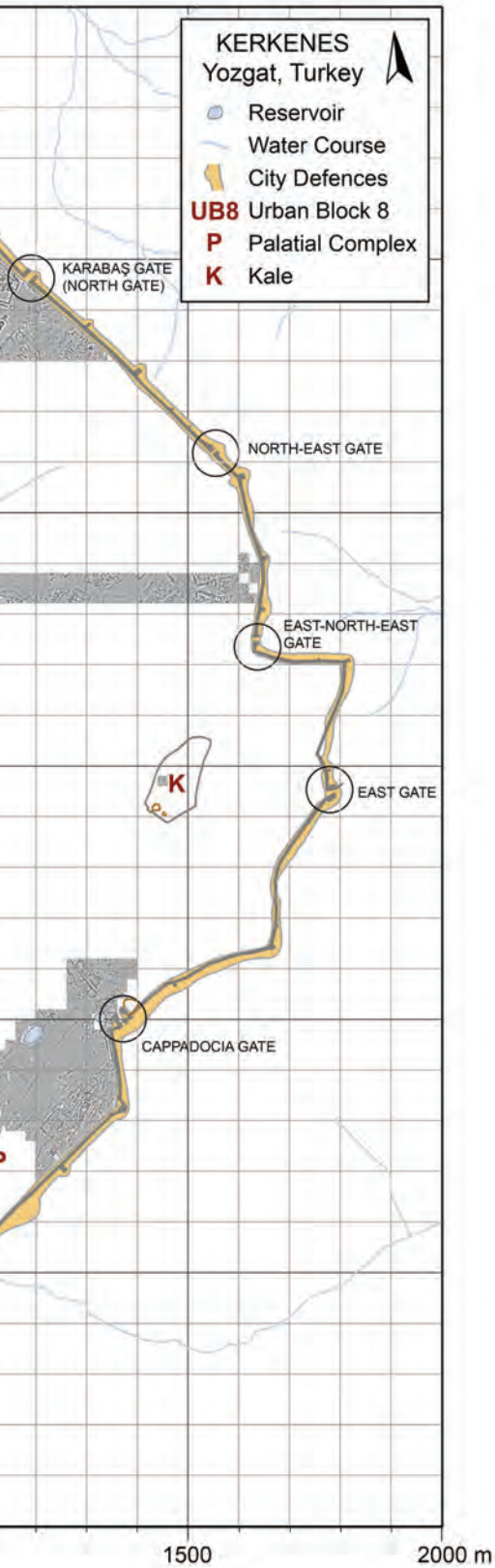
Figure 1. Map of the locations of work at Kerkenes in 2018: (1) Urban Block 8, (2) Urban Block 7, (3) the resistance-survey areas in 2018, (4) the Cappadocia Gate, and (5) the Byzantine Castle.

GEOPHYSICAL SURVEY

Our team completed twenty-five days of geophysics at Kerkenes between May 5 and June 5, ending when the ground became too dry for the resistance survey to continue. The resistance survey, working in two teams, surveyed a total area of 122,400 sq. m. (12.24 ha) (fig. 2). We undertook the survey in both the far southern area of the city, adjacent to the Gözbaba Gate (fig. 3), and in the north and west central area of the city, including inside and outside of the Water Gate (fig. 4). The area adjacent to the Gözbaba Gate was an area of particular interest, given the evidence from earlier excavations for larger-than-household-scale bread production in these urban blocks. It also completed the full survey of the immediate vicinity of the main street leading from the Cappadocia Gate to the Gözbaba Gate via the Palatial Complex. We plan to expand the survey in this area of the city in future seasons. The area inside and outside the Water Gate continued our multi-year survey in the north-central portion of the city. It is a revealing building-by-building plan of the northern half of the city. The project also undertook extensive groundtruthing of the surveyed data at the Water Gate in partnership with students from Abdullah Gül University's Department of Architecture.

Additional geophysical survey was undertaken, utilizing Electrical Resistance Tomography (ERT) methods, up on the later Byzantine Castle. Two long transects were surveyed in this manner along the length of the castle. The results provide us with a preliminary idea of the depth of the bedrock within this area of the city as well as an idea of how it undulates beneath the surface. The bedrock appears to be within 2 m of the surface of the ground and is largely level, other than a deep cut for a large cistern that was in use within the castle. These results indicate that the present-day elevation of the castle is not far off the raised area that would have existed in this part of the city during the Iron Age. We plan to expand this work in future seasons and to attempt to map the buildings within the castle.



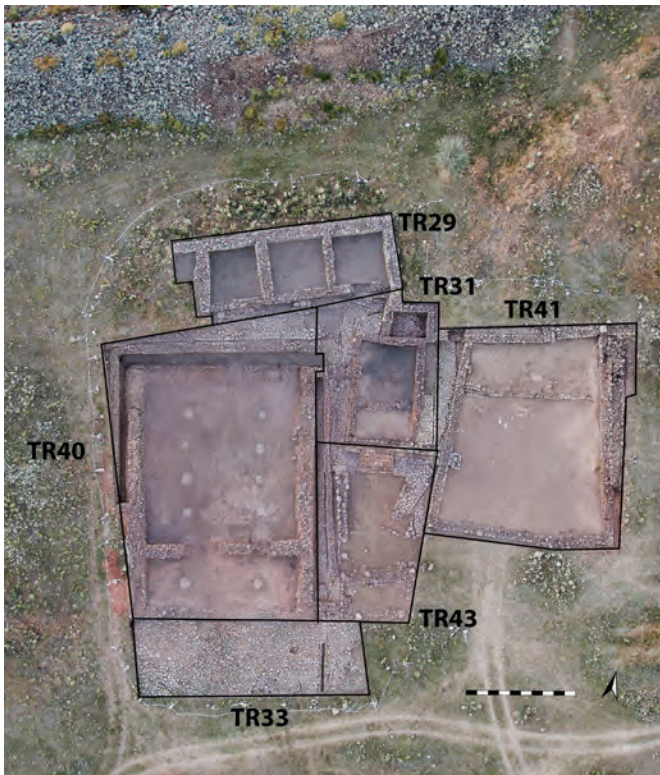


LEFT: Figure 2. Results of the 2018 electrical resistance survey within the city. TOP: Figure 3. Results of the electrical resistance survey near the Gözbaba Gate. BOTTOM: Figure 4. Results of the electrical resistance survey near the Water Gate.

EXCAVATION

We excavated at Kerkenes in May, June, and July. Work took place in three trenches: Trench 41 (TR41), Trench 43 (TR43) (figs. 5 and 6), and Trench 44 (TR44) (figs. 6 and 7). TR41 and TR43 are located within Urban Block 8, while TR44 is located 125 m away in Urban Block 7 (fig. 6). All three of the trenches are located in the northern portion of the city. Urban Block 8 is a large urban block among the circa 757 urban blocks at Kerkenes, covering a total estimated area of 6,000 sq. m. Urban Block 7, in contrast, is a small urban block, covering only a total area of 600 sq. m. By excavating sections of both urban blocks in the same manner and using the same methods, we will be able to make a preliminary comparison of the use of space in large and small urban blocks. Excavations within Urban Block 8 have so far uncovered a large contiguous area of 1,650 sq. m, a little over one quarter of the urban block, revealing a range of different activity areas that speak to how the ancient inhabitants of the city used this urban block.

TR41 is a large trench, 370 sq. m, on the eastern side of Urban Block 8. It lies directly to the east of a paved area alongside the main building in Trench 31 (TR31) and to the west of what appears to be the eastern urban block wall. The western edge of the trench extends just beyond a north-south wall that demarcates the eastern edge of the paved area in TR31. The entire space is an outside, unroofed space. The main area within the bounding walls of TR41 is separated into two distinct areas by an east-west terrace wall. The northern raised terrace area is smaller, 64 sq. m. It likely was raised to level off an area for activities around an outcrop of protruding bedrock. The southern, lower area is much larger, 185 sq. m, with the bedrock outcroppings in the north-central portion of this area at a much lower level. The east-west wall that bounds the southern end of this area may also have a terracing function. Future excavation to the south will clarify the nature of this wall.



Excavations in the northern terrace were completed in 2017, while the excavation of the southern area and the top of the southernmost wall were completed in 2018. Two staircases were uncovered in TR41. One staircase of four steps is at the westernmost end of the east–west terrace wall. It provided people access between the terrace and the southern area without having to climb the terrace wall. The second staircase, comprising two steps, is alongside the north–south wall at the midpoint of the southern area. It provided access over that wall and into the outside paved areas of TR31 and TR43. Two sandstone blocks, found along the north–south wall near the midpoint of the terrace, might have also functioned as a step. If so, it would have provided access from the terrace directly into the paved area on the other side of that wall.

Throughout both the terrace and the southern area, we found scattered evidence for badly eroded surfaces. These areas may have been left exposed for some time after the destruction of the city until surrounding structures and the top courses of the surrounding walls collapsed in on them. As in years past, the team collected extensive soil samples in a hexagonal lattice across both areas at the level of the original surfaces. These soil samples have been floated, and analysis of the recovered material may reveal more detail as to the range of activities that took place on these outside surfaces. While pieces of metal, pottery, and bone were recovered throughout the southern area, two notable finds were discovered in the southwestern corner of this area. These were an iron awl and a copper alloy arrowhead.

LEFT TO RIGHT: Figure 5. Aerial photograph of the excavation areas of Trenches 41, 43, 33, 40, 29, and 31. Figure 6. Aerial photograph of the excavation areas of both Urban Block 7 (foreground) and Urban Block 8. Figure 7. Aerial photograph of Trench 44.



TR43 is a trapezoidal trench that encompasses a roughly 16.4 m × 9.7 m, previously unexcavated gap between Trench 33 (TR33), Trench 40 (TR40), TR31, and TR41. TR43 includes a southern continuation of the slot area, the northern end of which we excavated last year within TR31. This slot is a narrow (ca. 1 m wide) paved area along the outside of the eastern wall of the large columned building in TR40 (fig. 8). Unlike the bin area to the west of that building, the slot area was closed on its northern end in TR31 by a short east–west cross wall. A drain ran down the length of the slot, and both the paving and the drain continued along the western side of TR43 until ending in an east–west cross-wall just short of the southern end of the trench. The drain continued under the wall before meeting up with the covered drain excavated within TR33 in 2014. We discovered modifications to the end of the slot during its use life, including the removal of a portion of the paving and the wall on the east side of the slot. These modifications, along with an apparent rectangular enclosure in the southern end of the trench, will be the focus of further investigations.

In northern end of TR43, to the east of the slot, we uncovered a large and impressive T-shaped sandstone staircase (fig. 9). It measured 7.6 m × 3 m and comprised multiple worked sandstone blocks arranged into a five-step staircase. A cut posthole found in the sandstone blocks flanking the northern end of the central stair, and extending across most of the northern end of TR43, suggests that the stair might have originally been underneath a wooden porch. During the destruction of the city, this porch may have burned to the ground, exposing the sandstone steps to the extensive weathering of its constituent blocks that we found during excavation. This impressive staircase runs up to the southern wall of the main building in TR31. This suggests the presence of a doorway in this southern wall and that this building was of some importance. The preservation of the southern wall had left in doubt the presence of such a doorway when we originally excavated TR31. This is certainly the most impressive entrance feature, if it is one, so far found on any building within this urban block.



Stone paving abuts either side of the central stair and extends to cover the northern end of the trench. On the eastern side of TR43, the paving continues down into the middle of the trench, outlining an open area at the base of the steps. To the west, on the eastern side of the eastern wall of the slot, and to the east, along the eastern edge of the trench, drains flow downhill through this area. Both drains connect with drains encountered in previous years in the paved areas above them in TR31. Additional excavation in the southern end of TR43 may help better clarify how the drainage system for this area functioned.

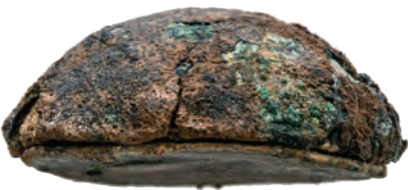
We found one-third of the finds from TR43 in close proximity to the staircase. This includes a small number of ivory and bone inlays, as were found in TR40, as well as a small metal weight (fig. 10). The inlays may have come from inside of the building in TR31, may have been part of the porch that covered the staircase, or were from items under the porch. We discovered pottery and bone in particular concentrations near the foot of the staircase, and an iron sickle was found on the stone paving near the easternmost drain within TR43. We also found iron tool fragments within the extension to the slot in western portion of TR43.



OPPOSITE LEFT: Figure 8. The excavated slot area in Trench 43. ABOVE: Figure 9. The sandstone staircase and northern end of Trench 43.

Finally, we opened a third trench, TR44, covering 33.5 sq. m within Urban Block 7. This is a much smaller urban block, 125 m to the east of Urban Block 8. In 2011, geophysical survey identified a row of rooms built along the southwest edge of this urban block. We used the geophysical data to situate TR44 to reveal one of the interior rooms within this row (fig. 7), a room that the survey showed as possessing a floor with higher electric resistance values. Excavation of the room revealed a bedrock outcropping partially used for the floor of the room, and a good state of preservation of material within the room. This included a small almost complete jug, a glass bead (fig. 11), and a footed bowl. We also discovered a green rectangular stone stamp seal within the room (fig. 12). This is the first seal that we have found at Kerkenes, providing the first evidence of bureaucratic practices that we have so far only been able to assume took place within the city. Given the level of preservation within TR44, Urban Block 7 will no doubt see additional excavations in the future.

In each of the trenches, daily and final recording was undertaken using 3-D modeling and photogrammetry alongside traditional recording techniques. The use of 360-degree cameras, pioneered last year, saw widespread usage for daily 3-D models in 2018. We also began to build on these digital recording methodologies by undertaking a new augmented-reality software-development project in 2018. We field tested new software that we had designed to allow archaeologists to start to use augmented-reality headsets in order to make digital drawings and plans in the excavation areas (fig. 13). We want to continue to develop and perfect this methodology in future seasons.



TOP: Figure 10. A small metal weight from near the sandstone staircase in Trench 43. MIDDLE: Figure 11. A glass bead from Trench 44. BOTTOM: Figure 12. A green stone stamp seal from Trench 44.



CONSERVATION AND LABORATORY ANALYSIS

Conservation efforts continued in 2018, both on site and in the excavation depots. The team performed annual cleaning and maintenance in areas of earlier excavators' work at Kerkenes, including the Cappadocia Gate and the Palatial Complex. We also undertook repairs to fencing and to the signs throughout the 271 ha of the site. In the excavation depots, the project's conservators were active in cleaning and conserving new objects from the excavations. They also welcomed a conservation student trainee from Batman University, who undertook basic conservation tasks under our conservators' watchful eyes. The training of students from Turkey and abroad has always been a part of the Kerkenes Project, and we enjoyed expanding that this year into the realm of conservation.

Team specialists also were active in processing material from the excavations, working closely with the conservators on their long-term preservation. Continued flotation of soil samples collected within key contexts over the past two years was completed, and the team finished sorting almost the entire heavy fraction from the bin context in TR40. By their painstaking efforts, our team recovered additional fragments of ivory, bone, and metals linked to the finds in this important context. Coordination between experts working with the various types of material within the soil-sample grid in room 5 of TR31 continues to also yield important information beyond what was seen when it was first excavated. A few malted-barley seeds found in the light fraction, combined with the grindstones and pouring vessels recovered during excavation, may help our team to piece together some of the activities that once took place within this room.

Finally, work also continued on the larger-scale conservation plan for the Cappadocia Gate. Data from the continued monitoring of shifts in the freestanding walls, recovered by the team through photogrammetric analysis of drone photographs, was used together with an engineer's site visit this summer to check the feasibility of the current conservation plan. With the wooden structure that once supported the walls in antiquity, burned completely in the fire that consumed the city, few options remain to try and preserve the structure. Final plans are being drawn up for submission to the commission overseeing all such efforts.

FACILITIES AND INFRASTRUCTURE IMPROVEMENTS

Our team continues to make significant improvements to the facilities within the excavation compound in Şahmuratlı village. We completed the garage in 2018, which was needed to protect the project vehicles and to provide additional storage for tools and equipment. The roof of the new garage also proved to be an excellent water-collection device when it rained, and a newly installed rain-barrel system helped collect that rainwater for use by the project's flotation-machine setup. Water access has been an issue for not only the excavation compound but also the entire village throughout the years, and our growing system of rainwater barrels have helped to elevate our pressure on the limited water resources. However, during the 2018 season, the entire village saw upgrades to its water-management system provided by the Sorgun Regional Governor and his officials as part of a regional improvement initiative within rural villages. For the first time, the village has central water and sewer lines! These needed improvements not only will benefit the project for the three months that we are in the field, but, more importantly, they will benefit the village all year long.

Additional maintenance and repairs were carried out this season in the excavation compound and on the roads leading up to Kerkenes Dağı. Metin Kayhan, the Sorgun special administrative director, with the support of the Sorgun regional governor, undertook repairs on the extension of the road that leads up to the archaeological site. Meanwhile, the team made necessary repairs

to roofs and structures in the excavation compound. We also installed new shelving within the large workspace area in the upper depot, an area that the project’s senior research specialists use for research and collaboration.

OUTREACH

Outreach continues to be a priority for the Kerkenes Project. During 2018 we completed work on the most recent Kerkenes News, a Turkish-English biannual publication detailing work during the preceding two-year period. We also presented the results of the 2017 excavations at the 40th International Symposium of Excavations, Surveys, and Archaeometry in Çanakkale. We hosted a lecture and a visit to the site by students and teachers from the Mehmet Akif Ersoy Ortaokulu, building on last year’s outreach efforts in Sorgun (fig. 14). In addition, we participated in the science fair held at the middle school. Finally, we hosted visits from guests wanting to see the site. We gave special site tours in 2018 to the Yozgat governor, the Sorgun subgovernor, and a member of the Japanese Embassy.

BELOW: Figure 13. Field testing the field drawing software in the augmented-reality headset. OPPOSITE: Figure 14. Students and teachers from the Mehmet Akif Ersoy Ortaokulu trying the augmented-reality headset while visiting Kerkenes.



ACKNOWLEDGMENTS

We are very grateful for the support of the Ministry of Tourism and Culture during the 2018 season. In particular, we are deeply indebted to Yılmaz Ergi from the Diyarbakır Kültür Varlıklarını Koruma Bölge Kurulu Müdürlüğü, who served as our ministry representative. We received excellent advice from Hasan K. Şenyurt, director of the Yozgat Museum, and the entire museum's staff helped to facilitate this work. In addition, we received support from the Yozgat governor Kemal Yurtnaç, the Sorgun district governor Dr. Mustafa Altınpınar, the Sorgun mayor Murat Gürbüz, 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 Merope Foundation, and the University of Central Florida. Our team included collaborators and students from the University of Chicago, University of Central Florida, Istanbul Technical University, Abdullah Gül University, FORTH Institute of Mediterranean Studies, Koç University, Arizona State University, University of Groningen, Boston University, University of Toronto, University of Connecticut, University of Arizona, University of Tirana, Batman University, and Middle East Technical University.



MUMMY LABEL DATABASE (MLD)

FRANÇOIS GAUDARD

On the occasion of the Oriental Institute centennial, François Gaudard, Raquel Martín Hernández, and Sofía Torallas Tovar contributed an article on the Mummy Label Database, which consists of a description of the characteristics, role, and appearance of mummy labels; a presentation of the project; and an introduction to the mummy labels in the Oriental Institute Museum (see below).

On July 13, 2018, Sergio Carro Martín and Alberto Nodar met with the IT specialist and programmer of the project at the University Pompeu Fabra (Barcelona), where the MLD is hosted. Among other things, they discussed the progress made with the codification of Greek and Demotic texts.

One of Klaas Worp's latest philological contributions to the MLD consists of a rereading of the word *θυροπᾶνης* as *θυροπ<ώ>λης* "rush-seller" (see LSJ 807b) in T. Berlin 13513, lines 3–4, based on a digital photograph of this mummy label.

We are glad to announce that our team member Alba de Frutos García (Universidad Complutense, Madrid) was awarded the prize of the Fundación Pastor de Estudios Clásicos 2018 for her PhD thesis, entitled "Profesionales de las necrópolis en el Egipto ptolemaico" ("Funerary Workers in Ptolemaic Egypt"), which she defended on September 14, 2018. Alba also delivered a lecture on this topic at the Department of Classics of Brigham Young University (Provo, Utah), on June 19, 2018.

RELATED PUBLICATIONS BY TEAM MEMBERS

The following articles have been published or submitted:

- Raquel Martín Hernández, "Faience Mummy Labels Written in Greek," *Zeitschrift für Papyrologie und Epigraphik* 208 (2018), 193–202.
- 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.
- 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*, eds. Sandrine Vuilleumier and Pierre Meyrat (Gollion: Infolio, 2019), 63–70.
- 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).

NOTE

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): <https://oi.uchicago.edu/research/projects/mummy-label-database-mld>.

NIPPUR

MCGUIRE GIBSON

In what was most probably my last trip to Iraq, in September of 2018, I went to Baghdad to consult with the officials of the State Board of Antiquities to assure them that the Nippur expedition was continuing after a long pause, and that the five-year plan I had submitted in 2017 would be honored. Although we continued to pay the guards and do repairs on the expedition house, we had not been able to work at the site since 1990. The Kuwait Crisis, the Gulf War of 1991, and the continuation of sanctions throughout the '90s meant that we could not resume work. I had deposited several trunks of books, equipment, and surveying instruments with a friend in Baghdad in 1993, but we had left tables, chairs, storage shelves, digging equipment, wheelbarrows, and other items in the house. It was clear, when I visited in about 2012, that most of these things had gradually disappeared, despite having not only our guards but also government guards residing on the site.

It became possible for foreign archaeologists to work in the north of Iraq after 2007, but the security situation in the south, especially given the existence of ISIS, did not allow us to return to Nippur. I wrote for permission to return in 2014, but was advised to wait. Finally, in 2017 we had the first glimmer of a green light. But, the condition of the expedition house was such that a lot of repair was necessary, so in that year, I made a contract with a local builder (who years earlier had been one of our expert diggers) to rejuvenate the house. In September 2018, I went to Nippur to inspect the work and found that there were still major repairs to be done. For a minute, I thought that some of our equipment had not been lost from the house. But, I then found that five rooms of the house were being used as storage for equipment of Iraqi teams that were working in the general area. Given the fact that we proposed to return to work at Nippur later in the fall, I asked that this equipment be removed. And I made a new contract with the same builder to complete the renovations so that the expedition could come in to use it.

Then, having decided to retire as of January 1, 2019, I turned over the excavations at Nippur to Abbas Alizadeh, who went in ahead of his group to buy furniture and equipment once more. He details his work of the new season at Nippur elsewhere in this publication. I continue to work on the manuscripts that will become final reports on the excavations I carried out at Nippur, and I hope to complete them in about three years.

The other site that I am working to publish is Umm al-Hafriyat, a site about 30 km east of Nippur that I dug in 1977. Bob Adams, returning to Nippur one afternoon in 1973, at the end of his survey season and just as we were beginning our work, reported finding “the biggest damned Akkadian site” he had ever seen and that it was full of looter holes. Given my keen interest in the Akkadian period (2350–2200 BC), I decided to visit it soon, and although Adams had not been able to put a name on the site, he said that the driver, Jabbar Nasser, would know which one it was if I described it. When I mentioned the looting, Jabbar immediately said “Oh, umm al-hafriyat” or “mother of holes.” On a Friday, which is a day off in Iraq, we drove out over the desert to the east of Nippur and reached the site in about a half hour. One part of the site was being badly damaged by looters, with whole pottery vessels and even metal tools thrown out along with bones, obviously from graves. I went to Baghdad the next week and asked permission from the State Board of Antiquities to do a salvage dig the next year, to save it from further looting. They, however, wanted me to continue at Nippur. I kept going

back to see the continued looting, and each year I asked for permission once again. Finally, in 1977, they granted the permission. We bought tents in Chicago, and when I got to Baghdad, I had tentmakers create five more. We hauled a truckload of tents and equipment and twenty-five workmen out to the site and excavated from October 8 until December 12, 1977. Our intention to return for another season in 1978 was impossible due to the obligation to work in the Hamrin Dam Salvage project for two years. We never had the opportunity to return. Again, each year thereafter, I visited the site and saw a bit more looting each time. My final view of Umm al-Hafriyat was from a U.S. Navy helicopter in May 2003 as part of a quick tour of sites in southern Iraq to assess the condition of major sites. In that visit to Umm al-Hafriyat in 2003, it was clear that there was no active digging going on, although the entire site was riddled with holes. It was apparent that these holes were made during the 1990s, when the State Board of Antiquities could not police the sites. During that helicopter tour, at each of the other sites, such as Adab, Umma, Umm al-Aqarib, and Isin, we counted as many as two hundred men at work. It was months later that the digging was halted at most sites.

Our one season at Umm al-Hafriyat yielded some surprises. It was not the biggest Akkadian site ever seen, but was in fact a relatively modest town that moved its location several times. The illusory size of the Akkadian occupation, like those of later periods there, was the result of the fact that strewn over the plain were at least four hundred pottery kilns, almost half of which were Akkadian in date. Richard Zettler, with Jill Carlotta Maher, conducted an intensive pickup of sherds on the surface, which showed the general pattern of kilns and over-fired wasters around them. They also established that there were as many kilns datable to the Ur III and Isin-Larsa periods (2100–1900 BC), and that there was even a brick kiln of the Ur III period. In addition, there were in one area of the site two small villages of the Kassite (ca. 1300 BC) and Seleucid (ca. 250 BC) periods, with a few kilns of their own. It seems that the inhabitants of the town shifted their houses when the buildup of ashes in the streets and courtyards became a nuisance. The inhabitants put up with the ash probably because of the exceedingly fine quality of the clay at the site that made it a locus for pottery making. In the 1980s, we were able to take out equipment and map in each of the kilns precisely and date them by the pottery at each one.

I have been putting off the publication of this site for far too long, but now I am actively working on it. Richard L. Zettler and James Armstrong, former students and members of the expedition who supervised the major operations at the site, are working with me to get it done. John Sanders, the Nippur architect, has done detailed plans of the site, and his wife Peggy Sanders as well as Augusta McMahan (then a student) prepared expert drawings of the important objects found. Patti Deres was the photographer for the project, and her husband John Mooney kept records. Stephen Lintner was the geomorphologist, taking soil samples and working to establish an environmental picture through time. Of great importance in the group were Hussein Ali Hamza and Daniel Ishak, the representatives of the State Board of Antiquities, who facilitated our living in the desert. Also important were Jabbar Nasser, the driver, who kept us supplied; Muhammad Jodah, the major domo; and the cook, Muhammad Abid, and his assistant, Karim Abdullah; as well as the twenty-five Iraqi men who did the excavating.

This publication will be important because of the information it gives on the history of environmental change through six thousand years, plus the contribution it makes to our understanding of chronology. And there are very fine cylinder seals and other objects to add to the artifactual record. Perhaps, most important, our work gives a view of a town carrying out an industrial operation, pottery making, that is rarely possible to view in Mesopotamia.

I wish to express my gratitude to all those who, in the past, have encouraged our work and have given, financially, to support it. The Institute's fieldwork depends in great part on the generosity of such supporters.

NIPPUR EXPEDITION

ABBAS ALIZADEH

The 1991 invasion of Iraq was disastrous not only for the country but also for all the archaeological projects, including the Oriental Institute's Nippur expedition. Thanks to the efforts of McGuire Gibson, the former director of the expedition, and Christopher Woods, the director of the Oriental Institute, we secured a permit and resumed archaeological research at Nippur in April of 2019, after twenty-nine years of hiatus. During this hiatus, all the previous excavation areas had been filled, the dig house had been ransacked, and all the tools and furniture had been looted. The dig house is now restored and furnished, and the necessary tools are purchased.

The OI appreciates the financial contributions provided by its members and partners that have helped to support the resumed excavations at Nippur over of the past year. Special recognition is given to Catherine Novotny, Howard Hallengren, and an anonymous donor who established the endowed Ancient Near East Research Fund, all of whom provided major gifts this year for the important archaeological work by the OI at Nippur.

Because the entire post-Saddam Iraqi government has been changed and some new rules and regulations are implemented, the 2019 season of excavations was an exploratory one to assess the working conditions and feasibility for major exploration at the site. Accordingly, in the twentieth season we had a small team consisting of Abbas Alizadeh, director and field archaeologist; John Alden of Michigan University, field archaeologist; Andrew Wright of the OCHRE Data Service project, database manager, and drone operator; Hussein Hamza, a seasoned Iraqi foreman; three government representatives; and eight local workers. Chris Woods and Jean Evans joined us for a week at the end of the season.

Much of Nippur had always been covered with sand dunes, but now most of the dunes are gone, providing a great opportunity for us to prepare a new topographic map and high-resolution aerial photographs of the site using a quadcopter (fig. 1). The new images clearly show all the previously explored areas, robber trenches, and all the surface features that were hidden under the dunes, including the stumps of Ur III/Old Babylonian house walls on the southern tip of the West mound as well as an 80 m stretch of the remnants of the city wall there that had been exposed in 1892 by the Pennsylvania expedition (fig. 2).

Nippur was extensively pierced by tunnels and trenches, some 100 m long, from 1889 to 1900 by the Pennsylvania expedition. The massive amount of excavated dirt was deposited around the tunnels and trenches covering large areas of the site. The Oriental Institute expedition that began in 1948 also excavated large areas on the East and West mounds with huge amounts of back dirt. While in some parts of the mound, especially around the ziggurat, it is easy to distinguish the back dirt covering the actual mound, in many areas it is almost impossible to do so at ground level. The new aerial images are excellent guides in distinguishing the areas covered by the back dirt from the actual mound, which immensely help in choosing pristine areas for excavation.

The city of Nippur is divided into two parts by a wide northwest-southeast ancient irrigation canal, known as East and West mounds (fig. 1). Since irrigation canals were also used as waterways connecting population centers in southern Mesopotamia, it is reasonable to assume that quays and warehouses existed on the banks of the canal to receive, store, and distribute goods brought to the

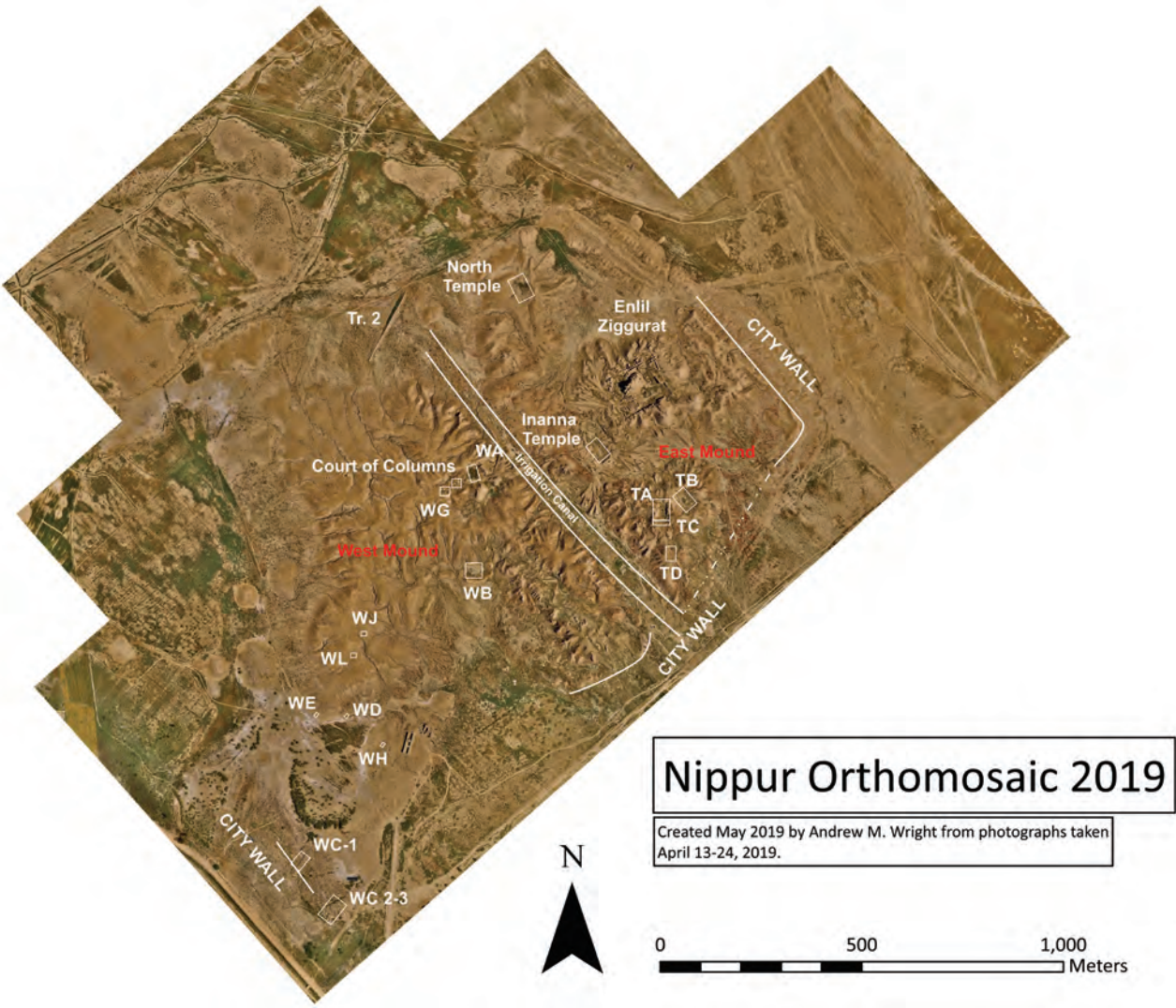


Figure 1. Aerial Image of Nippur showing all the areas excavated from 1948 to 2019.

city by boats. Since such structures have not been located at Nippur, we initially considered the idea of excavating a pristine area of the site on the western slopes of the East mound. But because such an operation required a much longer season, we decided to postpone this operation until the much longer season in 2020.

In the 2019 season, therefore, we chose two areas on the southern part of the West mound where surface signs pointed to the presence of architecture. Following the established tradition, we designated these two areas as WJ and WL, W standing for West mound—WK had been assigned to an area with traces of square mudbricks but was not excavated.

The main feature in WJ consisted of a north-south wall whose uppermost preserved layer was made of square and rectangular baked bricks of different sizes that seemed to have been cannibalized from other buildings in the area (fig. 3). The pottery associated with this latest phase belonged to early Islamic times (fig. 4). The baked brick wall had been built on top of a mudbrick wall that belonged to a late Sasanian house of which we only excavated its courtyard and the three fragmentary

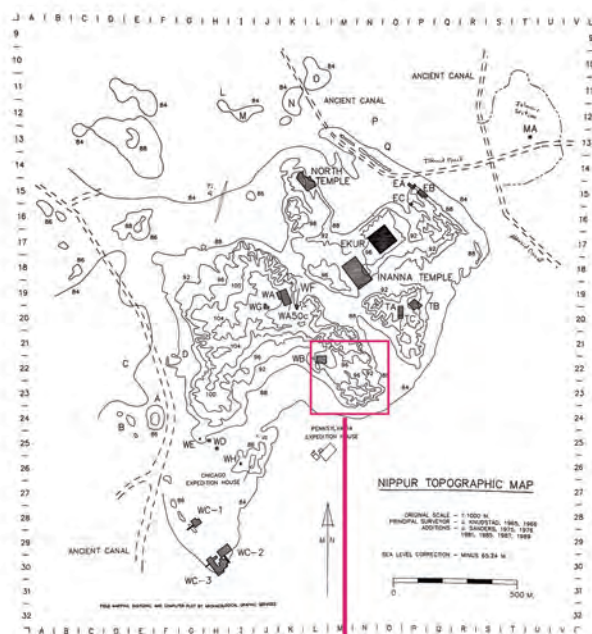


Figure 2. Aerial image of the southern tip of the West mound showing remnants of Old Babylonian walls and parts of the city wall excavated in 1892 by the Pennsylvania Expedition.

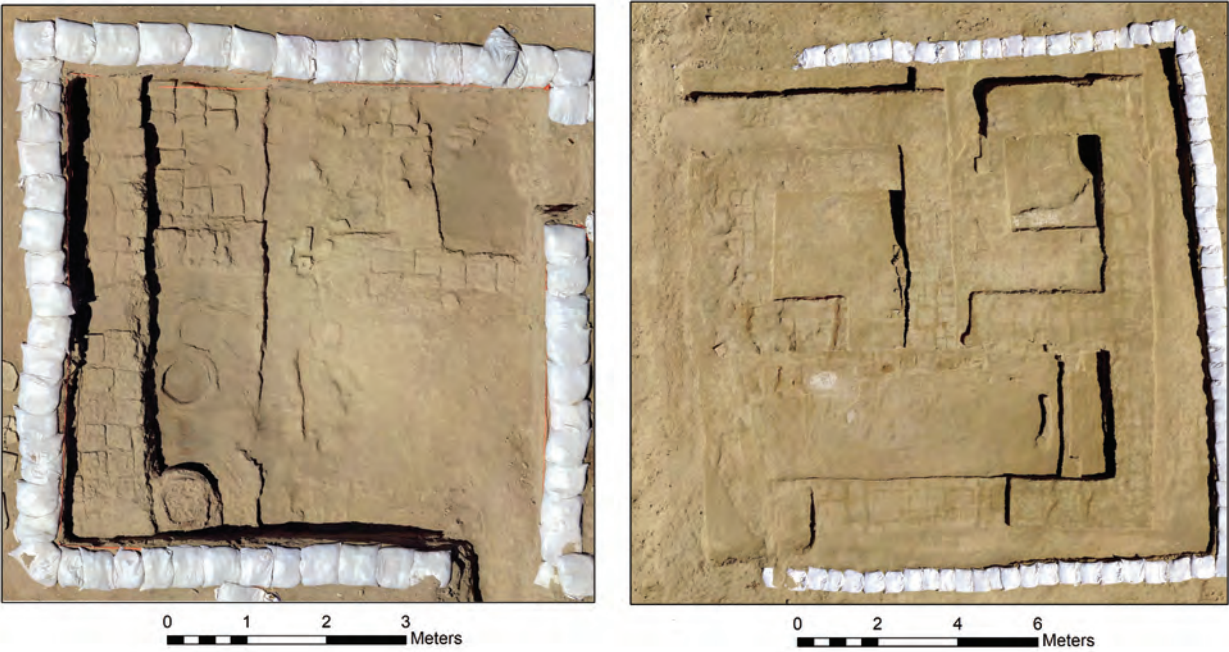


Figure 3. Top views of Trench WJ (LEFT), and WL (RIGHT).

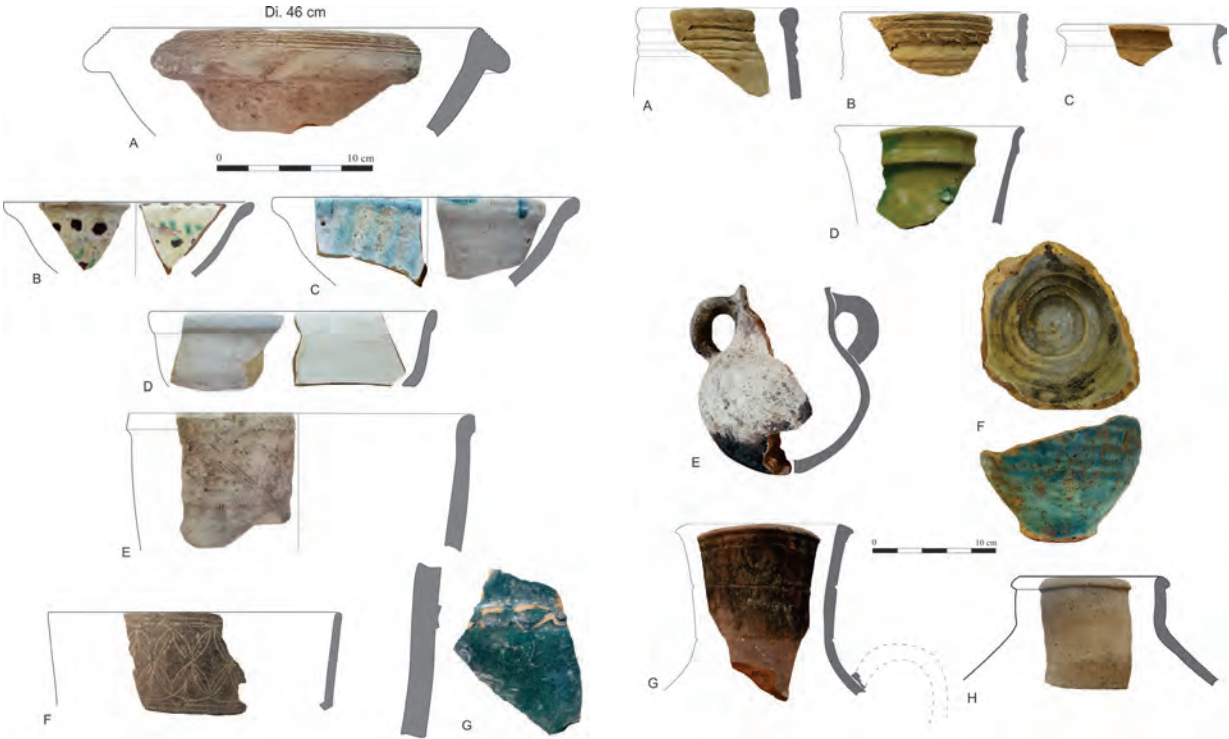


Figure 4. Left column A-G: early Islamic and Sasanian pottery from WJ (F: a steatite vessel). Right column: A-H Parthian pottery from WL.

walls surrounding it from the north, west, and south. Two bread ovens and burnt patches with ash were found in this courtyard.

Some 60 m southwest of Square WJ, traces of a major mudbrick building were visible in the aerial photos. We chose this area, WL, as the locus of our second operation. Here we uncovered a monumental building with walls between 1 m and 1.2 m thick with rectangular mudbricks and thick mortar (fig. 3). The bricks were made of sandy clay without any straw. As such, these bricks were fragile and difficult to articulate without the thick, 3–4 cm, mortar of darker shade that bonded them together.

A wide gully had cut much of the western part of this building, and we were able to excavate only two-thirds of the entire structure. Based on this exposure, the building consisted of a southern long room/hall with an entrance in the west of the southern wall, and two square rooms to the north. Traces of mudbricks under the remains of the uppermost phase indicated that this building was much bigger than what we were able to expose. In the exposed area, we distinguished three phases of walls and associated floors. All belonged to the late Parthian period (figs. 4–5).

The two floors we found associated with the walls were almost devoid of pottery and objects. In the long hall to the south and the eastern square room to its north, we found three clusters of broken pots. Surprisingly no bone or bone objects were found in the entire excavation areas, but fragmentary glass vessels were numerous. Two copper coins with completely eroded features were found in the square rooms.



Figure 5. LEFT: Parthian bronze pin (A), glazed jar and lamps (C–E), and a fragmentary incantation bowl with Arabic inscription (B), not to scale; RIGHT: Neo-Babylonian baked tablet of a house sale's contract, found on the surface of the East mound.

Both WJ and WL provide excellent contexts to explore domestic architecture in Parthian and Sasanian Nippur in future seasons.

ORIENTAL INSTITUTE NUBIAN EXPEDITION (OINE) PUBLICATION PROJECT

LISA HEIDORN AND BRUCE WILLIAMS

With the acceptance of OINE 14, 13, and 12 and the editing of volume 14 awaiting publication, activities for the Medieval Serra East and Dorginarti Fortress phase of the project included continued work on the Dorginarti database by Lisa Heidorn and the finalization of the 3-D reconstruction of Dorginarti by Nadejda Reshetnikova. We moved again to volume 11 on Serra East Fortress, and especially its seal impressions, but also beginning a process of updating the manuscript, adding color photographs, of both the excavation and the objects. Working in the lab rather than the field can often have surprises, great and small, as these reports have shown over the years. Our volunteer photographer, Larry Lissak, who has been photographing masses of sherds from Serra East for the databases made one discovery this year, of a decorated stand. Serra East had its own pottery industry, and one simple stand apparently made there was incised, probably by a Nubian employed at the fort, with a herd of goats running around the shaft.



Figure 1. Dorginarti Level III-IV fortress from the east, ninth-early eighth centuries BCE. 3-D rendering by Nadejda Reshetnikova, 2019.

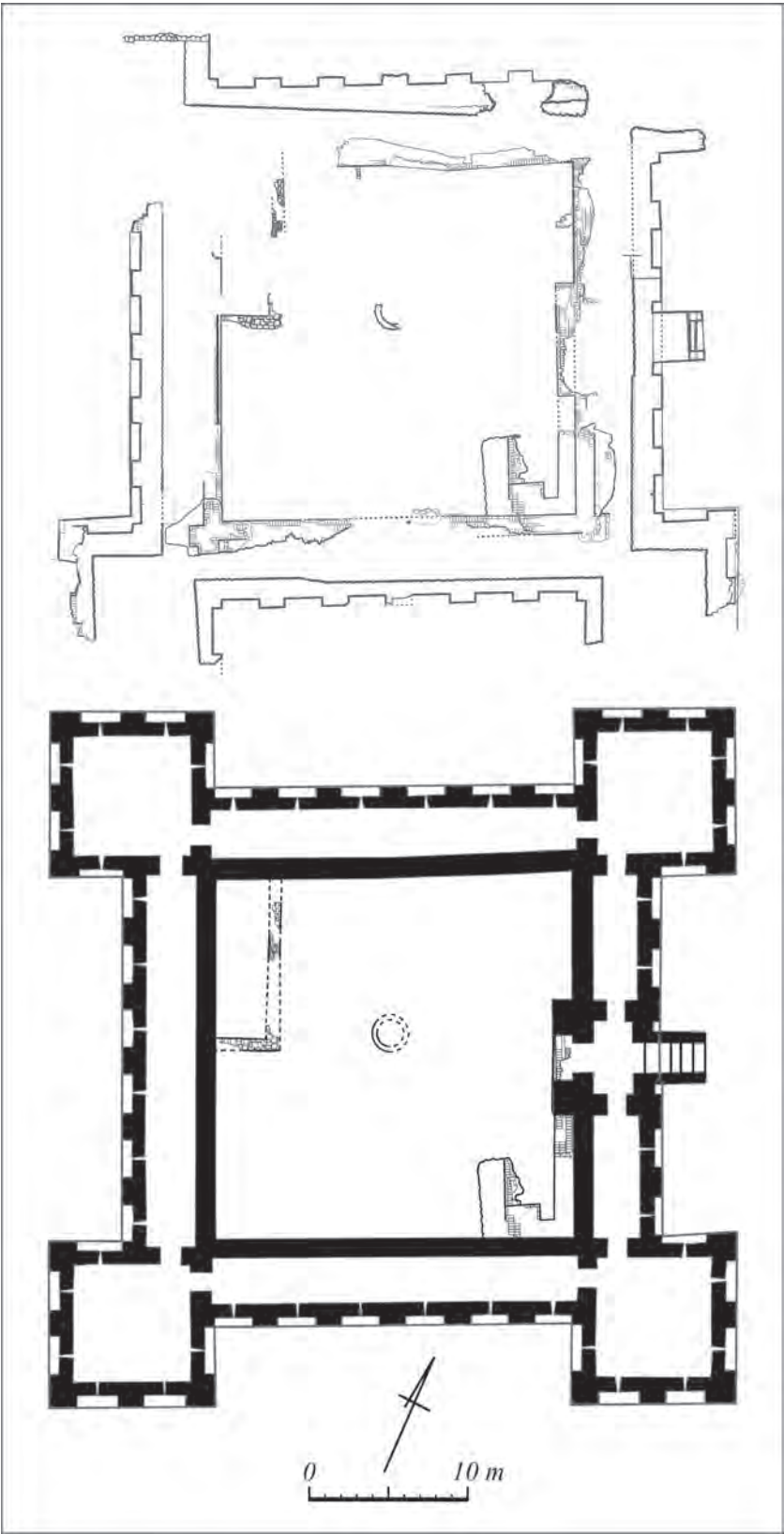


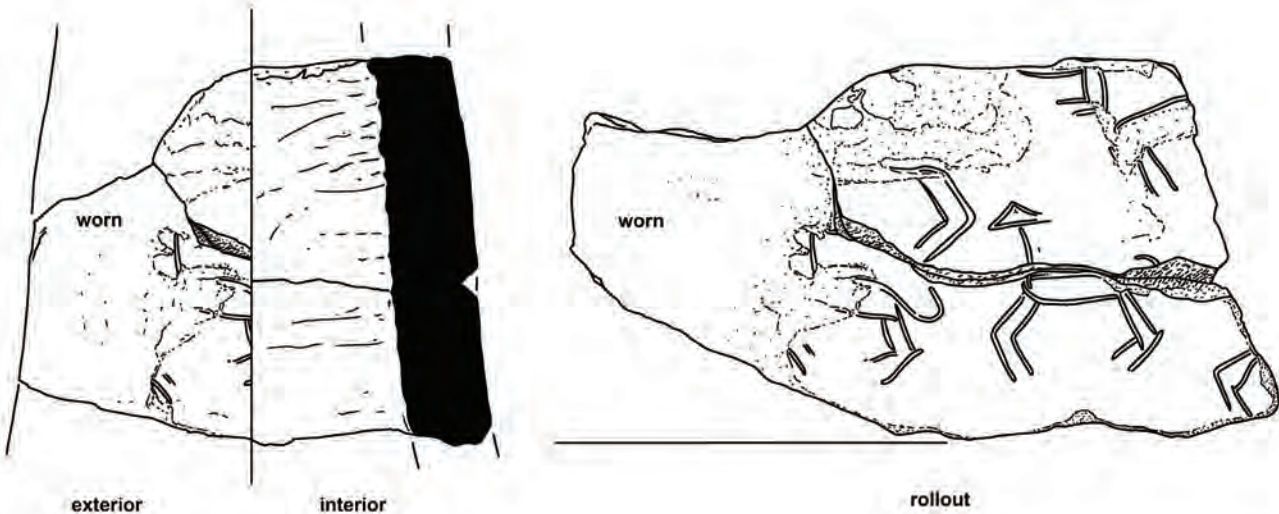
Figure 2. Dorginarti Level II fort plan and reconstruction (James Knudstad), sixth century BCE.

The main effort this year was preparing for the next major project, publishing the 2007–8 excavations in the Fourth Cataract salvage project planned for three years and two or three volumes. This effort included securing support, which bore fruit with the approval of grants from the Shelby White-Leon Levy Program for Archaeological Publications located at Harvard, and from the National Endowment for the Humanities Collaborative Research Grants program, which will enable us to build the volumes. We will begin the first year by organizing the records in detail, setting up a detailed pottery and object classification and beginning the process of creating plans and pottery drawings. This process can be quite complex, as it will require processing GPS and survey data and creating plans of superstructures, shafts, and burials that can be presented in layers.

As reported in the *OI Annual Reports* in 2007 and 2008, as well as in published articles, the Oriental Institute's work in the Fourth Cataract was like the previous operations in the 1960s, occasioned by a dam. Unlike the Aswan High Dam, which enhanced irrigation while providing power, the Merowe Dam, as it is called, was built just for power. Although not as large as the lake behind Aswan, the Merowe dam extends upstream 174 km, and it displaced many tens of thousands of people, inundating the entire country occupied by the Manasir, with some of the Rubatab upstream, and the Shaikiyya downstream. We had been assigned a concession at Shirri Island, capital of the Manasir, but not only did they not accept being displaced, they found the proposed compensation to be entirely inadequate. Partly in hopes of a better arrangement and because they associated archaeologists with the dam, they ordered all archaeologists to leave their area in 2006, a decision they later reaffirmed.

The loss of Shirri to archaeology was severe, at the least, but the expedition from the Gdansk Archaeological Museum in Poland under the direction of Dr. Henryk Paner offered us a choice of sites out of a huge concession in Shaikiyya territory, so the Oriental Institute Nubian Expedition was able to take the field with plenty to do, financed by grants from the National Geographic Society and Packard Humanities Institute, under the direction of Geoff Emberling and Bruce Williams. Once in the field, the expedition was repeatedly and decisively aided not only by Dr. Paner and the Gdansk team, but by the Omda of Amri, Hassan Mohammed Hassan, whose help was indispensable.

Figure 3. Fragment of a potstand from Serra East with incised goats, early eighteenth century BCE.



We began work in 2007 at Hosh el-Geruf, a site with many large grindstones that turned out to be a gold-processing center. Fortunately, our team included Dr. Carol Meyer of the OI, who has made a specialty of studying gold mining in Egypt's Eastern Desert, and geologist Professor James Harrell of the University of Toledo, who had studied mines and quarries in Egypt and Sudan for decades. Although gold has been mined widely in the Fourth Cataract Region, with dozens of large grindstones for pulverizing ore found throughout the region, Hosh el-Geruf is a unique center. Pottery came from three main periods at the site: Mesolithic-Neolithic, Kerma-Old Kush, circa 1800–1550 BCE, and early Napatan, circa 750–600, with Kerma-Old Kush pottery strongly predominant.

After sampling and excavating at Hosh el-Geruf, the expedition moved to work at a large Kerma-Old Kush cemetery near our village, Al-Widay, excavating a sample of its 110 tombs (Al-Widay I) and a small plot of tombs nearby at Al-Widay II. Hosh el-Geruf was unusual enough that in June 2007 the *New York Times* published a story about it in the science section.

In our second season, 2008, we returned to Al-Widay I, but this time with a different objective. In the 1960s rescue, whole cemeteries had been dug. This allowed research into chronology and culture with more complete data. However, in the Fourth Cataract, no large cemeteries of this period had been completely excavated, so the OINE undertook the complete examination of all the Al-Widay I tombs, which is now a unique undertaking for the survey region.

We were still very much cooperating with the Polish team, who were also excavating a few selected sites on an island just south of Al-Widay, Umm Gebir (Mother of Tombs). We were allowed to undertake more survey on this island, finding over a hundred sites. After completing the Al-Widay cemeteries, we transferred excavators to Umm Gebir, setting up four teams to dig different sites: a Nubian cemetery dating to the Egyptian New Kingdom (mid-Eighteenth Dynasty, ca. 1480–1330 BCE), a curious Napatan site that may have been a settlement and which the Gdansk team reassigned to us, a small Neolithic settlement, and a cluster of what are known as dome graves on a rocky eminence. Graves of this type are well known in the Fourth Cataract and the adjacent desert to the south, the Bayuda. They are elongated chambers constructed of perpendicular fieldstones carefully corbelled to create a chamber for the deceased, who is not placed in the ground, but on the surface within it. The dates seem to be post New Kingdom and Napatan, roughly 1000 to perhaps 600 BCE.

The brief resume above also shows the structure of the proposed publications, in three major parts, Hosh el-Geruf, Al-Widay, and Umm Gebir. We now begin the work, with details of site presentation, pottery fabric analysis, a program for drawing, photographs, and some database design in process.

Our research and “production” team for the new project includes Adrian Chlebowski (surveyor), Geoff Emberling, Jim Harrell (geologist), Lisa Heidorn, Jacek Kabaciński (lithic specialist), Carol Meyer (gold-working specialist; artist), Sasha Rohret (animal bone specialist), Aaron de Souza (pottery), and Bruce Williams.





OPPOSITE: Figure 4. On the road to the Fourth Cataract, once again. TOP: Figure 5. OI staff, Al Widay 2007. Standing: Hashem Mubarrak (cook and agent), Geoff Emberling, Mohammed Ali (house owner), Mahmud Suleiman (NCAM inspector), Tom James, Randy Shonkweiler, James Harrell. Seated: Bruce Williams, Debra Heard, Lisa Heidorn, Megan Ingvolstad, Justine James, and Carol Meyer. BOTTOM: Figure 6. The publications of the Oriental Institute Nubian Expedition at the Fourth Cataract are eagerly awaited!

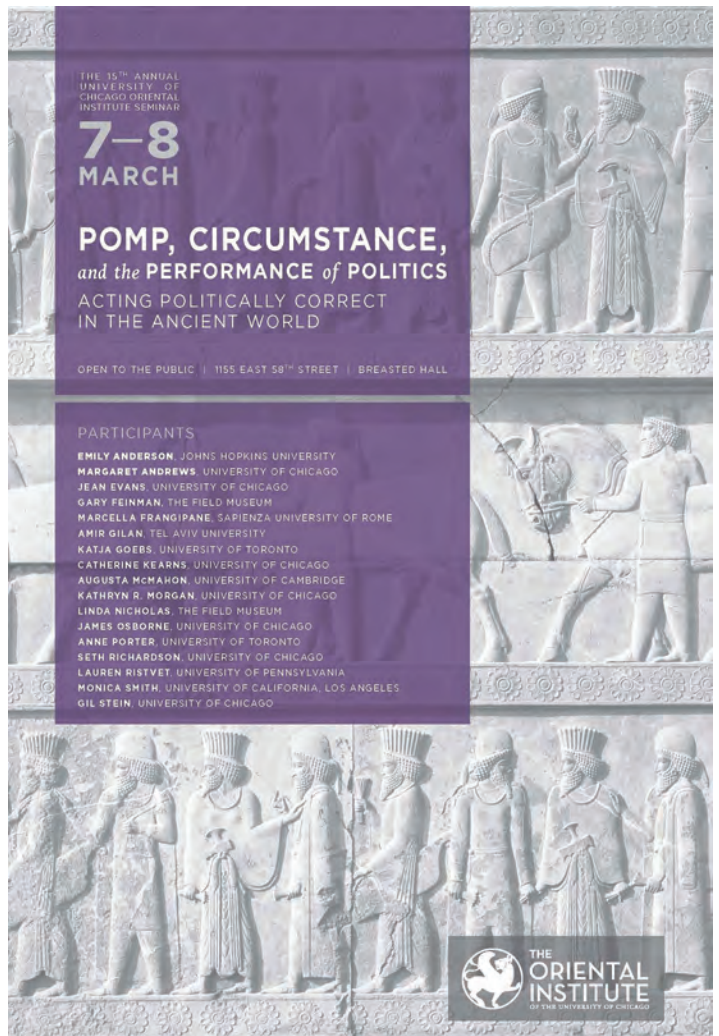
ORIENTAL INSTITUTE SEMINAR (OIS)

Pomp, Circumstance, and the Performance of Politics

KATHRYN MORGAN

The fifteenth Annual Oriental Institute Seminar (Pomp, Circumstance, and the Performance of Politics: Acting “Politically Correct” in the Ancient World) took place March 7–8, 2019, making it the inaugural event of the newly renovated Breasted Hall. The conference investigated the applicability of the hot-button contemporary concept of “political correctness” to the ancient world, inviting scholars working in a wide range of disciplines and periods to consider how we reconstruct the often unspoken rules and norms governing public life in past societies, the ways in which they are established, and the moments at which they shift. Arthur and Lee Herbst’s generous support of the event allowed us to welcome a diverse panel of sixteen presenters to the Oriental Institute, whose range of perspectives and shared enthusiasm resulted in a lively discussion about the expression and execution of political authority in ancient states. In so doing they embodied what was one of the primary goals of the conference: to reframe politics, in the ancient world as in the modern one, as an ongoing conversation among diverse groups of constituents, in which authority and legitimacy were objects of negotiation, not foregone conclusions.

The conference took place over two days, with an introductory paper, “Rethinking Politics in the Deep Past,” delivered by Field Museum anthropologists Gary Feinman and Linda Nicholas, followed by three interdisciplinary sessions: Making Space, Acting in Space, and Reacting in Space. As the session titles would suggest, many of the papers were grounded in spatial analyses—whether of individual monuments, urban built environments, or farther-flung, but no less human-made, landscapes. Understanding how different kinds of objects and spaces generate activity, limit possibilities for







All images: Steven Townshend.

action, and shape experience, narrative, and memory, was a path many contributors took toward assessing the conditions of public life in past societies, whether through the analysis of an unusual class of zoomorphic pouring vessels from pre-palatial Crete, like Johns Hopkins art historian Emily Anderson; investigating the acoustic qualities of temple courtyards in Mesopotamia, like Cambridge archaeologist Augusta McMahon; or mapping the changing dynamics of state-building liturgical processions in early medieval Rome, like Chicago historian Margaret Andrews. Other participants relied on textual criticism rather than spatial analysis: Amir Gilan, of Tel Aviv University, and Katja Göebs, of the University of Toronto, related peculiar episodes from Hittite and Egyptian history, respectively, in which rulers' self-presentation in text yielded unintended insights into their motivations, intentions, and audiences. Finally, certain presenters went beyond the issue of audience participation or experience to directly interrogate audience response, like Marcella Frangipane, of the University of Rome "La Sapienza," who argued that attempts at ideological manipulation by political elites at the site of Arslantepe, Turkey, in the fourth millennium BCE led to a popular uprising that ended in the total destruction of the site. Considerations of types of performance, accessibility, and the diversity of audiences arose frequently in discussion.





Oriental Institute faculty and staff were integral to the success of the event. OI director Chris Woods opened the conference with words of welcome; sessions were chaired, and the ensuing discussions gracefully moderated, by Jean Evans, Seth Richardson, and Gil Stein; James Osborne gave a paper, as did returning OI PhDs Augusta McMahon (mentioned above) and Anne Porter. The OI's IT manager Knut Boehmer, assistant director of events Polina Kasian, NELC PhD candidate Thalia Lysen, and assistant to the director Mariana Perlinac provided much-needed technical and logistical support, while Charissa Johnson, managing editor in the Pub-

lications Office, and Steven Townshend, editor, went beyond the call of duty in assembling publicity materials for the event, including the beautiful poster, programs, and event photography.

But the work of the Publications Office is never done: submissions for the conference proceedings volume, which will be published in the Oriental Institute Seminar series, have now begun to arrive. In it, contributions will explicitly address questions that arose in the concluding discussion period, foremost among them how reframing ancient politics in terms of performance and audience helps us to acknowledge, or more critically evaluate, the creation, distribution, and limits of political power. In a contemporary political climate in which Foucault's observation that "[e]ach society has its regime of truth, its 'general politics' of truth: that is, the types of discourse which it accepts and makes function as true," seems increasingly apt, it is vital that scholars of the ancient world work to better understand the modes, loci, and genealogies of public discourse. Performance as a concept lies at the intersection between what is "true," or real, and what we as a society simply choose to make function as true, however briefly, cynically, or hopefully; the question of audience input is thus a call for us all to interrogate our own agency as political actors, in the present as in the past.

PERSEPOLIS FORTIFICATION ARCHIVE PROJECT

MATTHEW W. STOLPER

As members of the PFA Project continue to labor in their several vineyards, recording, completing, correcting, editing, and presenting the contents of the Fortification tablets, the most dramatic strides have come in work on the seal impressions under the overall supervision of Mark B. Garrison (Trinity University, San Antonio), and especially in work on thousands of sealed, uninscribed tablets under the eyes and hands of Emma Petersen.

After graduating from the University of Minnesota in spring 2018 (with a BA paper on seals on the uninscribed Fortification tablets, mentioned in last year's *Annual Report*) and before entering a PhD program in Iranian Studies at UCLA in autumn 2019, Petersen has worked almost nonstop on this enigmatic component of the PFA (fig. 1). By the end of June, about 65–70 percent of the tractable tablets were recorded; more than 2,100 items were fully processed by the end of the August. Those bland words, “processed” and “recorded,” refer to these tasks: Petersen (assisted since May by OI volunteers Lauren Friesen, Roberta Buchanan, John Buchanan, and Dee Spiech) prepares a paper fiche with a 1:1 outline drawing of each of the six surfaces of the tablet (fig. 2); she indicates the orientation of seal impressions on all sealed surfaces; she identifies impressions of previously known seals; and she identifies impressions of new seals, assigns an identifying number to each, and makes a drawing of each. Handling about 900 tablets in this way, Petersen found almost 3,000 new impressions of more than 1,000 previously recorded seals and almost 1,000 impressions of almost 500 newly identified seals, for a running total of almost 1,500 legible seals impressed on the uninscribed tablets (fig. 3).

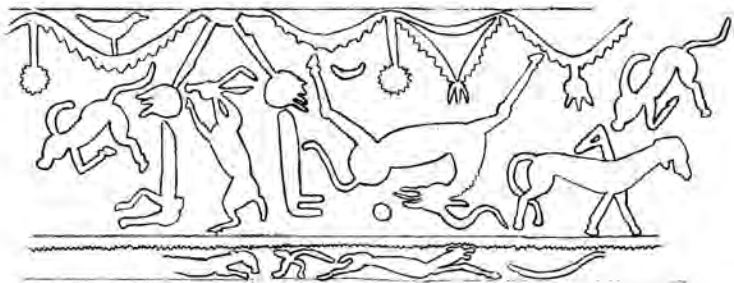


TOP: Figure 1. Emma Petersen draws the impression of a new seal on an uninscribed Fortification tablet. BOTTOM: Figure 2. Volunteers Roberta and John Buchanan prepare a paper fiche to record the seals on an uninscribed Fortification tablet.

PFUTS 430

PFUT 110-201 OBV
PFUT 485-205 REV
PFUT 905-201

repeat



edit 2-EP 7/25/2015

PFUTS 798

PFUT 867-203 (=001), UE



edit 2-EP 3/12/19
7/6/15 CC

Figure 3. Examples of Petersen's records of exceptional seals on uninscribed tablets. Mark Garrison comments, "The garland running across the top of the design and the small figural frieze at the bottom [of PFUTS 430] are unparalleled anywhere in the first millennium. . . . The style [of PFUTS 798], . . . over 100 seals rendered in this style [have] obvious links to Assyria and Elam, but I think that most of them are local (in some cases pre-dating the PFA by a generation or two) . . . [PFUTS 1480] seems similar to a few others . . . seals that appear to be experiments leading up to the Court Style [of Persepolis glyptic]."

PFUTS 1480

PFUT 869-204 REV

repeat



EP 8 JUNE '19

Plainly, this careful work is producing a large increase in the already enormous body of ancient imagery, style, and skill that the Persepolis seal impressions represent. Less obviously, it also produces new information on the patterns of seal use on the uninscribed tablets and their connections with the patterns of seal use on the tablets with Aramaic and Elamite texts.

Those emerging connections allow Garrison and his collaborators to approach one of the biggest standing problems of the PFA, namely, how the Elamite documents, the Aramaic documents, and the uninscribed documents were functionally related. It is now certain that patterns of seal use originally identified in the Elamite documents also occur on the Aramaic and uninscribed documents, meaning that the functional and administrative relationships among the actors who applied the seals are similar in all three categories. About 10 percent of the seals on the uninscribed documents and about 11 percent of the seals on Aramaic documents also appear on Elamite documents, suggesting that the Aramaic and uninscribed documents have similar general administrative relationships with the Elamite documents. The patterned use of a few of the seals most frequently seen on more than one kind of tablet implies that many of the Aramaic and uninscribed tablets document outlays of travel rations—that is, that they are functional counterparts of the largest category of preserved Elamite texts. More detail, more connections, more clarity, and even more clues to problems in the Aramaic and Elamite texts can be expected from such combined analysis of the seals.

After such long immersion, says Petersen, the way in which she sees the seals has evolved. She now looks past the overall layout of the images to recognize the details that distinguish generally similar scenes from each other—the space between the limbs and bodies of figures, the shape of individual feathers on wings, the angle between a head and neck. This must be how ancient users of these tablets saw the seal impressions, just as we now sometimes distinguish among generally similar signatures by recognizing small variations in shape, slope, or separation of their elements. For an ancient user of these tablets, discriminating among the impressions of hundreds or thousands of seals was no more or less difficult than for a modern user of paper documents to discriminate among unfamiliar handwritten signatures.

Another veteran of the Persepolis seals, Erin Daly (now a doctoral student at the University of Iowa), returned in the summers of 2018 and 2019 to complete her work on seals on the Aramaic documents, in collaboration with PFA Project editor Elspeth Dusinberre (University of Colorado). Daly made about forty new final drawings of seals on Aramaic and uninscribed tablets, along with draft catalog entries, and updated other drawings on the basis of newly recorded impressions. Final drawings of all circa 700 seals on Aramaic tablets will soon be done, to be inked by archaeological illustrator Tina Ross under Dusinberre's direction, and Dusinberre, Daly, and Garrison will turn to the final catalog entries for book-form publication. In a parallel effort, Christina Chandler continued to produce inked final drawings of inscribed seals (about 188 of them now, up from last year's estimate), along with catalog entries and full discussions, for her doctoral dissertation at Bryn Mawr.

In collaboration with Chandler, PFA Project editor Annalisa Azzoni (Vanderbilt University) has completed final readings of Aramaic legends in impressions of inscribed seals. Conferring weekly with Dusinberre, Azzoni continues to establish best readings of the often refractory texts on the monolingual Aramaic tablets, so far covering the almost 350 tablets and fragments newly identified since the PFA Project began and more than half of about 500 items first recorded by the late Raymond Bowman. Her final readings of about 65 Aramaic epigraphs on the published Elamite tablets have been uploaded to the Online Cultural and Historical Research Environment (OCHRE), and she is preparing revised readings of the epigraphs on more than 200 other Elamite tablets and fragments for upload and display.

PFA Project editor Wouter Henkelman (École Pratique des Hautes Études, Paris) finished recollating about 2,100 published Elamite Fortification texts and all but 20 of about 2,700 unpublished

texts first recorded by George Cameron, Richard Hallock, and Charles Jones. He began to organize them for publication, not according to formal categories, but according to reconstructed ancient files identified by administrative district, principal commodities, and dates. Taking time from other priorities, I could not resist the siren song of the still unread (and sometimes unreadable) Elamite tablets and fragments. I entered first readings of about 70 new items (bringing the running total of new Elamite texts recorded since the Project began over 1,700), and I corrected first-draft editions of about 100 others.

Veteran student worker Teagan Wolter (NELC) glossed, parsed, and linked about 90 new texts in OCHRE; she began to enter Henkelman’s editions of about 200 Elamite texts previously recorded by Hallock but incomplete in OCHRE; and she began to correct OCHRE entries of tablets being packed for return to Iran, checking that the texts were fully parsed and that the tablets and seals were correctly linked. Naomi Brandt, Eduardo Garcia-Molina (both CMES), and Yanxiao He (NELC) entered corrections arising from my re-readings of about 250 previously read Elamite texts. These numbers show progress in reducing the backlog of texts to be entered and edited, but they do not even hint

at the amount of attention and effort they must spend to enter and correct long documents on large tablets, often laid out in multi-column formats that must be represented accurately if the text is to be useful (fig. 4). Rhyne King (NELC) continued to edit and correct some of the lapses and inconsistencies in the OCHRE glossary of the Elamite texts, and he began work on a more user-friendly query system that will help him and other researchers to exploit this rich, complex, messy information.

Veteran Ami Huang (NELC) and new workers Naomi Harris and John Shannon (both CMES) made almost 3,000 conventional images of about 160 tablets and fragments and edited about a third of them for uploading and linking in OCHRE. Young Bok Kim and Theresa Tiliakos (both NELC) made dynamic Polynomial Texture Mapping (PTM) sets of more than 300 tablets and fragments and high-resolution scans of about 35 items with Aramaic inscriptions; both sets of images include supplementary images of previously recorded fragments. During the summer of 2018, Monica Phillips (NELC), Ashley Clark (History), Matthew Foster (unaffiliated), Oliver Nataranj (Williams College), and Clara Dandy (UC Laboratory School) continued to reduce the backlog of unprocessed PTM sets, but work tapered off in the autumn until Dandy returned to PFA Project work after a first year at Vassar. During the year, they processed almost 900 PTM sets recording about 160 tablets and fragments, but image capture is again outstripping image processing, so the backlog is rebuilding.

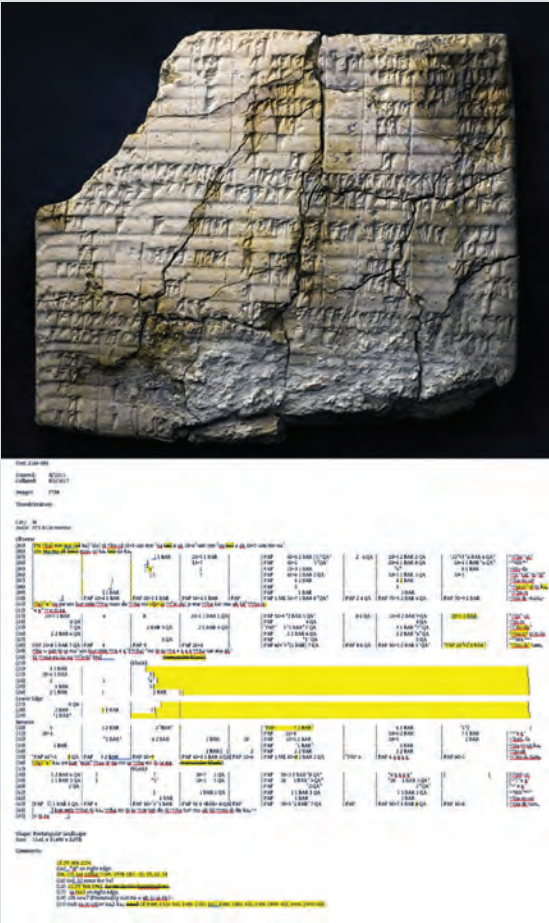


Figure 4. PTM image and draft edition, with corrections highlighted, of Fort. 2174-001, a ten-column balanced account of fruit revenues for three years.

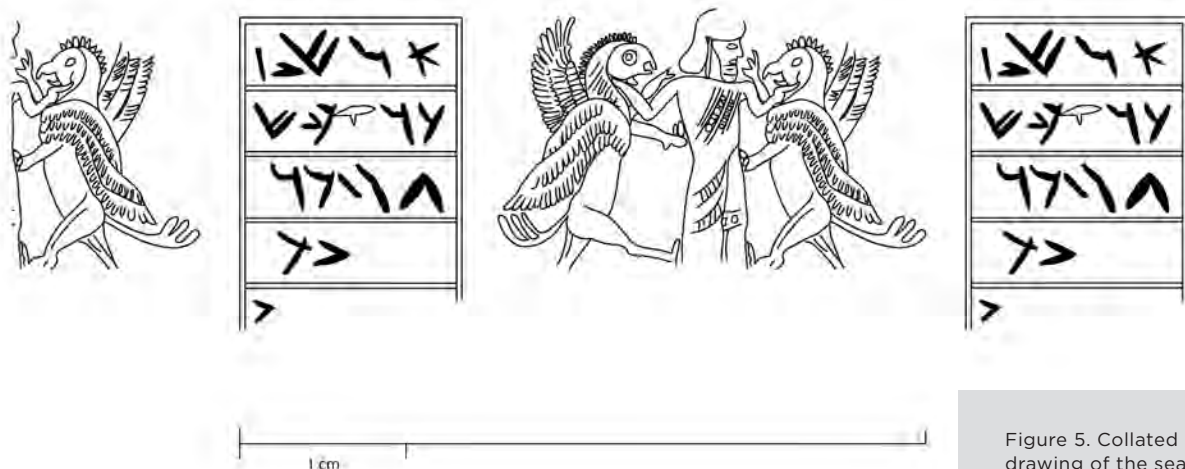


Figure 5. Collated drawing of the seal PFS 0913*, with Aramaic inscription that names the administrator called Iršēna in Elamite, ʾršyn in Aramaic (Iranian *ršaina-) as “treasurer” (Aramaic *gnzbr*, Iranian *ganzabara-).

Standouts among sixteen public and academic presentations of PFA-related results were the joint presentation by Azzoni, Chandler, and Garrison on the seal PFS 0981* with an Aramaic inscription entitling its user “treasurer” (Aramaic *gnzbr*) at the annual ASOR meeting in Denver (fig. 5); Daly’s talk on seal process in the PFA at a conference on the image in the ancient Near East at the Institut national d’histoire de l’art, Paris; King’s papers on dependent labor at Persepolis at the annual meeting of the American Oriental Society in Chicago and on social and material inequalities in the PFA at a conference in Buenos Aires; Garrison’s talk at UCLA on the evidence of the Persepolis seals for deities and ritual at Persepolis; talks by Henkelman in Kiel and Amsterdam on land use and land tenure at Persepolis, and in Berlin and Tehran on Elamite-Iranian language contact and influence; and presentations by Miller Prosser (OCHRE Data Services) on digital text editing and philology at Lausanne and at the annual Rencontre Assyriologique Internationale in Paris.

Items recently published or forthcoming include articles by Azzoni, Chandler, Daly, and Garrison along with OI colleagues Jan Johnson and Brian Muhs on the Demotic Fortification tablets mentioned in previous *Annual Reports* (Azzoni et al. 2019); by Garrison on Persepolis glyptic in its wider context (Garrison 2018, forthcoming); by Henkelman on Achaemenid estates and on Bactrians (Henkelman 2018a, 2018b); by King on Achaemenid Arachosia (King 2019); by me on the chronology of the PFA and on numbered tablets in the Archive (Stolper forthcoming a, b); and a volume of essays by Garrison and Henkelman in the new publication of the Aramaic letters of the late fifth-century Egyptian satrap Arsames (Garrison and Henkelman forthcoming).

Such works add to the already large accumulation of prolegomena leading up to authoritative book-form publication of the PFA’s texts and seals, and they also illustrate the wider range of work on Achaemenid language, history, art, and religion that the PFA supports, now including work by a rising generation of scholars. The PFA Project’s records also sometimes support work in unexpected areas. We were reminded of this when a group led by Edward Williams, AI resident at a biotechnology firm in Los Angeles, drew on the PFA Project’s images of tablets with individual signs tagged and linked to their transliterated values as the basis for a new project to develop a machine vision and machine reading system (fig. 6). For those of us who work in fields that we see as important and consequential but others see as esoteric and remote, few things are more gratifying than such unforeseen audiences and applications.

After a long wait, the OI received an export license from the Office of Foreign Assets Control for the first batch of about 1,800 Fortification tablets to be sent to the National Museum of Iran. OI volunteers packed these tablets in shipping containers (as described elsewhere in this *Annual Report*). In October, OI director Christopher Woods, chief conservator Laura D’Alessandro, and I accompanied the shipment to Tehran, where the National Museum of Iran marked the event with an exhibition, displaying 110 representative Fortification tablets in the shadow of the monumental statue of Darius I (<http://irannationalmuseum.ir/fa/%d8%a8%d8%a7-%d8%ad%d8%b6%d9%88%d8%b1-%d9%88%d8%b2%db%8c%d8%b1-%d9%85%db%8c%d8%b1%d8%a7%d8%ab-%d9%81%d8%b1%d9%87%d9%86%da%af%db%8c%d8%8c-%da%af%d8%b1%d8%af%d8%b4%da%af%d8%b1%db%8c-%d9%88-%d8%b5%d9%86/>).

Even before completing the handover we began to prepare a second batch of about 3,500 items for packing. Reviewing our records of these tablets now consumes much of my time. New images are needed for some, editions of others have yet to be entered, descriptions of many need to be completed or made consistent, editions and glossary entries need to be corrected, and so on. Some clean-up of PFA Project records will be done as the tablets are packed, but much more will remain to be done after they are returned.

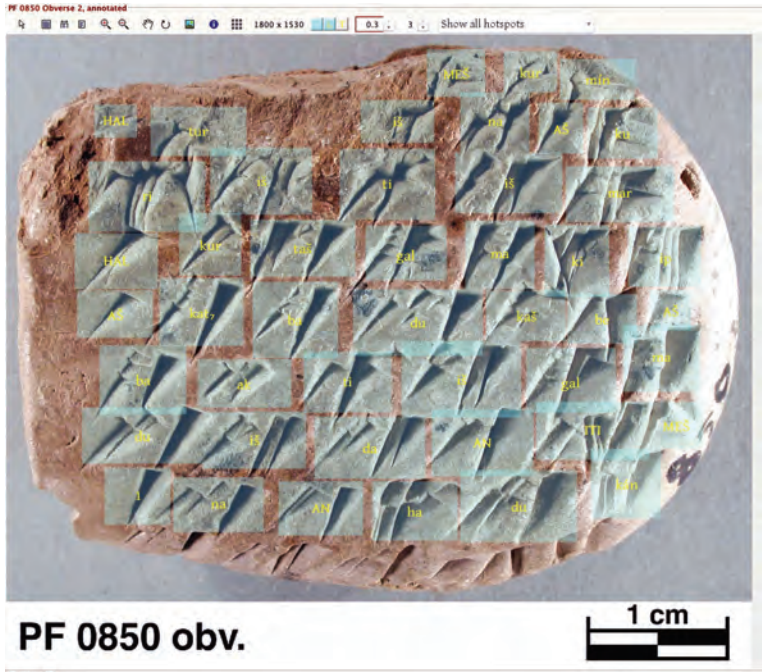


Figure 6. Hotspotted image of an Elamite Fortification tablet, with individual cuneiform signs tagged and linked to their transliterated values.

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SINNABRA

(OR KHIRBAT AL-KARAK)

TAUFIQ DA'ADLI AND DONALD WHITCOMB

In February 2019, the second excavation season at al-Sinnabra continued delineation of an early Islamic palace. In reality or quiet hope, the aim was the discovery of the mosque of al-Mu'āwiya (the Umayyad caliph, 661–680). The aim of this season was to trace more remains of the hypostyle building that was partly revealed last year. Following the finds of the previous season, we concentrated in two areas related to the two rows of column bases. In addition, a narrow probe in the large spoil heap covering the western part of the hall (which revealed no traces of construction at floor level). Further examination of the northern area indicated extensive damage through erosion and modern interventions. Therefore, we concentrated our efforts around the columns on the southern part of the hall and on its eastern border.

A HYPOSTYLE HALL

The main building of the site is a palace structure within a fortified wall, which we called *qasr* (fig. 1). Beyond its north wall, we discovered a third row of column bases, just below the level of the

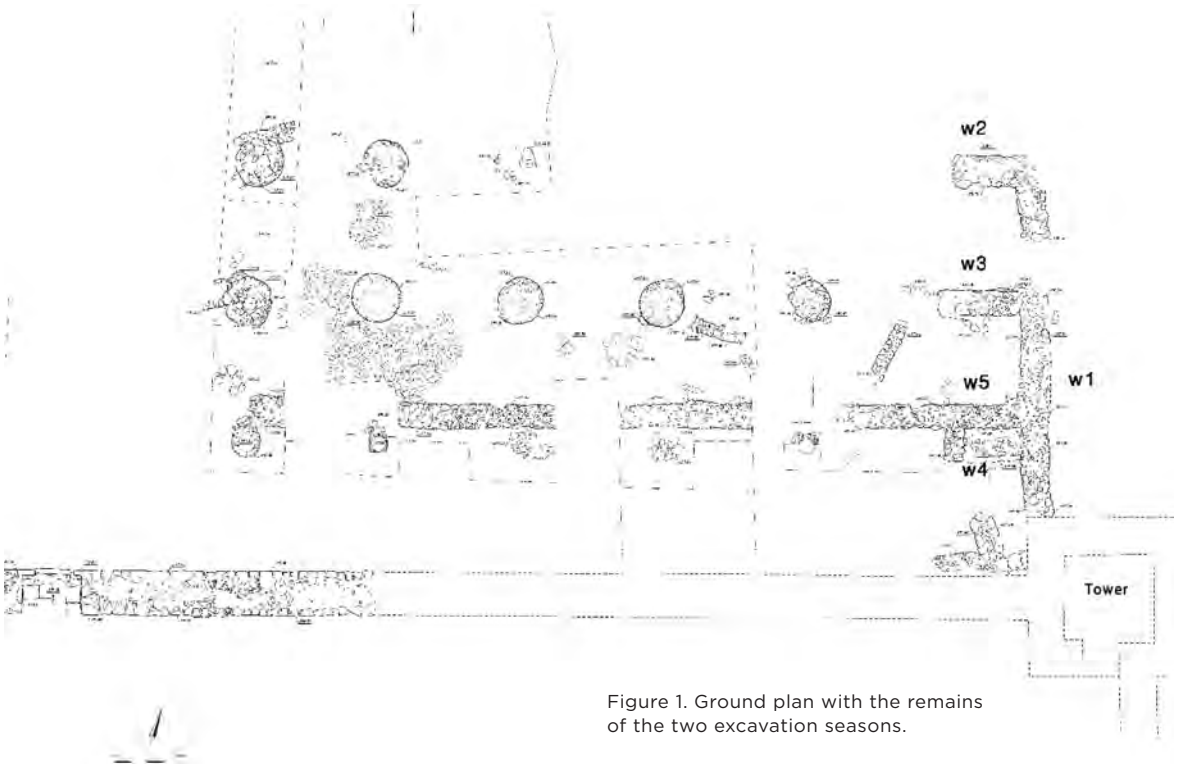


Figure 1. Ground plan with the remains of the two excavation seasons.

gravel pavement. This row is composed of three reused marble bases and two built bases, and more importantly, these bases were built at similar intervals to those of the two northern rows and they are aligned with them. An eastern wall was discovered with three east–west walls on the same lines of the bases. Three west–east walls were also exposed (fig. 1, w2–4), attached to the eastern north–south wall (fig. 1, w1). The eastern wall and these short walls appear to be the eastern edge of the hypostyle hall. Another east–west wall intersected with the column bases; this wall (fig. 1, w5) probably predates the hall (fig. 2). The bases seem arranged to create a rhythm of 4 m bays. The columns begin at a 4 m interval from the northern wall of the *qasr*, suggests suggesting that the northern *qasr* wall was a common wall for both structures (fig. 3).

BELOW: Figure 2. Column bases, looking east.
OPPOSITE: Figure 3. Air view of the trenches.



Some earlier wall fragments may be dated to the Hellenistic era from ceramic finds. These materials were covered with a layer brown earth mixed with small pebbles, containing mixed materials and some types of Arab-Byzantine coins.

The edges of the building exposed on the northern side of the *qasr*, be it a mosque or any kind of a hypostyle structure, still need to be defined. Due to the erosion on the northern side, no efforts are recommended on this side. While the eastern wall may be further defined, the width of the hypostyle hall needs to be determined. Its western wall would seem to be still hidden beneath the spoil -heap of the previous excavations. As hypothesized from the size range of other early mosques (fig. 2), there may be a remnant of the northern wall, still preserved in the area. This would justify a brief further season on this possible early mosque.





EASTERN WALL

During the conservation of the site throughout the year some traces of a north-south wall were revealed on the eastern edge of the mound, parallel to the *qasr* wall. Therefore, a small trench was opened to track this wall. This wall seem to be a retaining wall to a walk way that extended along the eastern border of the *qasr* (fig. 4).

BATHHOUSE

As reported last year, in February 2018, during our excavation season, a team of conservators launched a long-term maintenance project that lasted for almost a year. Among other things, they have brought to light some forgotten corners of the site, including the Umayyad bathhouse and parts of the palace itself (fig. 5).

During the conservation works, the bath was cleaned and some details were revealed in them, mainly of the central pool and the two bathtubs on the south side of the main room. Moreover, the cleaning works revealed two building stages of the western wall (fig. 6). It seems that an

extension was attached to the lower course of the wall that came to create a base for the benches along the wall. This addition even covered the edges of the marble pavement, in this manner preserving some of the marble tiles, one of which bears a Greek inscription.

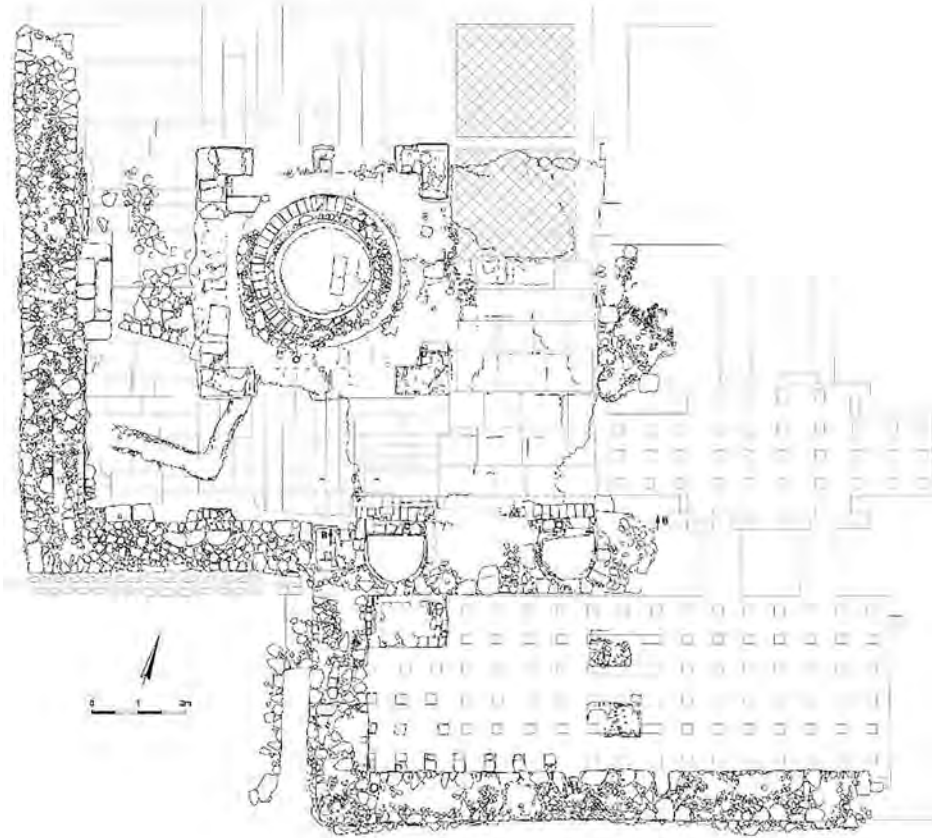
ABOVE: Figure 4. Eastern walkway and supporting wall, looking east.

OPPOSITE TOP: Figure 5. General view of the *qasr*, from the west, after the conservation works. The bathhouse is at top right, above a large Bronze Age structure.

OPPOSITE BOTTOM: Figure 6. Detailed plan of the bath after cleaned by the conservators.



4



PROGRAM FOR NEXT SEASON

The edges of the building exposed on the northern side of the *qasr*, be it a mosque or any kind of a hypostyle structure, still need to be defined. Due to the erosion on the northern side, no efforts are recommended on this side. The eastern wall, partly exposed during the fifties of the twentieth century, can be re-examined. The same can be said about the western wall that may be still hiding beneath the spoil-heap of the previous excavations. Therefore, we would like to return to carry out a final, brief, two-week probe before the end of this calendar year.

SUREZHA EXCAVATIONS 2018

Erbil Plain, Kurdistan Region, Iraq

GIL J. STEIN AND MICHAEL T. FISHER

The Surezha excavations investigate the key phases in the origins of towns and later cities in northern Mesopotamia during the Chalcolithic period from roughly 5500 to 3500 BC (fig. 1). Surezha is an ideal site to define the Chalcolithic chronology and developmental sequence of the Erbil plain and the Assyrian heartland region east of the Tigris because the high mound at Surezha is largely prehistoric, with only limited later occupation from the Middle Assyrian period and the Iron Age. This means that the houses and other occupation levels of the fifth millennium BC lie very close to the surface and are thus easily accessible for archaeological excavations.



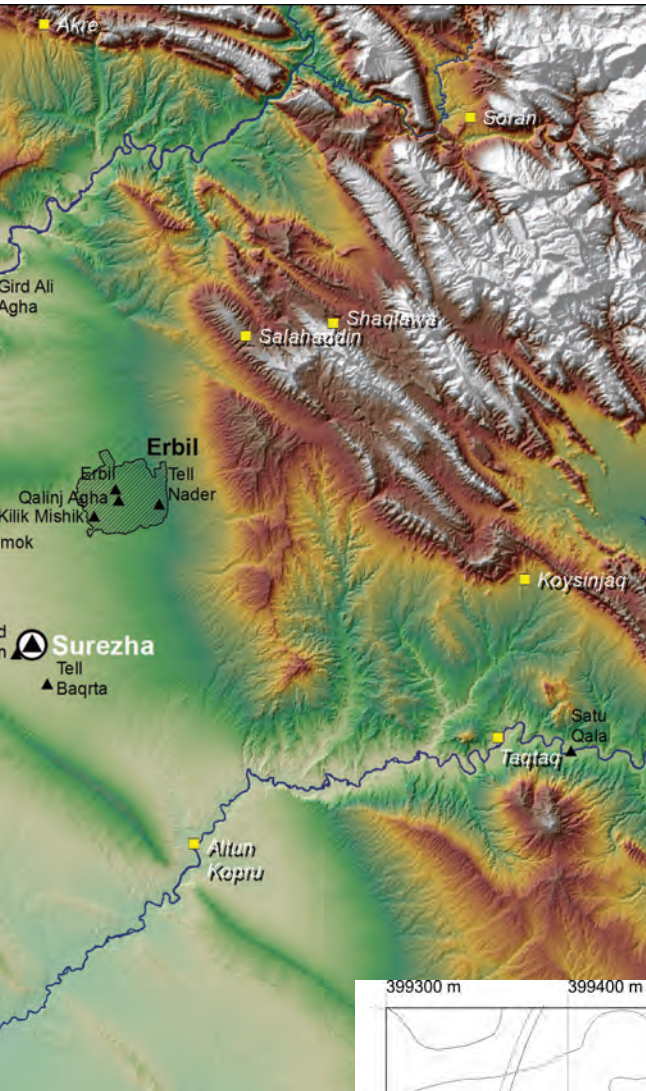
Surezha is a mounded settlement of circa 22 ha, located next to the modern village of Surezha, approximately 20 km south of the modern city of Erbil in the Assyrian heartland region east of the Tigris River and Nineveh (fig. 2). The Erbil plain has sufficient rainfall to support rich agricultural production of cereals without the need for irrigation. This in turn has supported a large population in the center of the plain at Erbil, the ancient city of Arbela, which seems to have been continuously occupied from Neolithic times to the present. The region surrounding Erbil historically supported a large rural population in agricultural villages from the Tigris River eastward toward the foothills of the Zagros Mountains and Iran. In a manner similar to the modern region of Kurdistan, the Erbil region has had strong cultural links north into Anatolia, east into the highlands of Iran, and west and south into Mesopotamia.

Surezha was first recorded by the Erbil Plain Archaeological Survey (EPAS). The ancient site 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 NW-SE and 150 m from SW to NE, with an area of approximately 2.8 ha (fig. 3). 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. Part of the lower town lies underneath the modern village of Surezha to the north and east.

Excavations at Surezha by the Oriental Institute began in 2013 with a two-year hiatus (2014–15) due to the conflict with ISIS/Da'ish in northern Iraq and the Mosul area. Excavations resumed in 2016 and have continued annually up through 2018. Our work on the conical high mound of Surezha 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), 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 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 affords us the rare opportunity to easily reach the buildings of an early town settlement dating back more than seven thousand years.

The 2018 field season took place from September 13 to October 14, 2018, codirected by Gil Stein and Michael Fisher along with project staff members John Alden, Taos Babour, Sam Harris, David



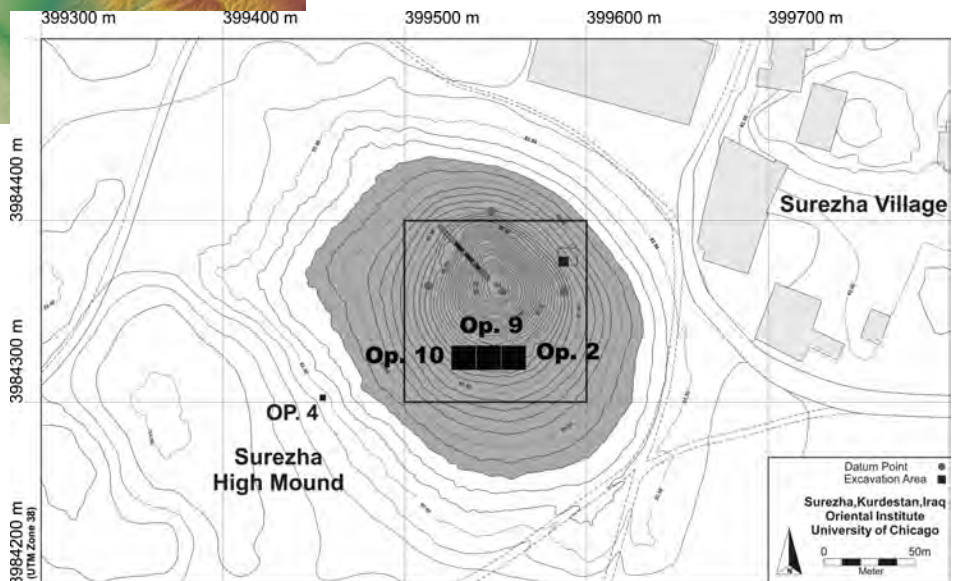


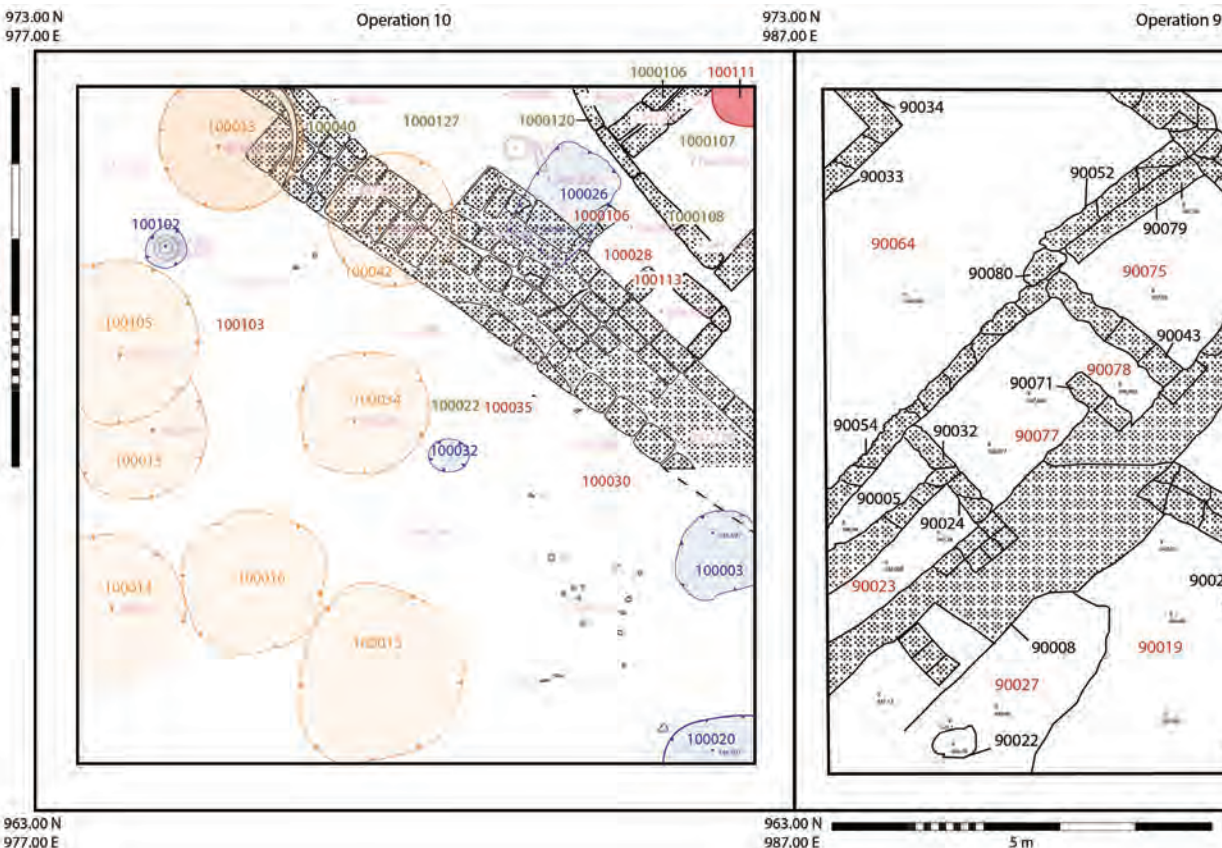
Usieto, and Ramin Yashmy. Our government representatives were Rozhgar Rashid and Nader Babakr. Site excavations were carried out by fifteen workers from the Erbil Department of Antiquities and the village of Surezha. We are grateful to the general director of antiquities, Mr. Kayfi Ali, and to Mr. Nader Babakr, director of antiquities for Erbil Governorate, for permission to excavate at Surezha and for the numerous ways in which they have facilitated our work.

Since 2017, we have focused our excavations on area B—ops. 2, 9, and 10 (each 10 × 10 m trenches) at the southern base of the high mound. 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. Fortunately, at Surezha, the very early deposits of the LC1 can be reached immediately beneath the surface in area B, allow-

ABOVE: Figure 2. The Erbil Plain and the location of Surezha.

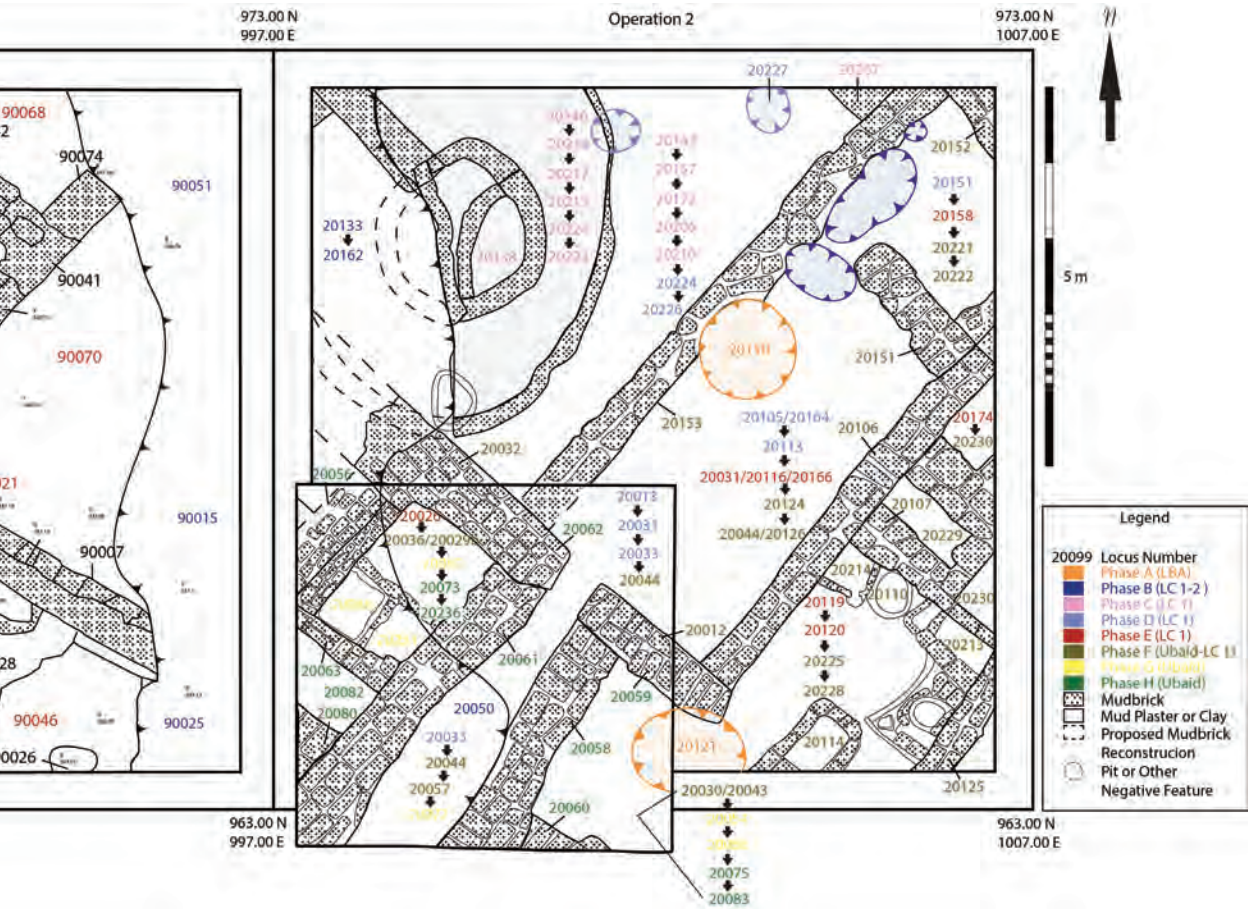
RIGHT: Figure 3. Topographic map of the site of Surezha, showing the location of ops. 2, 9, and 10 in area B.





ing us to make a broad contiguous horizontal exposure of 300 m² of architecture, open-air spaces, and streets dating to the LC1 period (figs. 4 and 5).

One of our most important discoveries of the 2018 season was the realization that there appears to be a major 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 comprise a large mudbrick walled enclosure that appears to have been non-domestic in function.



OPPOSITE BOTTOM: Figure 4. Orthomosaic photo of LC1 architecture in area B, showing the contrast between the domestic architecture of op. 2 at the right edge of area B, and the large, non-domestic enclosure in ops. 9 and 10 at the center and left. ABOVE: Figure 5. Composite top plan of the LC1 architecture in area B.

OPERATION 2

Excavations in op. 2 is a 10 × 10 m trench at the eastern end of area B supervised by Michael Fisher and Ramin Yashmy. Op. 2 is especially important because it 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 that 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). The floor of this room is cut through by a deep well (locus 150) dug down into the long-buried LC1 deposits during the Middle Assyrian period (second millennium BC). The western wall (locus 153) of this courtyard was constructed in the earliest stages of the LC1, immediately on top of the earlier Ubaid houses. To the northwest of the courtyard and wall 153 is a series of outdoor surfaces with features such as tannurs (ovens) and small pits. To the southeast of the LC1 courtyard was a small room, possibly a kitchen, with a hearth (locus 114) along its south wall, and a series of basins and bins (loci 213 and

214) constructed along its north wall. 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. Late in the LC1 occupation, a large oval-shaped, flat-topped platform (locus 146) was constructed of packed mud/terre pisé in the center of the open-air work surface 210. A small circular feature of mudbricks with two small internal walls was built on top of platform 146. The function of this small mudbrick feature and of the platform itself remains unknown.

Although the architecture and associated surfaces in op. 2 were domestic spaces, it is important to note that a number of artifacts were found there as well—notably two carved stone stamp seals with incised crosshatched geometric decorations (fig. 6) and at least eight stamp seal impressed fragments of shaped clay container closures. The same styles of incised crosshatched geometric designs were found on stamp seals and seal impressed clay artifacts in both op. 2 and op. 9. One should recall, however, that seals were originally developed in the Neolithic Period and were most commonly used as markers of personal ownership; only in later periods were seals also used for administrative/bureaucratic purposes.



The long, continuous sequence of domestic architecture in op. 2 ended in late phase C with what appears to be the localized abandonment of this part of the site. The platforms, surfaces, and houses were gradually covered over with wash deposits. In the subsequent op. 2, phase B, a 2 m wide erosional gully (loci 133–135) cut down to a depth of 50 cm and extended for about 5 m from north to south along both sides of the grid line between ops. 2 and 9. The gully was filled with erosional wash from upslope deposits that apparently predate the LC2 (no LC2 diagnostics have been identified in the gully deposits) and can be assigned instead to the final phase of the LC1 period at Surezha, which was probably located in the area immediately to the north of ops. 2 and 9.

In addition to the local Surezha LC1 wares, the gully cut ceramic assemblage also included Dalma impressed wares and Dalma painted wares deriving from Iranian Azerbaijan in the region just south of Lake Urmia. This area lies immediately to the east of the mountain passes that connect Iraqi Kurdistan and western Iran. Dalma wares have been found in the latest LC1 levels in all three operations in area B at Surezha. They represent the earliest material and cultural connections between the Erbil plain and northwestern Iran, and date to the period between 5000 and 4500 BC. The Dalma wares from Surezha are currently undergoing geochemical studies through Instrumental Neutron Activation Analysis (INAA) to determine if these wares were locally manufactured at Surezha or if they are imports from Iran.

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 David Usieto. Ops. 9 and 10 are distinctive in having a large mudbrick enclosure wall, associated rooms, and a free-standing structure inside the enclosure, all of which 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 four to five 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 dif-



OPPOSITE: Figure 6. LC1 carved stone stamp seals with geometric motifs from ops. 2 and 9, along with modern impressions in modeling clay. LEFT: Figure 7. Op. 9: SR7368 stone mortar and pestle and SR7171 painted lenticular vessel with broken spout, found in the abandonment deposit inside room 1 in the large mudbrick enclosure.

ferent 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 several phases of architectural modification over this time span. The 2018 excavations exposed the latest of these phases.

To the east and southeast of the enclosure is 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 8 and 41. 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.

Inside the enclosure, four rooms were constructed against the interior of SE conjoining walls 8/41. The mudbrick walls were one course wide, and in some places were preserved to a height of at least 60 cm. As was the case with the enclosure itself, the rooms along its SW wall were built separately and not as part of a unified plan. The two long, narrow, parallel rooms at the south end shared a common wall and appear to have been used for storage. The central room yielded few artifacts. It had what looks like a blocked doorway in its north corner and might have functioned as the entry room from the open courtyard area inside the enclosure to the northwest. The central room may have functioned as a small foyer, giving access to the adjacent rooms to the northeast and southwest.

The northeast room (room 1) was significantly different from the other three rooms along the interior of the SE wall of the enclosure. The room interior had been burned in an intense fire that partially vitrified the mud plaster along the NE corner. Afterwards, the room was cleaned, mudbrick bench 79 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 (fig. 6) and seal impressed clay container sealings. At a certain point, the room was abandoned. A large amount of clay, ceramic, and stone objects were found in related abandonment deposit loci 69 and 72—far more than in any other room in op. 9. Immediately to the east of bench 79, a nearly complete lenticular jar (SR7171—lacking only the spout) in a style similar of those from Gawra and Eridu was placed upside down, along with an overturned grinding stone and an upside down stone mortar and pestle (fig. 7). It is still unclear whether the number, nature, and placement of these objects represent “normal” discard or perhaps a more deliberate ritual associated with the abandonment and “closing” of the room.

OPERATION 10

Op. 10 is a 10 × 10 m trench at the western end of area B. The 2018 excavations were supervised by Taos Babour. 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 conjoining SW walls 28/30 of the enclosure, b) a street or passageway running along the north face of the wall inside the enclosure, and c) a free standing multi-roomed structure that bounded the street on its north side and extended into the northeast corner of the trench (see figs. 4 and 5).

The 11-m-long south walls 28/30 of the enclosure extend from the north baulk in the NW corner of op. 10, running SE until they enter the east baulk, and seems to form a corner on the other side of the baulk in op. 9 with wall 8, the SW wall of the enclosure. Mudbrick wall 30 was at least three to four courses wide, and preserved to a width of 1.4–1.5 m. The height of the wall is uncertain, since excavations in 2018 did not reach its base. The red clay matrix of the wall bricks is crumbly and badly eroded on its south face. Wall 28 runs along the north face of wall 30. It is a narrow wall, one course wide, constructed from longer, narrower brownish-gray bricks along the north face of wall 30. Two small buttresses, one brick wide, abutted the north face of wall 28. The area outside of the enclosure to the southwest of walls 28/30 appears to have been an open-air work surface, sloping down gradually to the south.

A narrow passageway or street ran along the length of the north face of conjoining walls 28/30 on the inside of the enclosure. Wash and trash deposit locus 112 overlay street surface 127. The northern edge of the street/passageway was defined by wall 108. Walls 108 and 120 formed the south wall of the free-standing structure inside the enclosure. The structure had at least two rooms (the “west room” and the “east room”), divided by double walls 106 and 107, which abutted the north face of walls 108/120. Walls 108/120 are made of long, narrow bricks laid one course wide. Only a small corner



Figure 8. Op. 10: Free-standing mudbrick structure and adjacent passageway or street inside the large mudbrick enclosure to the north of conjoining enclosure walls 28/30. Note the small buttresses constructed against the face of wall 28. OPPOSITE: Figure 9. Sam Harris collecting microarchaeological samples from floor surface in 50 cm grid squares for spatial-functional analysis.

of the west room was exposed inside op. 10. A larger area of the east room was exposed through the excavation of room deposit locus 109 (fig. 8). A later LC1 pit locus 111 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 33 formed a corner with the north wall 34, giving us portions of three out of the four walls of the structure (see figs. 4 and 5).

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.

MICROARCHAEOLOGY

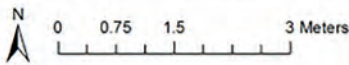
In 2018, Sam Harris (University of Chicago) continued work on collecting microarchaeological samples from rooms, courtyards, and open-air work surfaces in ops. 2, 9, and 10. Microarchaeology involves the collection and analysis of very small fragments (under 1 cm in size) of ceramics, bone, chipped stone, 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.

Whenever distinct indoor or outdoor surfaces were exposed by excavators, the surface was 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 (fig. 9). 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 Surezha.





Figure 10. Comparison of microdebris patterning in the work surface to the north of wall 153 (at the top of the photo) versus the patterning inside the small room, possibly a kitchen, to the southeast of the courtyard (at the bottom right of the photo).



tion System) software to help identify the patterning of different activities such as flint tool manufacture, food preparation, and craft production.

Although analyses are ongoing, Sam has been able to draw some promising preliminary conclusions. First, and most importantly, there is clear patterning in the overall distribution of microartifacts across area B, with microartifacts tending to collect along walls and in corners or niches (presumably as a result of sweeping). Additionally, there is a clear difference in the cleanliness of indoor room floors (fig. 10 at top) and outdoor/courtyard surfaces (fig. 10, bottom right). As one might expect, both the indoor and outdoor spaces in the houses and courtyards of op. 2 were used for multiple functions rather than for just one specialized activity.

ZOOARCHAEOLOGY

Analysis of the Surezha animal bone remains is being conducted by Max Price (Massachusetts Institute of Technology). To date, 733 bone fragments from the Ubaid, LC1, LC2, and LC3 periods have been identified to the genus or species level (table 1).

In 2018, eighty-four microarchaeological samples were collected and processed from fourteen distinct LC1 contexts in ops. 2, 9, and 10 (with the vast majority coming from op. 2), including rooms, courtyards, outdoor surfaces, and a mudbrick platform. The floor matrix samples were processed in a flotation machine to separate the “light fractions” (charcoal and burnt seeds) from the “heavy fraction” used for microarchaeological analyses. The light fractions were sent to project archaeobotanist Lucas Proctor at the University of Connecticut for analysis, while the heavy fractions were analyzed by Sam Harris at the University of Chicago.

In the lab, the heavy fraction samples were sorted to identify and count the ceramics, bones, chipped stone, shell, and other microartifacts. The counts were plotted spatially using GIS (Geographic Information

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

| Identified Taxa | Ubaid | Ubaid % | LC 1 | LC 1 % | LC 2 | LC 3 | LC 3% |
|-------------------|------------|-------------|------------|-------------|-------------------|-------------------|-------------|
| Ovis/Capra | 55 | 43% | 221 | 51% | 17 | 83 | 48% |
| Ovis | (3) | — | (28) | — | (2) | (9 ^A) | — |
| Capra | (1) | — | (29) | — | (8 ^B) | (2) | — |
| Sus | 51 | 39% | 128 | 30% | 0 | 67 | 39% |
| Bos | 19 | 15% | 45 | 10% | 0 | 22 | 13% |
| Gazella | 1 | 1% | 3 | 1% | 3 | 1 | <1% |
| Capreolus | 0 | — | 1 | <1% | — | — | — |
| Cervid | 0 | — | 0 | — | 0 | 0 | — |
| Canis | 3 | 2% | 32 | 7% | 0 | 1 | <1% |
| Total | 129 | 100% | 430 | 100% | 20 | 174 | 100% |

Although the sample sizes remain small (especially for the LC2 period), we can see several significant changes in the animal economy of the site from the earlier Ubaid into the LC1 period. Most notably, sheep and goats increase as a percentage of the overall assemblage from 43 percent in the Ubaid period up to 51 percent in the LC1. At the same time, pigs decline from 39 percent to 30 percent, while cattle decrease in abundance from 15 percent to 10 percent. The reason for these changes remains unclear.

It is tempting to conclude that the increase in sheep and goats represents a shift toward economic intensification in the form of a developing focus on wool production. This is a reasonable hypothesis; however, it would have to be verified by examining a) the ratio of sheep:goats; b) the ratio of male:female sheep; and the ages at which the animals were culled, to see if the data matched the age and sex profiles characteristic of managing sheep to maximize wool production. Hopefully, as we continue excavating and increase the faunal sample sizes from LC1 and Ubaid contexts, we will be able to determine whether or not this important shift to wool production took place in the LC1 period at Surezha.

ARCHAEOBOTANY

LUCAS PROCTOR

Analyses of the archaeobotanical remains from Surezha are 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 (fig. 11). Based on the identification of botanical remains from seventy-five samples, the evidence suggests that the

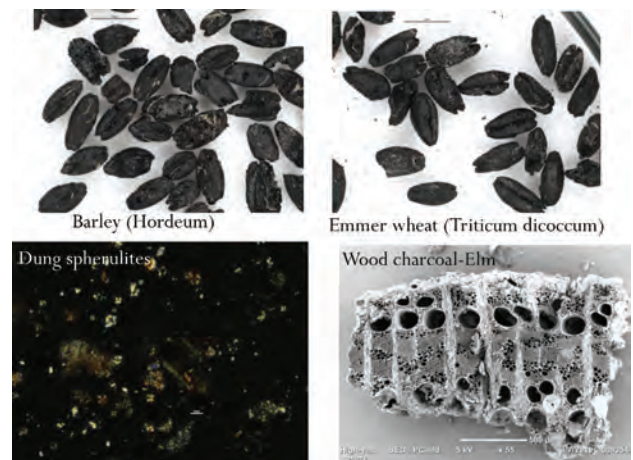


Figure 11. Archaeobotanical remains from Surezha: barley grains, emmer wheat grains, dung spherulites, and wood charcoal.

inhabitants of Surezha practiced rain-fed agriculture focusing primarily on drought tolerant crops such as barley and emmer wheat.

The Ubaid and LC1 archaeobotanical data also provide useful insights into changing patterns of fuel use as a key aspect of the Chalcolithic economic system at Surezha. Archaeobotanists can detect the use of wood fuel through finds of charcoal, and dung fuel through the presence and ubiquity of dung spherulites—small spherical pieces of slightly calcified sheep, goat, or cattle dung. Generally speaking, ancient Near Eastern sites show a gradual transition from a heavy reliance on wood charcoal as fuel to an increasing dependence on animal dung fuel. This transition appears to stem, in many cases, from the increasing scarcity of wood due to deforestation. However, at Surezha, wood fuel was rare in both the Ubaid and the LC1, while dung fuel was much more common in both periods, and actually increased in the LC1. This early, heavy reliance on dung fuel is most likely due to the environment of the Erbil plain as a grassy steppe where trees may have only grown along water courses. The increase in dung fuel use in the LC1 might indicate progressive depletion of these riparian wood resources or environmental stresses such as desiccation or periodic droughts. To better understand these processes, we need to collect better paleoenvironmental data for the Erbil plain through pollen coring, hydrological, and geomorphological studies.

CERAMICS

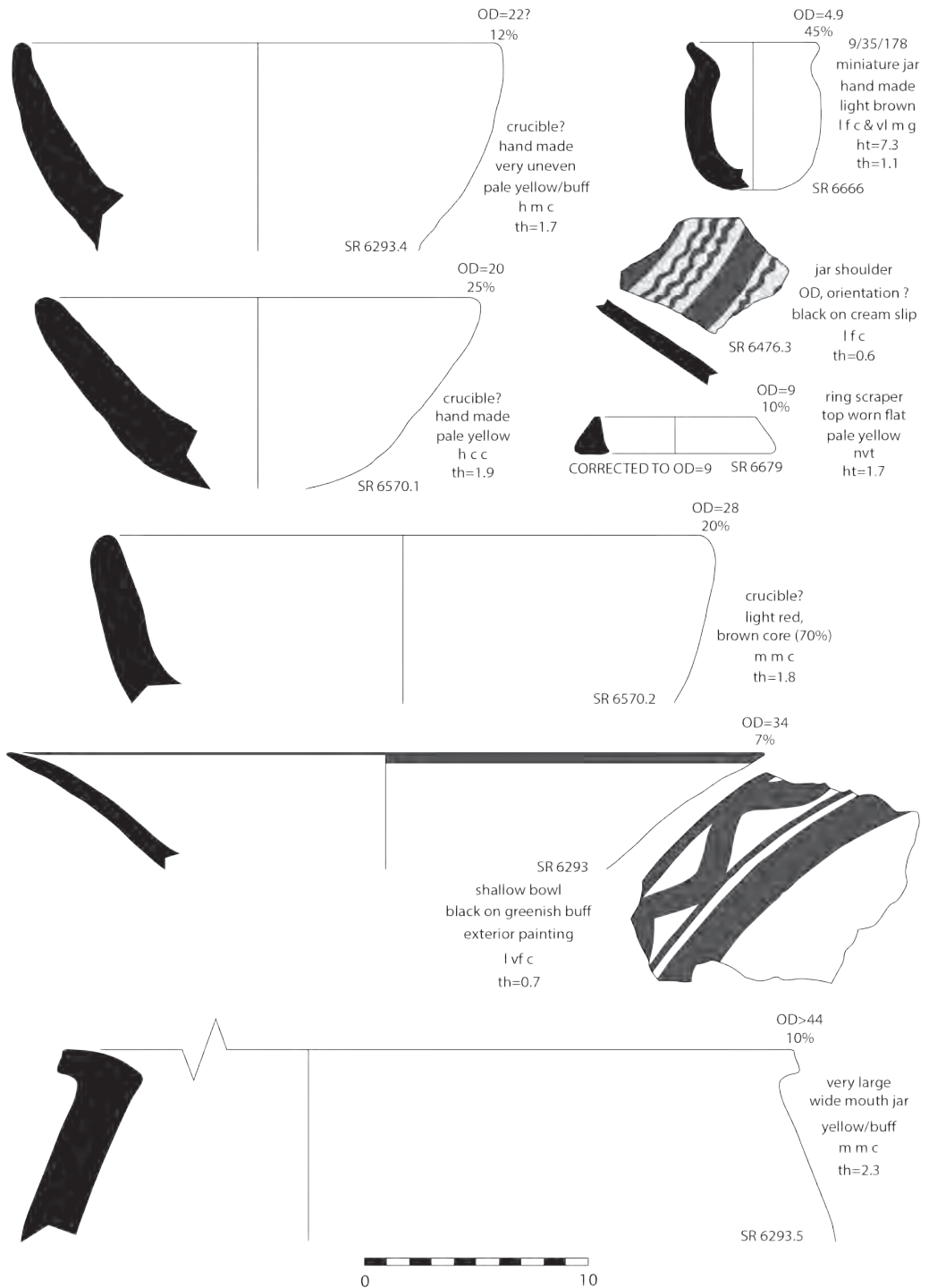
The 2018 analyses of the Surezha ceramics were conducted by John Alden (University of Michigan), Gil Stein (University of Chicago), and Taos Babour (Sorbonne University).

289 pottery lots were processed, totaling 9,087 sherds, of which 2,849 were diagnostic forms such as rims, bases, or sherds with surface treatment such as painting, incision, or impressed decoration.

We were surprised to find that painting as a form of 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. Painting was common even in the latest LC1 phases (fig. 12). This is noteworthy because in other regions of northern Mesopotamia (e.g., 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 crosshatch 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 locally distinctive characteristic of the LC1 ceramics at Surezha was the presence of small amounts of Dalma ware 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 Iran and Iraqi Kurdistan. We first discovered the presence of Dalma impressed ware in the 2017 season. In 2018 we identified Dalma painted ware as a second ceramic style originating in the same region (fig. 13). Both forms of Dalma ware appear only in the uppermost LC1 deposits at Surezha, and apparently date between 5000 and 4500 BC.





ABOVE: Figure 12. Ceramics from the later LC1 phases at Surezha, showing the continued presence of painted decoration on serving bowls and jars.

LEFT: Figure 13. Dalma impressed wares (TOP) and painted wares (BOTTOM) found at Surezha. This style of pottery is characteristic of northwestern Iran, adjacent to the modern border between Iran and Iraqi Kurdistan. The appearance of Dalma wares at Surezha indicates that cultural and economic connections between the two regions had begun as early as the end of the LC1 period, circa 5000-4500 BC.

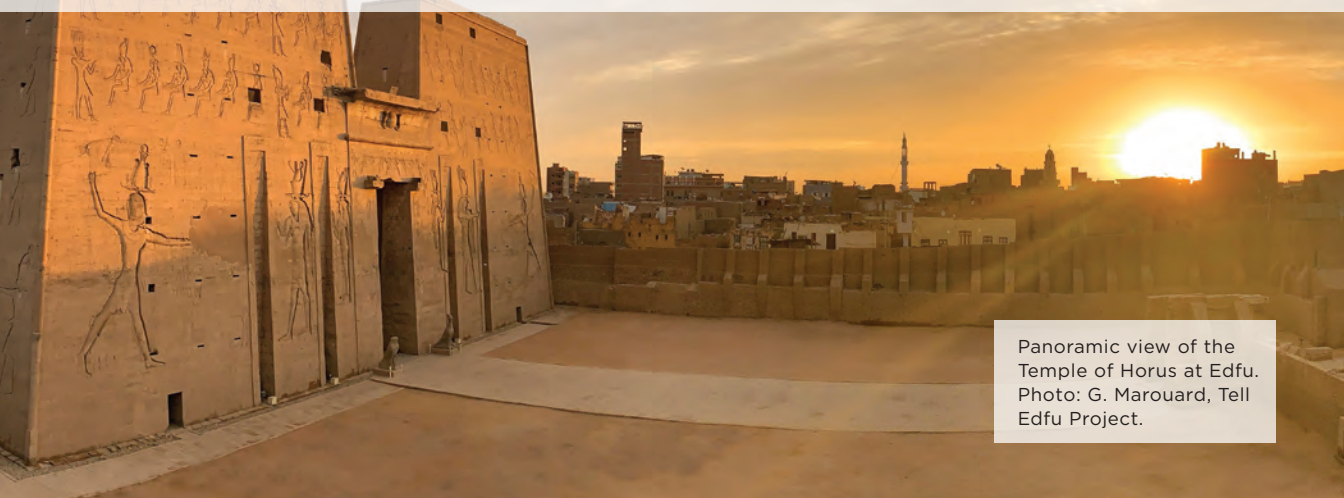
CONCLUSIONS

In the 2018 field season at Surezha our focus on operations 2, 9, and 10 in area B at the south end of the high mound allowed us to expose a contiguous area of 300 m² of the LC1 settlement. We found clear evidence for functional differences between the domestic area in op. 2 and the non-domestic large mudbrick enclosure that extended across ops. 9 and 10.

Economic evidence showed gradual changes in the agricultural and herding economies in the shift from the Ubaid to the LC1 period. We recovered additional evidence for the development of cultural contacts across the mountain passes into northwestern Iran. Finally, the available evidence indicates a short episode of localized abandonment of this part of the site, with gully-cutting and erosion at the very end of the LC1 period.

TELL EDFU

NADINE MOELLER and GRÉGORY MAROUARD



Panoramic view of the Temple of Horus at Edfu. Photo: G. Marouard, Tell Edfu Project.

The ancient city of Edfu is situated on the West Bank of the Nile valley, halfway between Aswan and Luxor. In ancient times, Edfu was the capital of the Second Upper Egyptian Nome and formed an important regional center in Upper Egypt since the mid-third millennium BC until the late Byzantine period.

Since 2014, one of the main research objectives of our archaeological fieldwork at Tell Edfu has been to identify the earliest traces for settlement activity and to investigate the Old Kingdom occupation that lies deep under the actual surface of the preserved tell site. In the continuity of previous seasons, we mainly focused this year on the excavation of Zone 2, which is situated to the west of the pylon of the Ptolemaic temple (fig. 1) and contains the earliest settlement remains at Edfu so far discovered, dating to the second half of the Fifth Dynasty (ca. 2400–2300 BC) and the reigns of several of its late rulers, Nyuserre, Menkauhor (both kings were identified this season), and Djedkare Isesi.

After the extensive cleaning work conducted in the previous 2017 season on the top of the tell, on the north side of previously excavated Zone 1, marked by its massive silo courtyard and Middle Kingdom governors' residence, a new excavation area was opened this season at Zone 4 (previously named Zone 1 Northern Extension). After the meticulous 3-D mapping and the removal of several remains of houses from the early Late Period (Twenty-fifth Dynasty, ca. 750–650 BC), previously excavated by the French mission of the IFAO in 1932–33, a new settlement area of the late Second Intermediate Period and the early New Kingdom (early Eighteenth Dynasty, ca. 1580–1500 BC) has been discovered, and one urban villa has been partially excavated.

The 2018 season at Tell Edfu started on October 20 and finished on December 6, 2018. The project has been conducted by Professor Nadine Moeller (director; Oriental Institute, University of Chicago) and Dr. Grégory Marouard (codirector; Oriental Institute, University of Chicago). This year team members were Katarina Arias Kytnarová, PhD (Old Kingdom pottery specialist, Czech Institute of Egyptology, Charles University, Prague), Aaron de Souza, PhD (Nubian pottery; Macquarie University, Sydney), Natasha Ayers, PhD (Middle and New Kingdom pottery specialist; University of Chicago),

Emilie Sarrazin (archaeologist, trench supervisor; University of Chicago), Sasha Rohret (archaeozoologist; University of Chicago), Camille Lemoine (independent contractor, small-finds drawings), Hilary McDonald (photographer; University of Chicago House in Luxor), Raghdha “Didi” El-Behaedi (archaeologist; University of Chicago), “Rebecca” Ziting Wang (Egyptologist, small-finds specialist; University of Chicago), Maja Sunleaf (assistant ceramicist; University of Chicago).

The local inspectorate of the Egyptian Ministry of Antiquities (MoA) was represented this season by Mrs. Hanan Abd-el Fattah Ewees Mohamed and Mrs. Shaimaa Abdel Mageed Hassan.

EXCAVATIONS ON THE OLD KINGDOM SETTLEMENT AREA IN ZONE 2

The main objective of Zone 2 is to investigate an area on the northeastern side of the currently preserved tell, located only 25 m on west of the Ptolemaic temple (fig. 1), which corresponds to the only parts of the site where archaeological layers dating to the Old Kingdom are still accessible. Much of the remains in the area had been covered by several meters of unstratified debris dumped here by *sebbakh* diggers and previous excavations conducted by the French Institute (IFAO) in the 1930s. After several seasons that involved the removal of a thick deposition of mudbrick rubble and mixed pottery, archaeological layers that were still in situ were finally reached in 2012. These layers had also suffered from *sebbakh* digging, which left deep holes cutting through the ancient stratigraphy. Over the past three seasons, it has been possible to reach the natural substratum in several areas and to follow the overall development of a settlement quarter, from the oldest layers of occupation (ca. 2450 BC) ever found in Edfu that were directly settled onto the natural ground and constituted Nile sand and clay deposits, to the last preserved remains here, which date to the late First Intermediate Period (ca. 2100 BC). It is now evident that this town sector saw several phases of drastic transformations over time.

In Zone 2, the oldest constructions belong to a settlement phase that has been provisionally designated as “monumental” because of two sizeable buildings that do not show any of the usual characteristics of domestic architecture. These structures can be considered the first installations in this part of the settlement at Edfu and they were founded *ex nihilo*, directly on the natural Nile deposits.

This season, the excavation mostly focused on the unusual mudbrick Northern Building 1, whose massive exterior walls and main eastern entrance have been fully exposed along the western limit of Zone 2. Its eastern, northern, and southern outer walls have been preserved on a significant elevation of about 2.2 m above the functioning floor level (fig. 2). The Northern Building 1 was originally orientated east–west, and only its eastern façade including the main entrance door is preserved, which consists of the wooden lintel and door found still in situ during our 2012 season. The northern and southern walls have a width of 2.3 and 2.8 m. The eastern exterior façade stretches 9.2 m from north to south and probably more than 12 m at its base, which has not been reached yet. On the three sides of this massive building, the façade presents a fairly steep slope (fig. 9). Northern Building 1 was founded directly on the natural Nile sand deposits and therefore constitutes the very first planned installation here, clearly of an official nature, but this needs to be further clarified in more detail.

In 2014, a trench was dug along the interior of the entrance in order to reach the corresponding floor level, which is situated 1.8 m below the lintel. This permitted us to observe a system of an entry room in the southeast corner that led to two rooms to the west and the north. The massive trash layers that had covered the small entrance space seems to have filled up quickly with debris containing not only late Fifth Dynasty and early Sixth Dynasty pottery but also pieces of copper slag and crucible fragments covered with green copper splashes attesting to metallurgical activity in the area even after the abandonment of the structure. These pieces of copper ore and slag will be further analyzed next

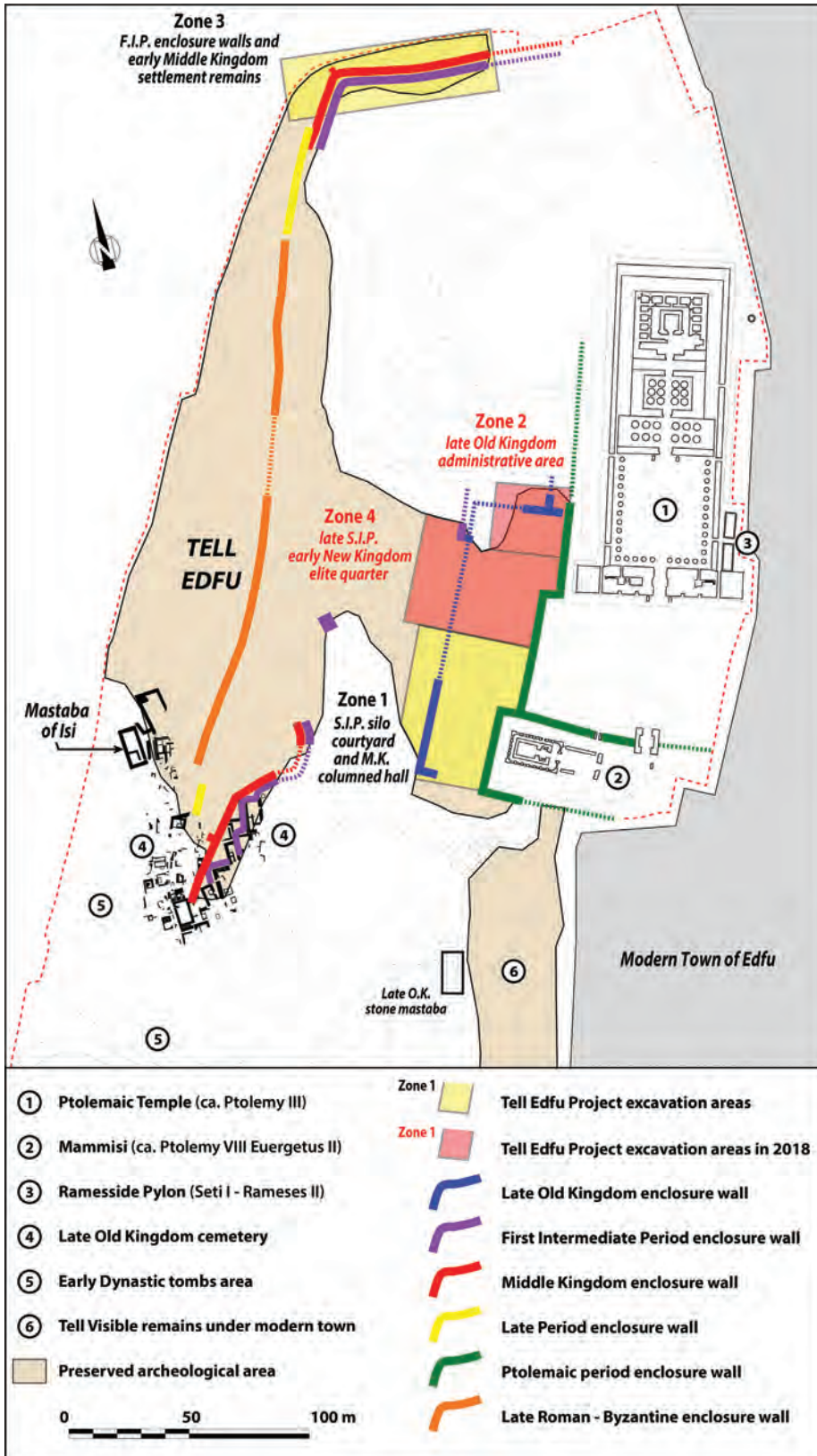


Figure 1.
Schematic plan of Tell Edfu showing excavation areas, main monuments and sections of enclosure walls. Plan: G. Marouard, Tell Edfu Project.



TOP: Figure 2. General view of the central part of Zone 2 with the large Northern Building 1 (end of the Fifth Dynasty) emerging from later occupation levels. Photo: G. Marouard, Tell Edfu Project. BOTTOM: Figure 3. Bakery level in situ with several complete late Fifth Dynasty bread molds. Photo: G. Marouard, Tell Edfu Project.

season in order to determine its chemical components with the aim to trace their origin of extraction, most likely from the Eastern Desert. In addition, numerous sealings were excavated in association with the first buildings in this area, many of which are marked by a cylinder-seal impression naming the Horus name in a *serekh* of King Djedkare-Isesi, *Djed-Khaw*, the penultimate ruler of the Fifth Dynasty (ca. 2375–2350 BC; fig. 7). Therefore, the first buildings in Zone 2, including Northern Building 1, can be dated exclusively to the late Fifth Dynasty (ca. 2400–2300 BC), which has close parallels to the larger installation at the town of Elephantine (modern Aswan), in the First Cataract region.

During the excavations in the fall 2016 season, a 1 m thick perimeter wall (W 1210) that is located to the south of Northern Building 1 was excavated, once again built directly on natural sand deposits. This well-built wall also has faces with a slight slope and runs east–west for about 12.5 m along the southern side of the Building 1. It is then linked on the east to a second wall of identical dimensions (W 1170 - W 1256), which runs north–south. These two long walls were used as a delimitation for a very large space that covers an open area of at least 100 sq. m on the eastern side of Northern Building 1 and functioned as a vast courtyard (fig. 2). The excavation of this outer zone that occupies most of the central part of Zone 2 was the focus of this season’s excavations. Many traces of fireplaces have been discovered on the thick floor layer of this open space, and the mud-floor itself consists of at least four phases attesting to a long period of use. An important quantity of copper ore, crushed slags, fragments of crucibles, and small balls of pure copper embedded in thick layers of charcoals and ashes attest to the extensive transformation of this metal in this area (fig. 8). The processing of copper in particular during the Old Kingdom was almost exclusively conducted under the supervision of official institutions, and the exploitation of this kind of raw material was mainly organized by the central state under the charge of a high official personage sent by the king.

To the east, we excavated a series of well-built walls that probably mark the original entrance into this courtyard (fig. 2). It is noteworthy that there was no direct access to the building, but the entrance is built in the typical kind of “barrier” fashion, where no direct view into the interior is possible from the outside. The excavation of trash layers that had accumulated on the floor level in this entrance room contain a few official clay sealings naming King Djedkare Isesi and also Nyuserre, an earlier king of the Fifth Dynasty. The latest, for the first time attested in this area of Tell Edfu, can be considered now as the king behind the founding of the *ex nihilo* complex at Zone 2.

After the abandonment of the building and its courtyard, a large amount of trash accumulated on top of the floor, with a large quantity of broken pottery and regular activities of baking (fig. 3).

The central part of the large courtyard of the Northern Building 1 is still marked for the moment by a series of small domestic later courtyards (fig. 2) that date back to the beginning of the Sixth Dynasty and that will be excavated next season with the aim to reach the original floor levels of the courtyard that are contemporary to the functioning of our massive building.

THE EARLY NEW KINGDOM SETTLEMENT AREA, ZONE 4 (NORTHERN EXTENSION OF ZONE 1)

This season, a second part of the Tell Edfu Project fieldwork was concentrated on the upper part of the tell on Zone 4 (fig. 1), and a new excavation area opened immediately to the north of the previously excavated Zone 1, marked by a large silo courtyard of the late Second Intermediate Period. This new trench was under the supervision of Emilie Sarrazin, PhD candidate in Egyptian archaeology, NELC Department of the University of Chicago.

The first few weeks of the season were devoted to the proper recording of structures totally or partially excavated by the French missions of the IFAO conducted by Maurice Alliot, who had



worked in this area during two seasons in 1932 and 1933. Due to the excavation methods of the time, these upper remains consisted mainly of mudbrick walls disconnected from their original floors and stratigraphy (fig. 11). All structures were photographed, described, mapped using the total station, and modeled using photogrammetry in order to produce a 3-D model and orthophotographic views.

In these upper levels, at least three different phases of constructions could be identified. The latest phase (Phase 1) identified here was only represented by four disconnected walls, built on top of two structures belonging to the preceding phase (Phase 2). According to the brick sizes and several walls previously excavated in Zone 1, those top walls can be dated to the early Ptolemaic period (ca. 300–150 BC) and are contemporaneous with the construction of the vast temple of Horus, which still stands to the east of the settlement. Thanks to the presence of these Phase 1 walls, some of the stratigraphic remains below were left undisturbed by the 1930s excavations, providing us with some critical information about the Phase 2 buildings.

Phase 2 could be, for now, summarily dated to the Late Period, and most of the pottery material seems to correspond to the Twenty-fifth Dynasty (ca. 750–650 BC). A great discovery from this phase was a reused sandstone column, 1.6 m high, with a vertical line of hieroglyphic texts inscribed on it. It seems that this column belonged to an earlier context dating to the early New Kingdom and was then re-plastered and reused in another building before being discarded here (fig. 11). The original inscription on the column mentions a certain Amenmose, high priest in the temple of Horus at Edfu, and his wife, the lady of the house, Meret-Ger, which probably dates to the early Eighteenth Dynasty according to the paleography.



LEFT: Figure 4. Professor Nadine Moeller, director of the Tell Edfu Project, and NELC graduate student “Rebecca” Ziting Wang holding complete bread molds. Photo: G. Marouard, Tell Edfu Project. MIDDLE: Figure 5. Old Kingdom pottery specialist Katarina Arias Kytarová, PhD (Czech Institute of Egyptology, Charles University, Prague) recording a set of beer jars in situ. Photo: G. Marouard, Tell Edfu Project. RIGHT: Figure 6. Archaeozoologist and NELC PhD candidate Sasha Rohret. Photo: G. Marouard, Tell Edfu Project. INSET (RIGHT): Figure 7. Clay sealings showing the *serekh* and cartouche of King Djedkare-Isesi in addition to the *sementiu* sign. Photo: H. McDonald, Tell Edfu Project.



Phase 4 is characterized by an important building complex (fig. 12). This mudbrick structure was leveled shortly after its abandonment and buried under thick layers of stratified trash deposits (Phase 3) dating, according to the preliminary analysis of the pottery and several inscribed documents, to the first half of the New Kingdom, at least to the middle of the Eighteenth Dynasty (Thutmosid period, ca. 1500–1400 BC).

Due to the material found inside this large building and its stratigraphic position and relation with the late Second Intermediate Period silo courtyard (Zone 1), all evidence suggest that this complex belongs to the very end of the Seventeenth Dynasty and was still in use during the earliest reigns (Ahmose–Thutmose I) of the Eighteenth Dynasty, circa 1550–1500 BC.

This large building was not fully excavated, but five rooms were exposed this year in addition to the two rooms and a large columned courtyard previously investigated in 2015 (see OI Annual Report 2015–16, pp. 153–55). At this point, the exposed complex is measuring at least 26 ×

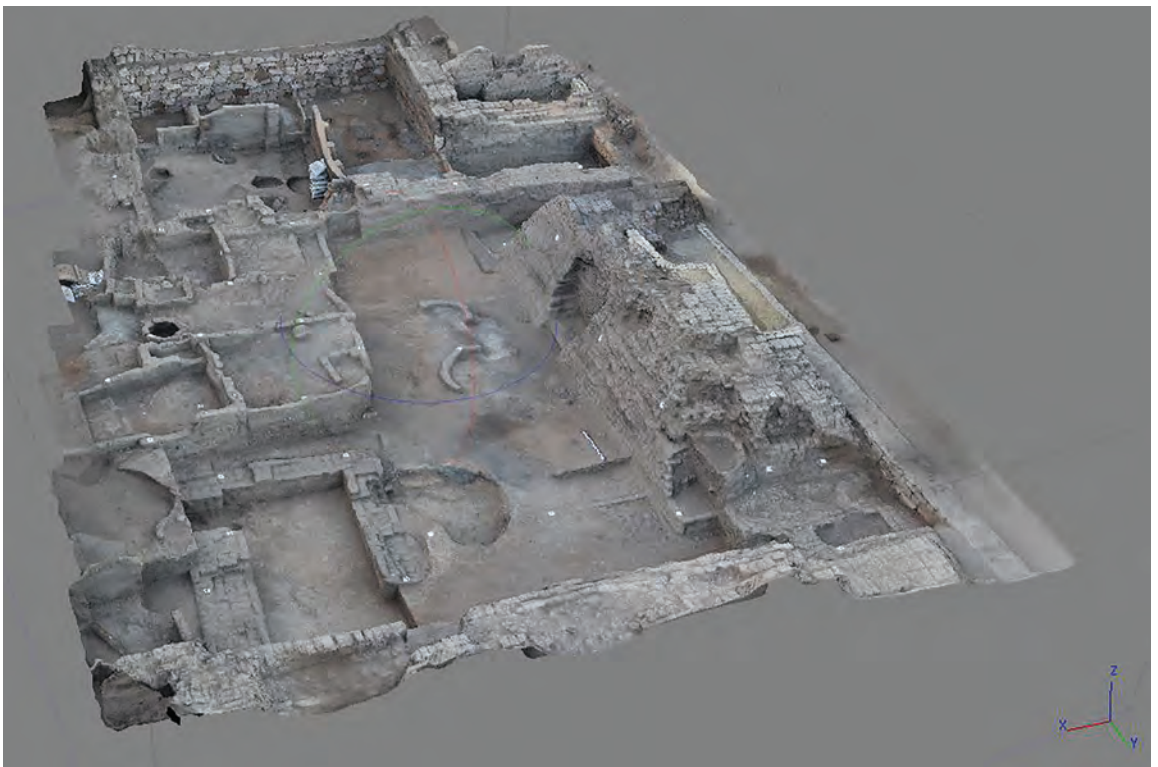
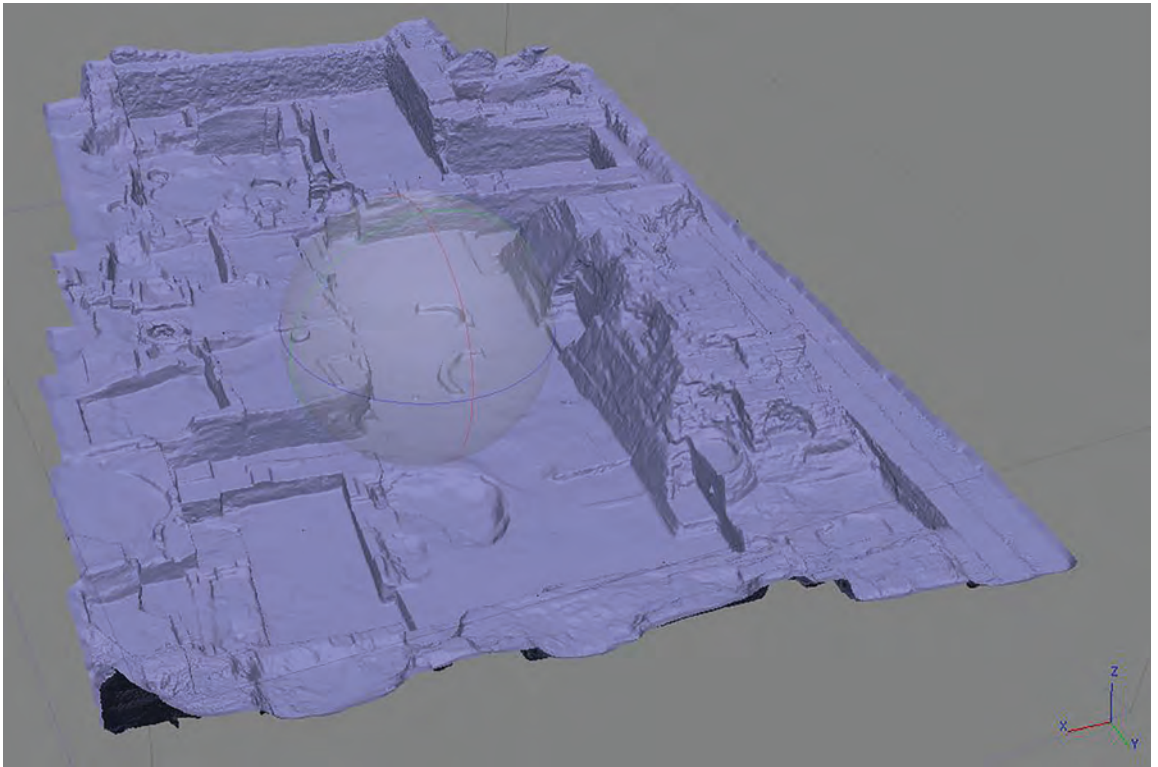
21 m in size, covering over 500 sq. m. If the northern façade and the main entrance is known, its eastern and western limits need to be found next season.

Its monumental size, domestic components, and associated finds suggest that it once was a large urban villa for an important family of the local elite living in Edfu. It is characterized by a large central hall with six columns and a large entrance marked by a stone threshold still in situ (fig. 19) that shows the pivot sockets for a two-winged door, and traces of two massive door jambs were found on its northern side. None of the column and column bases have been preserved; only the holes remain visible, as they were removed in ancient times, probably very shortly after the abandonment of the villa (fig. 12). The private rooms of this large house are arranged around the six-columned hall that



TOP LEFT: Figure 8. Thick level of charcoals, crushed slag, and copper fragments indicating significant copper reduction activity in the courtyard of the Northern Building 1. Photo: G. Marouard, Tell Edfu Project. BOTTOM LEFT: Figure 9. Southeastern corner of Northern Building 1 showing the mudbrick façade with the distinctive slope. Photo: G. Marouard, Tell Edfu Project. TOP AND BOTTOM RIGHT: Figure 10a-b. Mesh view and textured view of a 3-D model of the Zone 2 area (ca. 1,500 sq. m) rebuild with 536 pictures. 3-D model: G. Marouard, Tell Edfu Project.









TOP ROW (LEFT TO RIGHT): Figure 11. Ongoing excavation of the Late Period remains (Twenty-fifth Dynasty) in the newly opened area at Zone 4 (northern extension of Zone 1). Photo: G. Marouard, Tell Edfu Project. TOP RIGHT: Figure 12. General view of the late S.I.P.-early New Kingdom elite villa with its central six-column hall and a private ancestors' shrine. Photo: G. Marouard, Tell Edfu Project. Figure 13. Limestone ancestor bust found in situ on the floor of the private sanctuary. Photo: G. Marouard, Tell Edfu Project. SECOND ROW RIGHT: Figure 14. Diorite seated statue of the "Scribe of the Nome," named *Iuf*, discovered on the floor of the ancestors' shrine. Photo: G. Marouard, Tell Edfu Project.

SECOND ROW (LEFT TO RIGHT): Figure 15. NELC PhD candidate Emilie Sarrazin removing the seated statue of *Iuf*. Photo: G. Marouard, Tell Edfu Project. Figure 16 (CENTERFOLD). General view of the early New Kingdom ancestors' shrine after excavation. Photo: G. Marouard, Tell Edfu Project. Figure 17. Ongoing excavation in the northern part of the main six-column hall of the urban villa. Photo: G. Marouard, Tell Edfu Project

THIRD ROW: Figure 18. Dr. Grégory Marouard, Tell Edfu Project codirector, photographing the villa with an extensible carbon fiber pole in order to build a photogrammetric 3-D model. Photo: E. Sarrazin, Tell Edfu Project.

BOTTOM ROW: Figure 19. Photogrammetric 3-D model showing the large urban villa, from the north. 3-D model: G. Marouard, Tell Edfu Project.



LEFT: Figure 20. New protective mudbrick wall constructed on the eastern side of the Ptolemaic enclosure wall. Photo: G. Marouard, Tell Edfu Project.

OPPOSITE: Figure 21. Middle and New Kingdom pottery specialist Natasha Ayers, PhD (postdoc, Institute for Oriental and European Archaeology, Austrian Academy of Sciences), studying ceramics from Zone 1 area. Photo: G. Marouard, Tell Edfu Project.

occupies the center. On the southern side and in the north–south axis of the columned hall, another small two-columned room could be accessed. A smaller entrance to the private rooms on the eastern side is also marked by a doorway that once was made with two fine limestone door jambs of which only small traces are preserved, which show a few incised lines from an inscription. However, some inscribed pieces of these doorjambs were found throughout the room, and further excavations next season will probably reveal more of them.

The most important finds from this building this season came from a small structure built in the northeastern corner of this central six-columned hall (fig. 16). This structure, slightly elevated, contains all the elements of a private domestic shrine, which was dedicated to the worship of the family ancestors. Among the most remarkable objects found within or in proximity to this sanctuary are an ancestor bust (fig. 13), an inscribed statue of a seated scribe (figs. 14, 15), and three inscribed stelae made of limestone, sandstone, and wood, respectively, as well as a several big blue faience beads. The small limestone bust (fig. 13) shows a lady wearing a long tripartite wig and a *wesekh* necklace. Traces of black paint have been recognized on the wig as well as traces of red on her ears and the necklace. It measures 20 cm in height. The best parallels for such an ancestor bust come from Deir el-Medineh, where those ancestor busts have been associated with wall niches and date to the Nineteenth Dynasty. However, the facial features of this bust show characteristics of the early Eighteenth Dynasty and can therefore be considered the earliest example found so far in a sealed archaeological context. It was also found close to the wall and might have fallen from a niche set into this wall.

The small diorite statue of a seated scribe (fig. 14) shows a man wearing a shoulder-length wig and a long kilt. The statue measures 25 cm in height. He holds a papyrus roll in his left hand, and the right had is stretched flat on his knee. The inscriptions on this kilt and the sides and back of his chair mention his names and titles: he was called *Iuf* (*Jwf*) and he held the title of “scribe of the nome of Edfu” (*sš Wts-Ḥr*). On the left side of his seat, the name of his wife has been inscribed. She was called Hori and holds the title of the “lady of the house” (*nb.t-pr*). On the right side of the seat, we find the inscription naming his father, also called *Iuf*, who held the title of “judge” (*s3b*). The usual offering formula is mentioned on the back in addition to the name of his mother, *N3j*. It is very clear from these names and titles that *Iuf* belonged to an important elite family of Edfu. The stylistic features of the face, with his large ears and wig, are reminiscent of the late Middle Kingdom, but the facial features like the eyes and his mouth are typical for the early Eighteenth Dynasty, prior to the reign of Thutmose I.

A small limestone stela measuring 32 cm in height was also found within the context of this small shrine. It shows a man and a woman standing, in raised relief in center. Their faces and some of the lower parts of the inscriptions, where their names would have stood, have been hacked out, most likely deliberately, in ancient times. The hieroglyphic text that surrounds the couple includes the usual offering formula invoking the goddess Isis-Renenutet, who is most famous for the Theban region. The man holds the title of “mayor” (*h3ty-c*) and “overseer of priests” (*jmj-rc hmw-ntr*), as far as his name can be reconstructed at this point, was probably *Hor-Nakht*. The woman holds the title of “noble woman” (*jrj.t-pc.t*), and her name is very badly destroyed but might be reconstructed as *Nefer-Webenes*. This unusual piece clearly shows members of the family who once lived in this large house.

Pieces of a broken sandstone stela with traces of paint were also excavated, but it is incomplete, preserving only parts of the offering formula. A small wooden stela with traces of paint was also excavated, but because of its fragile state has not yet been cleaned. It needs to be treated by conservation first, which we are aiming to do next season with the help of a conservator.

The architecture of the shrine, with two small mudbrick pedestals (fig. 16), a hearth, and possible offering tables, still remains to be further excavated. Only very few parallels have ever been found in Egypt of such domestic shrines, the most famous examples coming from the workmen’s village at Deir el-Medineh, which was excavated more than eighty years ago. The size of this large villa as well as the elements found within it suggest that it belongs to an elite context and was probably part of several larger villas that formed a distinct elite quarter at the ancient town of Edfu dating to the very beginning of the Eighteenth Dynasty.





SITE-MANAGEMENT INITIATIVES

This year, several operations were engaged in order to support the site management of the Edfu temple area. We were able to replace a section of a wall constructed about fifteen years ago, when the new visitor-center complex was built at Edfu, as it was about to collapse on the path of the tourist pathway. This new protective wall has been constructed on the east side of the Ptolemaic enclosure wall (fig. 20). About forty-five thousand mudbricks were used in order to constitute a strong support for the antique wall behind it and to ensure the safety of the visitors. The red sand in the entire area and around the blockyard built by the Tell Edfu Project in 2012 was also renewed. Several lamps used for night lighting of the site were replaced by new energy-efficient LED lights near the excavation area of the Tell Edfu Project.

CERAMIC ANALYSIS

Again this season Katarina Arias Kytnarová, PhD,—an expert on the pottery from the Old Kingdom, a member of the Czech Institute of Egyptology at the Charles University in Prague, and a member of their excavation project at Abusir—continued to process a large part of the pottery discovered in the Zone 2 excavations this season (fig. 5). She is comparing the pottery found in Edfu to the ceramic vessels excavated at Abusir dating to the same period.



LEFT: Figure 22. Nubian pottery specialist Aaron De Souza, PhD (postdoc, Austrian Academy of Sciences), drawing a complete bowl from Zone 2. Photo: G. Marouard, Tell Edfu Project, Tell Edfu Project. MIDDLE: Figure 23. Small-finds artist Camille Lemoine drawing a small bull figurine made of molded clay. Photo: G. Marouard, Tell Edfu Project. RIGHT: Figure 24. New Tell Edfu Project member, NELC graduate student Raghda “Didi” El-Behaedi, using a total station on Zone 4 area. Photo: E. Sarrazin, Tell Edfu Project.

Natasha Ayers, PhD, University of Chicago, resumed her work on the Egyptian pottery material (fig. 21) from the latest phases of the Zone 1 area, which date to the late Second Intermediate Period and the early New Kingdom. Aaron de Souza, PhD, from the Macquarie University, Sydney, continued his study of the Nubian and C-Group pottery material excavated during the previous seasons in Zone 1. He also studied numerous new pieces of Nubian A-Group and possible Eastern Desert ware pottery from late Old Kingdom found in Zone 2 (fig. 22). The presence of these ceramics, especially in the contexts presented above and dated to the reign of King Djedkare-Isesi, highlights possible contacts and exchanges with the populations from Eastern Desert regions, which is expected in the context of the mining expeditions sent from Edfu to extract raw materials, foremost copper.

FAUNAL ANALYSIS

This year’s study of faunal remains (animal bones) at Tell Edfu by Sasha Rohret continued the work from the last two seasons, focusing on the Old Kingdom contexts from past and present excavations in Zone 2 (fig. 6). The analysis of this material will be part of a wider comparative study with Dendara and with other Old Kingdom sites with signs of administrative activity. This year over six hundred animal bones were identified and recorded, taking note of signs of burning, butchery, carnivore and rodent gnawing, and other modifications to the bones before and after deposition. These modifications, as well as measurements of complete and/or diagnostic elements, were recorded and photographed. The greatest proportion of bones comes from sheep and goat, followed by cattle. While more

pig remains were found in the contexts excavated last season, there is still a noticeable difference in their relative proportion compared with other domesticates. This would suggest a lack of a household-level economic structure concerning animal husbandry (pig rearing is often associated with a more individualistic production strategy). These trends would appear to support the interpretation of the area as an administrative center in Zone 2, as the animals most common in the collection are easily incorporated into a regional provisioning model. As in previous seasons, hippopotamus remains have been found in numerous contexts from the Old Kingdom area of the site, and like last year, they appear to be juveniles. A modest quantity of Nile fish species is present in the collection as well, but do not compose a large proportion of the remains. Future work will continue the process of collecting data and analyzing the faunal remains from Zone 2, and will provide more insight into the possible production strategies and uses for different species at Tell Edfu during the Old Kingdom.

ACKNOWLEDGMENTS

The directors and entire Tell Edfu team would like to thank the Edfu inspectorate for their help and collaboration this year, especially Chief Inspector Susi Samir Labib. We would also express our gratitude to Mohamed Abd el-Moneim, general director of Aswan Inspectorate. We also express our gratitude to Mary Sadek (ARCE Cairo office) for her help with the paperwork and MoA-related matters. This 2018 campaign was funded with the support of the Oriental Institute and its director, Chris Woods, and the FIRE fund for Innovation in Research in Egypt.



Figure 25. Tell Edfu Project 2018 team. Photo: G. Marouard, Tell Edfu Project.



INDIVIDUAL RESEARCH



OVERLEAF:
Epigraphic Survey's
Yarko photographing
in the chapel of
the God's Wife of
Amun Amenirdis I,
December 27, 2018.
Photo: Amanda
Tetrault.

INDIVIDUAL RESEARCH

ABBAS ALIZADEH completed and submitted his *Guide to the Persian Gallery* in 2018. This is the most extensive guide to the Persian Gallery that includes additional objects from third millennium BC (proto-Elamite) as well as the first millennium BC (Neo-Elamite) discovered by Donald McCown at Tall-e Geser (a.k.a. Tall-e Ghazir) in southwestern Iran between 1949 and 1950. He also has been working on an OIP manuscript to publish the results of his excavations at the five prehistoric settlements (Tall-e Bakun A and B, Tall-e Jari A and B, and Tall-e Mushki) in the plain of Persepolis that he excavated in 2005. These excavations have provided the hitherto unavailable absolute radiocarbon dates for these key settlements in the region as well as a stratified sequence of the local pottery and evidence of subsistence economy from circa 6800 to 4000 BC.

Alizadeh also conducted the twentieth season of excavations at Nippur in 2019 after almost thirty years of hiatus due to political unrest in Iraq. He will return to the site with a much larger staff and for a longer season in March of 2020. Once it is officially finalized, the Nippur project in 2020 will include the two important sites of Drehem (ancient Puzurish Dagan) and Dlehim (ancient Tummal) that lie within a 10 km radius of Nippur. The former was an important administrative and distribution center during the Third Dynasty of Ur; the latter was also an important cult center during the same dynasty and, according to some cuneiform texts, the burial place of Ur-Namma, the founder of the Third Dynasty of Ur.

In addition, Alizadeh's new project is "The Archaeology of Apprenticeship." This research focuses on the processes through which craftsmen (primarily potters) learned their crafts as children whose unskillful work is reflected in the clumsily made and decorated pottery vessels that most ceramic corpuses from prehistoric sites exhibit. This will be done by studying various categories of archaeological collections in both the Oriental Institute and the National Museum of Iran. The model for this project was provided by the ethno-archaeological works of M. A. Harding on contemporary potters in the southwestern United States. Alizadeh also plans to travel to Iran to conduct an ethno-archaeological survey of the modern-day pottery workshops in Hamadan (ancient Ecbatana) and in Khuzestan to document the way modern-day potters train their young apprentices.

RICHARD H. BEAL spent much of his time copyediting the final fascicle of the letter Š. This was submitted to the Publications Office, where they converted it from Word to the design program InDesign, and in doing so, put it into the page format of the dictionary. The resulting page proofs were read by several staff members, since the necessary corrections in such a complicated manuscript only show up at the proofing stage. Beal assembled the corrections and entered them into the page proofs directly; this produced a second set of page proofs, which Beal read and further corrected, producing a third set of page proofs, and so on. The abbreviation list also needed attention. As new scholarly works appeared between the publication of CHD fascicles, each new fascicle required an addendum to the abbreviation list for these new works. This was usually published on the inside cover of the fascicle. With this fascicle finishing a volume, and presuming that the fascicle covers would be torn off

to bind the fascicles into a volume, it was necessary to combine the abbreviations list of the P volume with addenda of each fascicle. The fascicle is finally, at the time of writing this report, at the printers.

He completed a review of Trevor Bryce's *Warriors of Anatolia: A Concise History of the Hittites* for *Bryn Mawr Classical Review*. Written by the well-known master of Hittite history, the book is a breezily readable overview of Hittite political and cultural history written for popular consumption. It contains far more informed speculation and imaginative reconstructions than are typical in most scholarly books; it is successful for what it is intended.

He and his wife, JoAnn Scurlock, have edited the papers of a one-day Midwest American Oriental Society conference at St. Mary's University in Notre Dame, Indiana. The book is tentatively 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 in the works at Archaeopress of Oxford, England.

In early June, Beal spent a month photographing in Sichuan and the surrounding regions of China, and at the end of the month, gave a lecture at Fudan University in Shanghai, China. The lecture was on Hittite oracles—questions to the gods asked in a yes/no format. Oracles were intended to find out which god was causing misfortune, why, and what compensation could soothe divine anger. They also asked about general or very specific military operations or unforeseen dangers, among other things. Some ten students taking courses in ancient Near Eastern studies from our hostess Professor Ouyang Xiaoli attended.

Finally, Beal wrote a chapter on the history of “Hittite and Anatolian Studies at the OI” for *Discovering New Pasts: The OI at 100*, ed. Theo van den Hout (Chicago: Oriental Institute, 2019), 320–39. Hittite language and Anatolian studies was a relative late comer to the University of Chicago, only beginning with D. D. Luckenbill's courses in Boğazköy Texts in the early 1920s and H. H. von der Osten's Anatolian surveys and excavations at Alişar beginning in 1926. These were followed by such distinguished names such as A. Walther, I. J. Gelb, H. G. Güterbock, H. A. Hoffner, up to the present day T. van den Hout, P. Goedegebuure, and J. Osborne. And, of course, since 1976 the OI has been producing the *Chicago Hittite Dictionary*, so this was a chance to reminisce about the various colleagues Beal has worked with since then.

As one of the coeditors of the series *Die Babylonisch-Assyrische Medizin in Texten und Untersuchungen*, **ROBERT D. BIGGS** spent several months reading and commenting critically on a massive manuscript of a new edition of Tablets III–XIV of the Babylonian medical diagnostic series *Sakikkû* for which many more sources are now known than were available for the previous edition in 1951. *Mesopotamische Diagnostik* will be published by deGruyter in Berlin.

ALAIN BRESSON's research activity is currently mainly focused on coinage and money in the ancient world. I have published one article this year, as well as four chapters and one review. I have also seventeen chapters in press (three of them should come out this summer) and several others in preparation.

As for my activity that is directly linked to the field of research of the OI, I will underscore the following. Two papers came out in 2018–19. “Coins and Trade in Hellenistic Asia Minor: the Pamphylian Hub,” in B. Woytek, ed., *Infrastructure and Distribution in Ancient Economies* (Vienna, Austrian Academy

of Sciences Press, 2019), 67–143. On the basis of an analysis of countermarks on the tetradrachms of Pamphylia, this chapter analyses monetary circulation between Asia Minor, Syria, and Mesopotamia under Antiochos IV, Antiochos V, and Demetrios I (between 175 and 150). Among other things it shows the close links among these three regions, Pamphylia playing the role of hub in this network. It also proposes a new interpretation of the Seleucid countermarks from Syria and Mesopotamia. “From Xerxes to Mithridates: Kings, Coins and Economic Life at Kelainai–Apameia,” in Z. Archibald and J. Haywood, eds., *The Power of Individual and Community in Ancient Athens and Beyond* (Swansea: Classical Press of Wales, 2019), 285–310, envisages the role of coinage in the long durée in the economic life of Kelainai–Apameia (in Phrygia).

Three papers that should come out in 2020. “The Choice for Electrum Monometallism: When and Why,” in U. Wartenberg and P. van Alfen, eds., *White Gold* (New York), on the origin of coinage in western Asia Minor after 650 BCE. “Closed Currency Systems of the Black Sea (Archaic and Classical Period),” in D. Schaps, ed., “Money on the Margins Coinage, Forms and Strategies of Intercultural Commerce on the Black Sea Shore in the Classical and Hellenistic Eras,” which offers a global approach toward coinage circulation in the Black Sea in the archaic and classical periods on the basis of coin hoards. “Silverization, Prices and Tribute in the Achaemenid Empire,” in C. Tuplin and J. Ma, eds., Arshama series, which shows that it is impossible to address the question of monetization in the Achaemenid Empire without taking into account the input of silver and gold coming from the west, that is, the Aegean.

In 2019–20, I will keep on working on currency and coinage in the ancient world, but I will also explore new ground. With Dr. Elizabeth Fagan, a former student of the UChicago History Department, I plan to organize at the University of Chicago and with the support of the Oriental Institute a Symposium on Armenia on April 17, 2020: “Ancient Armenia: Center and Peripheries.” We expect to have nine presentations. This symposium will be the opportunity for Dr. Fagan (as a specialist of Armenia) and me (as a specialist of Greek epigraphy) to present for the first time a new analysis (with new readings, restorations, and date) of a Greek inscription of Armenia that was published more than fifty years ago. The text was poorly understood and wrongly dated. Our new analysis will show that the text is of special importance for the understanding of the earliest phase of development of Christianity in Armenia.

JOHN BRINKMAN’s research has focused recently on the Ahlamu, the earliest known group of Arameans, who lived in Babylonia in the fourteenth and thirteenth centuries BC. The Arameans became a significant social and cultural force in the Near East in the first millennium BC; their language, Aramaic, served as the *lingua franca* for much of the region. They continued as a vibrant presence in later centuries, and their language is today spoken in scattered areas of Lebanon, Syria, Turkey, Iraq, and Iran and survives in Syriac, a congeries of dialects primarily seen in ecclesiastical and literary usage. In Babylonia of the Late Bronze Age, the Ahlamu were clustered in large kin groups (clans or tribes) and also appeared as individuals in various sectors of society. They organized merchant caravans, manned city gates, engaged in various agricultural enterprises, and worked as household servants. There are more than sixty known Middle Babylonian texts referring to the Ahlamu, most of them unpublished. Further research may lead to clarifying their role in society and to establishing a corpus of their personal names, which may provide clues to an early stage of the Aramaic language or at least a proto-Aramaic dialect. Brinkman also continued with his research on the Neo-Assyrian texts found by the Oriental Institute expedition to Khorsabad, reconciling disparate excavation and

museum records and correcting information in the OI database about the architectural provenance of individual prisms, tablets, and fragments.

FRED M. DONNER enjoyed leave during 2018–19, thanks to grants from the American Council for Learned Societies and the American Academy in Berlin (the “Berlin Prize”). The latter allowed him to spend four months (late January–late May) living and working at the Academy’s elegant villa facing the Wannsee in Berlin while he edited for publication seventh-century Arabic papyri he discovered some years ago in Vienna. He also spent time exploring the papyrus collection of the Staatlichen Museen in Berlin, searching for further seventh-century papyri. During the year Donner also gave lectures at various venues, which included “Islamic Historiography: Past, Present, Future” (American University of Beirut, October 26), “The Early Development of the Narrative of Islamic Violence” (University of Navarra, Pamplona, Spain, December 14), “Some Possible Interpolations in the Qur’an Text” (Consejo Superior de Investigaciones Científicas, Madrid, December 18), “Islam’s Origins: Myth and Material Evidence” (American Academy in Berlin, January 31), and “Vorislamische arabische Inschriften: Kontext für den Koran?” (University of Erlangen, February 7, and University of Leipzig, April 15).

Several articles that had been submitted for publication appeared this year, including: “Early Muslims and Peoples of the Book” in Herbert Bert, ed., *The Routledge Handbook on early Islam* (Abingdon: Routledge, 2017; appeared 2018), 177–93; “The Origins Myth: Looking Anew at Islam’s Origins,” *The Berlin Journal* 32 (Fall 2018): 54–56; “*Dīn, islām, und muslim im Koran*,” in *Die Koranhermeneutik* Günter Lülings, ed. Georges Tamer (Berlin: de Gruyter, 2018), 129–40; and “The Study of Islam’s Origins since William Montgomery Watt’s Publications,” in *The Life and Work of W. Montgomery Watt*, ed. Carole Hilenbrand (Edinburgh: University of Edinburgh Press, 2019), 19–47.











He also submitted several articles for publication: “Scripts and Scripture in Late Antique Arabia: An Overview,” to appear in a volume in the OI’s LAMINE series (Late Antiquity and Medieval Islamic Near East) edited by Donner and Professor Rebecca Hasselbach-Andee; *Scripts and Scripture: Writing and Religion in Arabia, ca. 500–700 CE*, the proceedings of a conference held at the University of Chicago in 2017; “Who’s Afraid of Shari’a Law?” in *Whose Middle Ages? A Sourcebook*, ed. Thomas O’Donnell et al. (New York: Fordham University Press, forthcoming); and “Early Islam and the Community of Believers: Cohesion and its Limits,” in *Ethnicity and Religion in Late Antiquity and the Middle Ages*, ed. Walter Pohl (Österreichische Akademie der Wissenschaften[?], forthcoming).

Donner’s work on the Vienna Arabic papyri, which occupied a good part of his year, is nearing completion and will eventually appear as a volume in the publications of the Papyrus Collection of the Austrian National Library.

Although on leave, Donner agreed to serve as chair of the Middle East Studies Association’s Albert Hourani Book Award committee, which meant that he and four other colleagues on the committee had to evaluate the 150 books submitted for the prize this year. It was time consuming in the spring, but highly enlightening to read so much fine scholarship!

FRANÇOIS GAUDARD completed his twenty-fifth year as part of the Oriental Institute scholarly community. During the past academic year, he made progress with several text-edition projects

and kept working on the Mummy Label Database (MLD; see separate report) and the publication of the Oriental Institute Museum funerary shrouds from the Graeco-Roman period.

Among the errors occurring repeatedly in the texts of the OI shrouds, some notable ones include the group  *nb.w* used as a writing of  *nb* “lord” or  *nb.t* “lady,” the addition of the feminine ending  to some masculine words such as  *wr* “great,” and the use of the sign  (D37) instead of  (D39) in the word  *mw.t ntr* “god’s mother.” In shroud OIM E4789, also note the unusual writing of the group *ḥ.t-dī* as  instead of  (N97).

On the occasion of the Oriental Institute centennial, François, together with Raquel Martín Hernández and Sofía Torallas Tovar, contributed an article on the Mummy Label Database, which consists of a description of the characteristics, role, and appearance of mummy labels; a presentation of the project; and an introduction to the mummy labels in the Oriental Institute Museum.

François is pleased to announce that he has joined the Polish Centre of Mediterranean Archaeology of the University of Warsaw as a research associate. As every year, he served as an editorial consultant for Egyptology articles published in the *Journal of Near Eastern Studies* (JNES) and the *Journal of the American Research Center in Egypt* (JARCE). He has also been working on various articles, including the following:

- “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*, eds. Sandrine Vuilleumier and Pierre Meyrat (Gollion: Infolio, 2019), 63–70.
- “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).
- “A Demotic Accounting Text from the Ptolemaic Period” (in preparation).
- “The Mummy Label Database (MLD),” with Raquel Martín Hernández and Sofía Torallas Tovar, in *Discovering New Pasts: The OI at 100*, ed. Theo van den Hout (Chicago: Oriental Institute, 2019), 213–19.

It is with deep sadness that François learned of the passing of his good friend Dany Roy, on September 25, 2018. Trained in Orléans by the famous association of the *Compagnons du Devoir et du Tour de France*, Dany was a talented stonecutter specializing in cultural-heritage restoration projects. He worked on many Epigraphic Survey and American Research Center in Egypt projects at the sites of Medinet Habu, Luxor Temple, Karnak, Cairo, and the Valley of the Kings. Just as his creativity, rigor, and skills were his professional trademark, his cheerfulness, kindness, and helpfulness characterized his personality. We miss you much, Dany, and we always will.

MCGUIRE GIBSON, in 2018, continued to carry out his research, publishing, and teaching duties before retiring on January 1 of 2019. Besides his commitment to Nippur, he read submissions to scholarly journals; revised manuscripts that are in press; worked with Richard Zettler, Karen Wilson, and Jean Evans to perfect the Inanna Temple publication; and assembled the notes and plans for Umm al-Hafriyat and Nippur, which make possible his continuing preparation of site reports. He finished the editing and revising of two reports by Iraqis (Hussein Ali Hamza and Salah Rmeidh) that deal with excavations in the Diyala region and therefore have relevance to the Institute’s own work in that area in the 1930s. These reports have been submitted to the OI Publications Office and will appear in one volume. Gibson also continues to serve on the boards of The Academic Research Institute in Iraq (TARII) and the American Institute for Yemeni Studies, both of which he founded. There appears to be a good chance now of setting up a permanent office/hostel for TARII in Baghdad. The building

owned by AIYS in Sana'a is still standing, and the Yemeni woman who manages it can occasionally host small events for Yemeni scholars, despite the continuing war.

PETRA M. GOEDEGEBUURE spent her sabbatical year working on her ACLS project *Expressing Agency and Point of View: The Core Cases in the Ancient Anatolian Languages, 1700–300 BCE*. Her study of the function of the nominative and ergative led to some unexpected results. Petra argued against current opinion that the ergative only existed in New Hittite, not already in Proto-Anatolian. This new case, restricted to neuter nouns, arose out of the reanalysis of a morpheme that originally turned masses and collectives into individuals (“The Packagers *-ant-* and *-a-*, and the Origin of Split-Ergativity in Hittite (and Lycian),” in *Proceedings of the 29th Annual UCLA Indo-European Conference*, ed. David M. Goldstein, Stephanie W. Jamison, and Brent Vine (Bremen: Hempen, 2018), 77–115.

The status of an entity as a mass, collective, or individual determines whether it can occur as a plural. Typically masses do not occur as plurals: compare the awkward *airs* (plural of a mass) with *chairs* (plural of an object). Petra’s study of the ergative and its origin as an individuation morpheme already showed that masses and collectives could be treated as individual objects, but how would Hittite express the individual members of a collective, which is usually a neuter noun? It turns out that Hittite simply uses the common-gender singular ending for a single member, and the plural for the sum of all members of a single neuter collective (“The Old Hittite Plural Genitive on *-an*,” to appear in a *Festschrift*). In other words, there are no neuter or common-gender nouns; there are only masses, collectives, and individuals, and depending on how the speaker wants to present these entities, s/he chooses the appropriate endings: common gender for individuals, and neuter for collectives and masses. Grammatical gender in Hittite is not a fixed property of a noun.

It is common for nominatives to introduce topics to the left outside the clause (compare the so-called *casus pendens* of Hebrew), and this was believed to be the case in Hittite as well. Investigating the function of the nominative, Petra found an overlooked topic-introducing construction that always begins with *kuid=a* “but as for,” but against common wisdom, the following noun already takes the case ending it needs in the main clause. Such a Hittite sentence looks like “but as for **to Pete**, I gave the book **to him**” (article “*kuit=a* ‘but as for,’ Old Hittite marker of extra-clausal constituents”).

A main event was the organization of a surprise mini-conference in honor of Theo van den Hout’s sixty-fifth birthday (October 12, 2018, Oriental Institute) with the support of the Oriental Institute, and the presentation of a draft of his *Festschrift* with the crucial assistance of graduate student Emily Smith.

Finally, Petra went off topic and presented “Wine in the Ancient Near East: From Origins to Anatolia” for the plenary session of the 229th Annual Meeting of the American Oriental Society (March 17, 2019, Chicago), which allowed her to talk about drunk moose, and more seriously, the spread of wine and words for wine through the Middle East.



AP Photo/Per Johansson, <https://www.ndtv.com/world-news/drunk-swedish-moose-found-stuck-in-tree-467096>.

GENE GRAGG's chapter "Semitic and Afro-Asiatic" has appeared in the second edition of the volume *The Semitic Languages* (Routledge, 2019), 22–48, edited by John Huehnergard and Na'ama Pat-El—a completely redone version of Robert Hetzron's *The Semitic Languages*, published in 1997. Otherwise, in addition to continuing work on the interface and online publication of the Afroasiatic Morphological Archive, he gave two lectures in Paris in December, one on Afroasiatic at the École Normale Supérieure, and another, "Inflection-Class Change: The Cushitic Suffix Conjugation and Beyond," at a meeting of the Groupe linguistique d'études chamito-sémitiques (GLECS). He returned to Paris in June to attend the 47th annual meeting of NACAL (redubbed for the occasion the North Atlantic Conference on Afroasiatic Linguistics), hosted by the Institut national des langues et civilisations orientales, delivering his paper "Paradigm Survival and Innovation in Cushitic."

The second year of **ALEKSANDRA HALLMANN**'s postdoctoral position at the Oriental Institute was as busy as it was enjoyable. She started to edit the content of the proceedings of the 14th Annual University of Chicago Oriental Institute Seminar "Outward Appearance vs. Inward Significance: Addressing Identities through Attire in the Ancient World" that she organized in March 1–2, 2018. The conference explored cross-cultural patterns in dress behavior and multiple trajectories of the attires' role in the construction of various identities in the ancient world.

In the spring quarter, she taught the class Fashioning Identities in Ancient Egypt and Beyond (NEHC 20470/30470), in which she and her students explored the value of clothing as a powerful research tool to study distant civilizations. They investigated the importance of clothing as a marker of the self and its role as an expression and negotiation of identity.

As a part of her position at the OI, Hallmann organized three Connections Seminars: Donald Whitcomb, "The Oriental Institute and Excavating the Islamic City" (October 16); Gil Stein, "The World Cultural Heritage Crisis: What We Can—and Should—Do About It" (March 19); and Brett McClain, "The Epigraphic Survey in Luxor: Documentation, Preservation, and Publication" (June 12).

In September 2018, Aleksandra participated in the 14th International Congress of Nubian Studies in Paris, where she presented the paper "Negotiated Identity of Kushite Kings Visualized in Osirian Chapels in Karnak." She was also invited to participate in one of the congress' workshops: "Sudan, Thebes, Egypt: Crossing Cultural and Artistic Influences around the Kushite Domination in Egypt," where she presented a talk: "Cloak and Fringes: Few Remarks about Kushite Garments Represented in Egyptian Art."

Aleksandra also conducted fieldwork in Egypt during the winter of 2018–19, where she continued her ongoing research on the iconography of Kushite and Saite monuments in the Theban area. The fieldwork for the project was conducted in the framework of the Epigraphic Survey of the Oriental Institute at the temple of Medinet Habu, as well as in the framework of the Mission "Osirian Sanctuaries at Karnak" and the Franco-Egyptian Center at the temple of Karnak. Her fieldwork was funded by the National Science Centre of Poland in the form of Grant Harmonia 8 (016/22/M/HS3/00354) for international cooperation between the Institute of Mediterranean and Oriental Cultures of the Polish Academy of Sciences (Warsaw) and Institut français d'archéologie orientale.

Two of Aleksandra's articles were published this year: "Unwrapping Ancient Egyptian Fashion," *Oriental Institute News & Notes* 239 (Fall 2018): 6–15, and "Les divines Adoratrices: parure et iconographie," in *Chanteuses, adoratrices et prêtres d'Amon à Thèbes. Une société égyptienne mille ans avant notre ère. Une exposition pour le Musée des Beaux-Arts de Grenoble, en collaboration avec le Musée du Louvre*, ed. Florence Gombert-Meurice and Frédéric Payraudeau (Grenoble, 2018), 306–11.

Aleksandra also continued her work on the final version of the book manuscript based on her dissertation, which was accepted to be published by the Oriental Institute. The PhD thesis, “The Representation of Private Costume in Egyptian Art from the 25th to 31st Dynasty,” was defended in June 2015 at the University of Warsaw, Poland, and won the Prime Minister’s Award of Poland for one of the best dissertations of the year.

This academic year, **REBECCA HASSELBACH-ANDEE** finished two of her bigger book projects and submitted them for publication. One of those projects consists of the translation and revision of a grammar of Classical Ethiopic (Geʿez) originally written by Josef Tropper in German (2002). The other book is an edited volume for Wiley Blackwell, *A Companion to Ancient Near Eastern Languages*, which includes twenty-nine chapters by experts in the field on various aspects of ancient Near Eastern languages, with special focus on sociolinguistic topics such as language contact and language standardization. This volume is now in production and is expected to be published within this year. In addition, Hasselbach-Andee started a new project focusing on the relationship of Eblaite and Akkadian; these constitute the only two languages of East Semitic, one of the major two branches of the Semitic language family. How they relate to each other—that is, whether they reflect dialects of a single language or two separate languages—is still unclear. Hasselbach-Andee is looking at various aspects, such as linguistic criteria and historical factors, in order to answer the question of how these two representatives of East Semitic relate to each other. Preliminary results of this investigation were presented at the annual meeting of the American Oriental Society in March 2019. As a second, smaller project, she has also worked on the opposite end of Semitic in terms of chronology, namely on Neo-Aramaic—Akkadian and Eblaite being the oldest representatives of the Semitic language family, while Neo-Aramaic is a group of modern dialects that are spoken today. It has often been claimed that Neo-Aramaic reflects ergative alignment—a particular way in which certain elements of a sentence are marked. Hasselbach-Andee does not fully agree with this analysis and suggests that the dialects in question exhibit a different sort of marking instead, namely semantic alignment. This project is almost finished and will result in an article. Otherwise, she has started editing another volume on Akkadian historical linguistics with a colleague from the University of Texas at Austin, Naʿama Pat-El, with whom she has worked in the past.

Besides her work on research projects and publications, Hasselbach-Andee continued her involvement in organizing a lecture series on ancient languages, the Ancient Languages Reading Group, which she co-organizes with her colleague Petra Goedegebuure and student Matthew Hewett. This reading group, which had two meetings each quarter, was generously sponsored by the Oriental Institute. Hasselbach-Andee presented a paper in this group on the presumed “archaic” character of Akkadian and the numerous innovations the language underwent in its pronominal system.

This year **JANET H. JOHNSON** continued her work with the ancient magical handbooks project (Graeco-Egyptian Magical Formularies). This project, which is funded by the Neubauer Collegium, is directed by Christopher Faraone and Sofia Torallas Tovar in the Department of Classics. Jan’s thanks go to Egyptology graduate student and *Chicago Demotic Dictionary* staffer Ariel Singer, who has produced a wonderful publication version of the transliteration and translation of all these magical texts, the first time most specialists in ancient magic who are not Demotists will have seen a replica of the original documents. Jan wrote up a brief survey of the history of the *Chicago Demotic Dictionary* for

the Oriental Institute centennial publication and is working with Jean Evans, the curator of the OI Museum, and Brian Muhs on a small exhibit on the CDD for the OI Museum Special Exhibit for the OI centennial. She collaborated with numerous colleagues, including Brian Muhs and Annalisa Azzoni, on publishing an intriguing Demotic tablet, with stamps of Persians seals, which was found among the Fortification Tablets at Persepolis. She continues to work on her Sourcebook on Women in Ancient Egypt, on which she gave a presentation at the University of Chicago's annual Humanities Day during the fall/autumn. In addition, Center for Middle Eastern Studies student Maja Sunleaf found funding to assist on the project over last summer; she did proofreading as well as tracking down possible texts to use, which was most useful.

This year **W. RAYMOND JOHNSON** completed his forty-first year working in Egypt, his fortieth year working full time for the Epigraphic Survey, and his twenty-second season as Chicago House field director. With Assistant Director J. Brett McClain, Ray coauthored two essays on the work of the Epigraphic Survey for the Oriental Institute centennial volume *Discovering New Pasts: The OI at 100—“The Epigraphic Survey, 1924–2019,”* and “Chicago House: Technological Innovations in Epigraphic Recording.” Ray gave the R. B. Partridge Lecture in Manchester, England, on November 17, 2018, for the Manchester Ancient Egypt Society entitled “Reassembling *Talatat* Blocks of Akhenaten from Tel el-Amarna: New Joins, Discoveries, and Surprises,” and a second lecture for the University of Manchester, “The Epigraphic Survey at 95: Documentation, Conservation, and New Digital Technologies at Chicago House in Luxor, Egypt.” He wrote an article entitled “Epigraphic Survey Update” for *Ancient Egypt Magazine* 19, no. 2 (October/November 2018). He contributed a catalog entry for the exhibition catalog *Toutankhamon, à la découverte du pharaon oublié*, eds. Simon Connor and Dimitri Laboury (Liège: Presses universitaires de Liège; Europa Expo, 2020), where he presented a joined group he reconstructed of two Amarna *talatat* blocks that depict female torchbearers in an Amarna torchlight procession. He also contributed an article to the forthcoming thirtieth-anniversary edition of *KMT: A Modern Journal of Egyptology* entitled “A Reappraisal of the Recumbant Limestone Colossus of Ramesses II at Memphis,” *KMT* 30, no. 4 (Winter 2019–20).

During the 2018–19 academic year, **MORAG M. KERSEL** was an Oriental Institute affiliate with the Galilee Prehistory Project (GPP). In the summer of 2018, Morag (with Yorke Rowan) worked toward publishing the excavations at Marj Rabba (2009–14) and preparing a manuscript on the 2015 Wadi al-Ashert archaeological survey (accepted for publication in *BASOR*). The various projects of the GPP are changing our understanding of the dramatic changes in villages, ritual sites, and mortuary practices during the Chalcolithic period (ca. 4500–3600 BCE) in the Galilee in Israel. As a part of the OI Members' Lectures Series, Morag was the inaugural speaker in the newly renovated Breasted Hall, where she discussed her research on the illegal and legal movement of archaeological artifacts from the Dead Sea Plain in Jordan. Throughout the year, Kersel gave nine public lectures as a Joukowsky Lecturer of the Archaeological Institute of America (AIA) National Speaker Series. The lecture topics covered many of Morag's research interests: the museum presentation of archaeological artifacts, the antiquities trade, and the desire to own objects from the Holy Land. As part of her ongoing commitment to the protection and preservation of global cultural heritage, on April 1 Kersel provided expert testimony before the U.S. Department of State's Cultural Property Committee in support of the Hashemite Kingdom of Jordan's request for a bilateral agreement to protect against the illegal

importation of archaeological artifacts. Kersel also participated in a Wenner-Gren-sponsored workshop on cultural heritage crime in Fort Apache, AZ, where she and tribal archaeologists collaborated on strategies for recording looted sites. In March, Morag was a visiting scholar for a week of talks and meetings at the University of Agder in Norway. While in Kristiansand, Kersel and Norwegian colleagues discussed the trade in, and forgery of, Dead Sea Scrolls. During the year Morag published a review essay on F. Hagen and K. Ryholt, “The Antiquities Trade in Egypt 1880–1930: The H.O. Lange Papers and Z. Çelik, *About Antiquities: Politics of Archaeology in the Ottoman Empire*,” in the *Journal of Near Eastern Studies*. She coedited (with C. Luke) an issue of the *Journal of Eastern Mediterranean Archaeology and Heritage Studies* on “The Power of Place at the U.S. Overseas Research Centers, Heritage Diplomacy, and Archaeology.” Through a series of case studies from the centers in Armenia, Cyprus, Egypt, and Jordan, the issue highlighted the critical role of American Overseas Research Centers as places where American researchers in the humanities and social sciences and in-country scholars, students, and locals meet one another and foster the seeds of collaboration.

GRÉGORY MAROUARD dedicated this year to his fieldwork projects in Egypt and his academic research, lectures, and publications. He spent more than three months on fieldwork excavations in Egypt. For the second year consecutively, his September season on the settlement area at Dendara, in Upper Egypt, was unfortunately cancelled due to a significant delay in the deliverance of the security clearance. However, between mid-October and early December 2017, Grégory conducted for seven weeks the seventeenth excavation season of the Tell Edfu Project in Upper Egypt, as codirector with Professor Nadine Moeller (see Tell Edfu report *infra*).

After the completion of his teaching during the 2019 winter quarter (Introduction to Egyptian Archaeology, NEAA20006), Grégory joined his colleagues from the Paris-Sorbonne University, the CNRS, and the French Institute in Cairo (IFAO) for the ninth season of excavation at Wadi al-Jarf, an early Fourth Dynasty harbor site on the Egyptian shore of the Gulf of Suez. He almost completed his work in Zone 5 area on the levels discovered last season 2018 under the foundations of the workmen barracks previously excavated. This campaign was particularly fruitful again with an extensive excavation of about 1,500 sq. m., which revealed a large complex with multiple installations that belongs to the oldest occupation level ever discovered at the site, which date back from the reign of King Snofru, first ruler of the Fourth Dynasty (ca. 2650–2600 BC) and now considered as the founder of the harbor site at Wadi al-Jarf.

This year, Grégory worked on multiple fieldwork reports, articles, and monographs and gave several lectures. Last summer, as primary author, he completed and submitted to the MDAIK (German Institute in Cairo) an extensive joint article about the results of an extensive survey carried out between 2012 and 2015 on the archaeological site at Bouto, in the western Nile Delta: G. Marouard, P. Ballet, J. Marchand, L. Mazou, M. Pesenti, and A. Simony, (under review), *À la recherche de la Bouto tardive. Essai de modélisation du site de la basse Époque au début de l’islam: les prospections et cartographies statistiques des kôms A et C de Tell el-Fara’in – Bouto*.

Last autumn an article, coauthored with Nadine Moeller, was published in the proceedings of the international conference held in Munich in September 2017: N. Moeller and G. Marouard, “The Development of Two Early Urban Centres in Upper Egypt During the 3rd Millennium BC: The examples of Edfu and Dendara,” in *From Microcosm to Macrocism. Individual households and cities in Ancient Egypt and Nubia*, ed. J. Budka and J. Auenmüller (Munich, 2018), 29–58.

Another coauthored article for a volume of conference proceedings was published in France: P. Ballet, S. Marchand, and G. Marouard, “Approches de l’espace domestique dans l’Égypte gréco-romaine

et de son mobilier,” in *De la Gaule à l’Orient méditerranéen. Fonctions et statuts des mobiliers archéologiques dans leur contexte*, ed. P. Ballet, I. Bartrand, and S. Lemaître (BiGen 53, Cairo, 2018), 25–34.

In late January and late February 2019, Grégory was invited to give two lectures on his work on the Red Sea shore harbors and the eastern Nile Delta survey by the NELC department at Yale University and the NELC department at UCLA. He also gave a joint lecture, with NELC PhD candidate Emilie Sarrazin, at the seventieth annual ARCE meeting in Alexandria, VA, about the recent results of the Tell Edfu Project excavation and the exceptional discovery of a private ancestor shrine from the early New Kingdom. In early July 2019, Grégory was also invited to talk about this recent discovery at the conference *Egypt’s Heartland: Regional Perspectives on Hierakonpolis, Elkab and Edfu*, organized by St. Antony’s College and Ashmolean Museum, University of Oxford.

In early 2019, Grégory was appointed for three years to the editorial board of the ASOR journal *Near Eastern Archaeology* and was invited to serve to the publication board committee of JARCE.

In May 2019, Grégory received, as co-PI together with Nadine Moeller, a two-year grant from the Shelby White and Leon Levy Program for Archaeological Publications at the Harvard Semitic Museum in order to organize and supervise the production and publication of the first Tell Edfu Project monograph: *Tell Edfu I: Excavations of the Governor’s residence of the late Middle Kingdom and the granary court of the Second Intermediate Period in Zone 1 (2005–2013)*.

Finally, on July 1, 2019, Grégory was promoted to the rank of senior research associate at the Oriental Institute.

Much of **CAROL MEYER**’s personal research time was spent working through the enormous corpus of early Islamic glass from Aqaba, part of the Aqaba publication series. The last of the material from the 1992 season was tabulated and drawn, and some of the drawings were colored by means of “patterns” extracted from the best photographs. The last of the glass stored in Registration was also processed and the whole typology revised, some 1,338 drawings. This leaves only the last two field seasons, 1993 and 1995. Meyer also began the long process of seeking comparanda for glass types. Given that the trade connections of the port of Aqaba reached, at various times over the course of five hundred years, from China to north Africa, the publications are widely scattered indeed.

Meyer also resumed two long-delayed projects. She extensively updated the report on the glass from Tell Nebi Mend (ancient Qadesh) in Syria from a 1988 dot-matrix printout and submitted the manuscript to Peter Parr for publication. The corpus is not large, but it is significant because the earliest materials, the Late Hellenistic mold-formed bowls, are very close in time and space to the place where mass glass production is believed to have been invented, the Mediterranean coast from about Tyre to the Belus River in the first and second centuries BC. Also, little glass has been published from Syria, and the situation is not likely to improve soon.

Additionally, Meyer reworked the 1994 manuscript on the late Parthian through early Abbasid (late second to mid-eighth century) glass from Nippur, again from paper records, as the digital ones had decayed beyond retrieval. Post-1994 references were added as a cross-check on the dating of the Nippur levels. The relative paucity of such publications made the task easier, but it also means that the corpus from Nippur is that much more valuable in helping to fill the rather large gap in what we know about ancient Iraqi glass. As expected, the Nippur material seems closely related to ancient Iranian glass, though this is not extensively published either. What is surprising is how little connection there is to the vastly better-documented Levantine area. The reasons for this need further exploration.

During the academic year 2018–19, **NADINE MOELLER** was interim department chair of NELC, replacing Franklin Lewis. This was a particularly busy year, which included the first departmental review, the implementation of a new sixth-year funding and pedagogy model for our graduate students, and the creation of a new archaeology major/minor track. During one week in September, Moeller together with Sarah Walters, director of the Study Abroad Program at the college, visited Cairo in order to reestablish the Cairo study abroad program that had been put on hold temporarily after the Arab Spring. The program is now scheduled to start again in winter quarter 2020 with a lineup of three NELC faculty teaching the Middle Eastern Civilization sequence. At the beginning of October, she was invited by Irene Forster-Müller to give the keynote lecture at the Austrian Archaeological Institute in Cairo at the occasion of the so-called Institutstag. This lecture was attended by the minister of antiquities, Khaled el-Enany, and the Austrian ambassador in Cairo, Georg Stillfried. The dean of the humanities, Anne Robertson, invited Moeller to participate in her Dean's Salon in November, discussing recent results from fieldwork in Egypt. This brief presentation followed by Q&A was well received among the attending advisory council members. In February, Moeller was invited to give a guest lecture at the Cotsen Institute at UCLA, and in April, she participated in her role as board member at the annual meeting of the American Research Center in Egypt, which was held in Alexandria, VA, this year.

As far as publications are concerned, Moeller published two articles together with Grégory Marouard on the recent results of the excavations at Tell Edfu. In addition, the last fieldwork season at the site (see Tell Edfu Project report for further details) was very successful and included the discovery of a small ancestor shrine, which was announced in the UChicago news (see <https://news.uchicago.edu/story/ancient-urban-villa-shrine-ancestor-worship-discovered-egypt>).

As far as grants are concerned, Moeller received an NEH fellowship for her next sabbatical, during which she is aiming to complete the second volume of her book *The Archaeology of Urbanism in Ancient Egypt*. Together with Grégory Marouard (PI), she was awarded a White and Levy Publications Grant for the first volume of results from excavations at Tell Edfu, in particular the results from the fieldwork in Zone 1, which includes the governor's residence of the late Middle Kingdom and the silo court of the Second Intermediate Period. The excavation in this area had been finished since 2014.

KATHRYN MORGAN's first year as Oriental Institute postdoctoral fellow began not in Chicago, but at the archaeological site of Zincirli, Turkey. Kate is assistant director of the OI-sponsored excavation project, where she supervises work on a newly discovered Middle Bronze Age settlement. Since she returned from the field in October, much of her research time at the OI has been spent preparing the preliminary publication of results since 2015, which include evidence for food, wine, and textile production, as well as administrative activities and transregional trade, and promise to shed new light on evolving relationships between Syria and Anatolia (and beyond!) over the course of the second millennium BCE. She is delighted to have shared this material with colleagues at the annual ASOR meeting in Denver last November, and with the OI community in a Brown Bag talk in April, and even more so, that her article on the subject has been accepted for publication in *BASOR*. She also submitted a second article this spring, on spinning and weaving tools from Kinik Höyük, Turkey. Pending the appearance of those articles, she will present on MBA Zincirli to international colleagues at the twelfth ICAANE in Bologna, Italy, next April, following further study in Turkey in the fall.

Of course, the primary focus of Kate's academic year was the organization of the fifteenth annual Oriental Institute Seminar, Pomp, Circumstance, and the Performance of Politics: Acting Politically Correct in the Ancient World, held March 7–8, 2019, in the newly renovated Breasted Hall.

Featured talks investigated the intersection of politics, ritual, space, and experience across the ancient world, from the ziggurats of southern Mesopotamia to the streets of medieval Rome. She was grateful for the attendance of so many OI faculty and staff, whose participation fueled a lively concluding discussion. She hopes the volume, for which she has already received several submissions, will elicit a comparable level of interest!

The conference also gave her the opportunity to build relationships with colleagues outside the OI. Kate subsequently joined OIS participant Catherine Kearns, from the Classics department, on her field project in southern Cyprus in June. Getting a closer look at the archaeology of Cyprus has provided Kate valuable context for her work at Gordion in Phrygia, central Anatolia—a region similarly positioned at the periphery of both the Greek and the Near Eastern worlds. In the second year of the postdoctoral fellowship, Kate plans to return her focus to Gordion, with two articles based on her dissertation work there currently in preparation.



Kathryn Morgan excavating in a destroyed Middle Bronze Age building at Zincirli, Turkey, and (BOTTOM LEFT) her excavation team at Zincirli, Turkey.

Several of **BRIAN MUHS**'s articles appeared this year, including: "Of Priests and Pastophoroi," in K.-Th. Zauzich, ed., *Akten der 8. Konferenz für Demotische Studien, Würzburg 27.-30. August 2002* (Wiesbaden: Harrassowitz, 2019), 131–44; "A Loan Contract in Chicago from the Archive of the Theban Choachytes (Second Century BCE)," in *Essays for the Library of Seshat: Studies Presented to Janet H. Johnson on the Occasion of Her 70th Birthday*, ed. Robert K. Ritner (SAOC 70; Chicago: Oriental Institute Press, 2017), 205–26; "Gender Relations and Inheritance in Legal Codes and Legal Practice in Ancient Egypt," in *Structures of Power, Law and Gender across the Ancient Near East and Beyond*, ed. Ilan Peled (OIS 12; Chicago: Oriental Institute Press, 2017), 15–25; "The Institutional Models for Ptolemaic Royal Banks and Granaries," *Ancient Society* 48 (2018): 83–101; "Imprisonment, Guarantors, and Release on Bail in the Ptolemaic Fayum," in *Le Fayoum: Archéologie—Histoire—Religion, Actes du sixième colloque international, Montpellier, 26–28 octobre 2016*, ed. Marie-Pierre Chaufray, Ivan Guermeur, Sandra Lippert, and Vincent Rondot (Wiesbaden: Harrassowitz, 2018), 89–99; "Collecting and Commoditizing Cultural Properties: The Case of William Randolph Hearst's Papyri," *Journal of the American Research Center in Egypt* 54 (2018): 117–27; and "Wenamun's Bad Trip," *News & Notes* 241 (Spring 2019): 6–9.

Brian also published an article with Annalisa Azzoni, Christina Chandler, Erin Daly, Mark B. Garrison, and Jan Johnson, "From the Persepolis Fortification Archive Project, 7: A Demotic Tablet or Two in the Persepolis Fortification Archive," *Achaemenid Research on Texts and Archaeology (ARTA)* 2019.003 (May 2019): 1–31 (www.achemenet.com/pdf/arta/2019.003-Azzoni.pdf); and he submitted an article, "Egypt and the Phoenicians: Substance over Style," for the proceedings of Jonathan Hall's

and James Osborne's 2018 conference, *The Connected Iron Age, Interregional Networks in the Eastern Mediterranean, 900–600 BCE*.

Brian was on leave during winter and spring quarters, so he took the opportunity to co-teach with Tasha Vorderstrasse an adult-education course entitled *Languages of Ancient and Medieval Nubia: Adaptation and Innovation* on March 7 and 14, 2019. At the beginning of April, he traveled to Egypt to visit Nag' el-Mesheikh, because he was preparing an edition of Demotic and Greek ostraca from that site. He then spent a week in London at the British Museum checking the readings for his forthcoming edition of the Demotic papyri containing the moneylending accounts of the mortuary priest Panas son of Espemetis from Ptolemaic Thebes. Brian gave a gallery talk on "Hadrian's Autobiography?" on June 6, 2019, about a Greek papyrus in the OI Museum collection. He prepared a brief history of Egyptologists at the OI for an OI centennial publication, and he worked with Jean Evans and Jan Johnson on an OI centennial exhibition about the *Chicago Demotic Dictionary*. He also collaborated on two OI podcasts with Matthew Welton and Steven Townshend.

In addition to her responsibilities as curator and communications associate, **KIERSTEN NEUMANN** continues to research and publish on Assyrian art and architecture, with an emphasis on sensory experience and material production, and has also expanded her scope of interest to include Achaemenid period material culture, in particular sculpture from Persepolis. Alongside her book on the sensory experience of the Neo-Assyrian temple, Kiersten is working on a volume coedited with Dr. Allison Thomason, professor at Southern Illinois University Edwardsville, entitled *Senses and Sensibility in the Near East*, to be published in the coming year by Routledge/Taylor & Francis as part of the Routledge Handbook series. Articles by Kiersten that have been published in the last year include "Sensing the Sacred in the Neo-Assyrian Temple: The Presentation of Offerings to the Gods," in Eisenbrauns's volume, *Distant Impressions: The Senses in the Ancient Near East*; and "Laying the Foundations for Eternity: Timing Temple Construction in Assyria," in *Sounding Sensory Profiles in Antiquity: On the Role of the Senses in the World of Ancient Israel and the Ancient Near East*—part of SBL's ANEM series.

During the course of the year, Kiersten gave a number of public lectures, including two conference presentations as well as community/campus talks. In November, she chaired the third and final occurrence of the Senses and Sensibility in the Near East session at the 2018 ASOR Annual Meeting, in which she presented a paper on the smell of incense in the Assyrian temple; she also continued as co-organizer of the Art Historical Approaches to the Near East session. At a conference at the Max Weber Kolleg in Erfurt, Germany, entitled "Towards Urbanism: Ritualizations and the Growth of Settlements, Late Bronze Age to Archaic Period, Mediterranean Basin," Kiersten was invited to present a paper on Sennacherib's canal systems and urbanization at Nineveh; this paper will appear in a forthcoming publication of the conference papers. More locally, Kiersten was invited to act as interlocutor along with Ann Gunter, Bertha and Max Dressler Professor in the Humanities at Northwestern University, at a talk by Iraqi-American artist Michael Rakowitz, entitled "Counter Histories with Michael Rakowitz," at the Block Museum of Art, Northwestern University. This event took place in association with the Block Museum's exhibition *Caravans of Gold, Fragments in Time: Art, Culture, and Exchange across Medieval Saharan Africa* (January–July 2019). In the spring Kiersten presented a paper on the OI's excavations at Persepolis and the collection of Achaemenid sculpture and artifacts in the OI collection at the Barrington's White House in Barrington, IL.

During the 2018–19 academic year, **JAMES OSBORNE** had the great fortune of being on research leave for the entire year with the support of a fellowship sponsored by the university's Franke Institute for the Humanities. Based in the Regenstein Library, the Franke Institute fellowships offer a forum for scholars from across the Humanities Division to gather biweekly and scrutinize one another's work. Besides having non-specialists read one of my book chapters and offer insight into it—always a productive undertaking—the real delight of the year was getting a sense of the scholarship being undertaken by my colleagues in other departments. With the support offered by the fellowship, I was able to complete and submit my book manuscript, *The Syro-Anatolian Culture Complex*, to Oxford University Press in the spring. One of the most rewarding professional experiences of my career took place in Ascona, Switzerland, where European colleagues organized a small gathering of specialists in the Iron Age of southeastern Anatolian and northern Syria—precisely the subject matter of the monograph I had just submitted. To spend several days with the world's leading thinkers on exactly this subject was a fitting conclusion to my book-writing process.

Another very successful event that took place this year was a conference I organized on behalf of the Center for Ancient Middle Eastern Landscapes (CAMEL), called Landscape Studies in the Near East: The Next 100 Years. Thematically aligned with the OI's centennial celebrations, this conference gathered the world's leading landscape archaeologists and philologists to take stock of what the discipline—one that was largely created here at the Oriental Institute—has accomplished so far, where things stand currently, and what ought to be done next. It was extremely gratifying to see such an occasion take place at the University of Chicago, which seeks to retain its rightful place as the intellectual home of Near Eastern landscape studies. In addition to the financial support offered for the conference by the OI and by the Franke Institute, it was a pleasure to organize the conference with the help of the new Mansueto Institute for Urban Innovation, thereby creating a partnership between one of the university's oldest institutes and one of its newest.

June 2019 also saw the beginning of a new field project in Turkey: the Türkmen-Karahöyük Intensive Survey Project, or TISP. I started this project at the invitation of colleagues Michele Massa and Christoph Bachhuber, who codirect a large regional survey in the Konya plain of south-central Anatolia called the Konya Regional Archaeological Survey Project. Visiting their survey last summer, I was very drawn to the multiperiod site of Türkmen-Karahöyük and proposed doing a rigorous survey of that site alone for several weeks. With the help of several OI graduate students, TISP completed a highly successful season whose results will be presented soon.

The most significant moment in the past academic year for **SUSANNE PAULUS** was being awarded tenure and being promoted to associate professor. I am very grateful and indebted to my colleagues at the OI and in the NELC department for their hard work and their support of my case, and I look forward to being a part of the future of the OI for many years to come.

Many of my research efforts this past year have been devoted to projects in connection with the Tablet Collection. One such project, which is funded by a grant from the National Endowment of the Humanities, studies the geochemical composition of clay tablets. In addition, I furthered our digitization initiatives and took part in the gallery enhancement project, plus numerous outreach initiatives. For a detailed outline of these activities, see the section under Tablet Collection.

I made progress on my second book project, *Approaching Economic Life in Kassite Babylonia*. I presented my work at the AOS meeting in a talk introducing a new approach to analyzing means of payment and prices and an invited lecture at Prague University on taxation and the management of resources in the Middle Babylonian period. In addition, after over a decade, I finally received permis-

sion to work on the Babylon tablets at the Vorderasiatische Museum in Berlin. During a three-week intensive research stay, I was able to acquire a comprehensive overview of the legal tablets from various private archives, which are essential for my work on the legal and economic history of the Late Bronze Age. I also wrote a chapter on the history of Kassite Babylonia, which will be published in the *Oxford History of the Ancient Near East*.

After the publication of “Fraud, Forgery, and Fiction: Is There Still Hope for Agum(-kakrime)?” I further investigated the complex issue of ancient forgeries in a second article, “Copy, Copy, Cruciform — Thoughts on the Forgery of the *Cruciform Monument*,” which has been submitted for publication. In this article, I trace the origins of a sixth-century BC forgery and the motivations underlying its creation, while also providing an explanation for its curious cross-like shape.

I was very honored to publish the first tablet fragment excavated in Nippur after a twenty-nine-year hiatus: a Neo-Babylonian Real Estate Sale from Nippur.

Finally, in addition to performing outreach for the Tablet Collection, I also dedicated my efforts to promoting public outreach by giving presentations at the Suburban Archaeological Society and the German Language Society.

During the 2018–19 academic year, **RICHARD PAYNE** primarily focused on the ongoing book project *The First Iranians: Ethnicity and Empire in Late Antiquity*. He also undertook ancillary projects on the political economies of trans-continental and trans-oceanic commerce in the first millennium, regimes of sexual exploitation and reproductive coercion, and the political salience of the memory of the Assyrian Empire upward of a millennium after its disappearance. He presented a paper on this final topic for the James Lecture in Assyrian Civilization at Northwestern University, and *Historische Zeitschrift* has accepted a version for publication. He continues to work on edited volumes on the history and archaeology of the Huns, the problem of highland political ecology for empire in Afghanistan, and the organization of labor in Middle Eastern societies in late antiquity.

Payne organized conferences at the University of Chicago, the University of Buenos Aires, and the Deutsches Archäologisches Institut in Berlin. He gave lectures in Leiden, Athens, Berlin, Los Angeles, Vienna, Evanston, and Buenos Aires.

The academic year 2018–19 saw the long-awaited publication of Assistant Professor of Assyriology **HERVÉ RECULEAU**’s book *Florilegium Marianum XVI. L’agriculture irriguée à Mari: Essai d’histoire des techniques* (Mémoires de NABU 21; Paris: Sepoa, 2018; 535 pp., 4 pl.).

Hervé also developed collaborations inside and outside the university. He participated in the activities of the 3CEA project as primary investigator (see the project’s report) and was a collaborator in the interdisciplinary project *Computational Research on the Ancient Near East* (CRANE), in a subproject directed by Lynn Welton (Durham University) that aims at reviving the ENKIMDU agent-based model developed years ago at the Argonne National Laboratory by John Christiansen as part of his collaboration with the OI in the *Modeling Ancient Settlement Systems* (MASS) project led by Tony J. Wilkinson and McGuire Gibson (<https://www.crane.utoronto.ca/simulation-modeling.html>). Together with James Osborne and Yorke Rowan, he organized on behalf of the Center for Ancient Middle Landscapes (CAMEL) the two-day conference Landscape Studies in the Near East: The Next 100 Years (May 10–11, 2019), a collaboration among the OI, the Mansueto Institute for Urban Innovation, and the Franke Institute for the Humanities.

Hervé wrote and submitted two articles this year. The first one offers an analysis of slavery in the Old Babylonian kingdom of Mari (eighteenth century BCE), to appear in a world history of slavery: “Mari et la vallée de l’Euphrate, IIe millénaire avt. JC,” in *Histoire mondiale de l’esclavage*, eds. C. Chevaléyre, P. Ismard, B. Rossi, and Cécile Vidal (Paris: Seuil, in press). The second article, written in collaboration with Antoine Jacquet (Collège de France), is 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*, ed. 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. These were gifted to the Haskell Museum in 1917–18 by the estate of Robert Francis Harper—the brother of William Rainey Harper and the first Assyriologist ever appointed at the university. Forty Old Babylonian tablets from this collection had been studied and published in 1917 by Theophile J. Meek for his University of Chicago dissertation, and a handful later appeared separately without their connection to the Harper collection being recognized. This new article offers the edition of the nineteen remaining Old Babylonian tablets, together with a brief overview of their institutional history—and with them brings new light on the OI around the time of its creation, right on time for the Oriental Institute’s hundredth anniversary.

Hervé presented his work in invited lectures and participations to workshops and conferences at the following institutions: Universität Innsbruck (Austria), Newcastle University and Durham University (England), Notre Dame University, the American Oriental Society, Harvard University, Yale University, and the University of Chicago.

SETH RICHARDSON’s research work this year refocused attention on writing a history of the fragmentation and collapse of the First Dynasty of Babylon in the seventeenth century BC as a book project. He is meantime having a good time pursuing collaborative research projects about the incidence of violence in Babylonian society with Steven Garfinkle (Western Washington University), and about some mysterious north Syrian storage vessels that show up in Babylonia about a century after we expect them to (with Kate Morgan, University of Chicago).

A busy year for papers on Babylonian topics had Seth going to Prague, to speak on the subject of strangers and foreigners; to Padua, to speak on concepts of peace at a MELAMMU symposium; to a workshop at Brown University, on the role of animals in the law; to UPenn, on rebellion; to Berlin’s Freie Universität, on systems of patronage; and to King’s College, London, on intersections of religion and war. Closer to home, he also presented a paper on the second-millennium historical content of a first-millennium oracle text, and he acted as respondent for the 2019 OI postdoctoral conference on politics and performance in antiquity. Several of these papers are bound up in Seth’s interest in political subjectivity, the topic of his larger research project with Clifford Ando (Classics).

Seth’s work published this year included a major study of Old Babylonian slavery, which appeared in the *Journal of Global Slavery* (2019). The work analyzed letters rather than contracts or administrative documents, concluding that the economic function of slavery was to provide a form of mobile credit for the mercantile economy, rather than to provide labor. He also published a long essay about the political purposes of antiquarian “Sumerianization” at the end of the Middle Bronze Age, an essay about the (very!) different roles played by animals in Sumerian versus Akkadian literature, and a note updating our knowledge of the many fortresses dotting the Babylonian landscape in the seventeenth century BC (at least twenty-eight, and as many as forty-two, against only four cities). He

also published a review of James C. Scott's 2018 book *Against the Grain*. Seth has eight more articles in press. He continues also as managing editor of the *Journal of Near Eastern Studies* (see report p. XXX).

For the American Research Center in Egypt (ARCE), **ROBERT K. RITNER** continued as a member of the board of directors, the annual meeting committee, and the editorial board of the *Journal of the American Research Center in Egypt* (JARCE). In April he became the chair of the ARCE Research Supporting Members. The accurate text of his edited volume *Essays for the Library of Seshat: Studies Presented to Janet H. Johnson on the Occasion of Her 70th Birthday* is now available for free download at <https://oi.uchicago.edu/research/publications/saoc/saoc-70-essays-library-seshat-studies-presented-janet-h-johnson-occasion>. After a hiatus of sixteen years, and with his personal digitization of the required 2,000+ photographic slides, Ritner revived his popular course Introduction to Egyptian Religion and Magic. He also taught courses on introductory Sahidic Coptic and a more specialized seminar on Coptic dialects. For the Rowe-Clark Math & Science Academy, he lectured in Humboldt Park and provided a tour of the OI Egyptian Gallery. For Volunteers Day, he again gave a guided tour of the Egyptian Gallery, and for docent training he lectured on "Akhenaton and the Problem of Amarna."

During the past year, **YORKE ROWAN** continued research as part of the Eastern Badia Archaeological Project (EBAP) in Jordan and the Galilee Prehistory Project (GPP) in Israel. For the GPP, he was senior author, with OI affiliates M. M. Kersel and A. C. Hill, on an article about field research into the Chalcolithic period at Wadi el-Ashert (a.k.a., Bet Netofa or Hanaton), submitted and accepted to the *Bulletin of the American Schools of Oriental Research*. An additional chapter, "The Spiritual and Social Landscape during the Chalcolithic Period," appeared in the volume he coedited (with A. Yasur-Landau and E. Cline), *The Social Archaeology of the Levant: From Prehistory to the Present*, published by Cambridge University Press (2019). He also was lead author on the prologue for that volume.

Yorke gave the Kershaw Lecture "Death and Rebirth: Religious Change and Reincarnation during the Copper Age in the Southern Levant" for the Southern Nevada (Las Vegas) AIA society in March. Also relating to Chalcolithic attitudes towards death, his continued collaboration with D. Ilan produced an article submitted and accepted for publication in the *Oxford Journal of Archaeology*, "Expediting Reincarnation in the Fifth Millennium BCE: Interpreting the Chalcolithic Ossuaries of the Southern Levant."

The Eastern Badia Archaeology Project team returned to Wisad Pools, in the Black Desert of eastern Jordan, for the first time since 2014. Our primary goal was completing excavation of building W-80, a large structure with multiple phases and occupations. Artifacts and radiocarbon dates confirm that the Late Neolithic structure was occupied intermittently from the mid-seventh to the mid-sixth millennia cal. BCE. The pools at Wisad formed around a short drainage that flows from a plateau down to a qa' (mudflat) about 10 m lower in elevation. These natural pools were augmented by blocking sections of the drainage, and around them hundreds of collapsed basalt structures built. In this arid region, pools of water attracted people and animals, depicted in hundreds of petroglyphs pecked into the basalt around the pools. Those results are discussed in greater detail under the Eastern Badia Archaeology Project. Yorke also presented lectures on the EBAP research. "Droning on: UAV Survey in the Black Desert of Jordan" was presented with A. C. Hill at the Society for American Archaeology annual meetings in Washington, DC. Research in the Black Desert was also presented for the Kershaw Lecture "Kites, Tombs, and Houses in the 'Land of Conjecture': New Discoveries in the Black Desert,

Jordan” that Yorke delivered for the AIA Cleveland Archaeological Society in March. Other publications included “Tel Yaqush: An Early Bronze Age Village in the Central Jordan Valley, Israel” authored with Y. Rotem, F. Hoflmayer, and M. Iserlis in the *Bulletin of the American Schools of Oriental Research* (381: 107–44), and “The Ground Stone Assemblage from Nevalat” in *Atiqot* (94: 107–30).

FOY SCALF’s teaching schedule this past academic year was relentless. He taught two classes for the OI’s adult education program: Introduction to Egyptian Hieroglyphs in autumn, with thirty-two students and over \$10,000 in revenue, and Introduction to Egyptian Religion in the winter, with fifty-one students and over \$14,000 in revenue. The latter class is now officially the largest and most profitable class taught in the program to date. With the move to online teaching spearheaded by Foy and Knut in 2017, along with the enthusiasm and promotion of Tasha, the adult education program has an exceptional opportunity for further growth and development. Foy presented insights about these pioneering efforts during a roundtable discussion on “Teaching and Learning Anthropology Online” at the American Anthropological Association meeting in San Jose in November. Foy taught two further classes for UChicago’s NELC department: Imagining the Text: Books and Manuscripts in the Ancient Middle East, and Introduction to Middle Egyptian II. He taught History of the Text: Early Books and Manuscripts Up to the Age of the Printing Press for the third consecutive year at Dominican University in the spring. Foy also guest lectured for the introductory approaches class for CMES master’s students taught by Brian Muhs and the Egyptian Religion class taught by Robert Ritner.

Foy was invited to give presentations in Los Angeles at the Getty and in Rockford at the local Archaeological Institute of America chapter. In Los Angeles, Foy joined a panel discussion on conceptions of the afterlife in the ancient world, where he covered some basic aspects of ancient Egyptian religious beliefs. In Rockford, he presented on “The Earliest Illustrated Manuscripts in History: Reading and Writing the Ancient Egyptian Book,” bringing results from his book history research and teaching to a broader audience. Foy joined with Tasha in revamping the OI’s cemetery walks, giving multiple tours of the Egyptian and Neo-Classical revival monuments in Graceland cemetery. As part of this public outreach effort, he gave over a dozen community scholars presentations around the Chicagoland area, including at public libraries in Burbank, Geneva, and River Forest, as well as a trio of talks at the Clare, programs for the OI Young Professionals at the Newberry Library, the OI centennial at the Barrington White House, and the OI Breasted Society.

The 2018–19 academic year saw the appearance of several publications, including two articles in the OI’s own *News & Notes*, one on the OI oral history project as well as a very popular piece on the hieroglyphic letterpress font in the Research Archives with a selected history of the use of hieroglyphs in print. Foy’s article on a long “lost” papyrus from the Newberry Library, now in a private collection, which was inscribed with a text known as the Book of Caves (BD 168) finally appeared in the *Journal of Egyptian Archaeology* 104 (2018). Another important article on the materiality of funerary papyri placement appeared in *Maarav* 25 (2019), which will inspire new discussion about ritual deposition practices. Foy’s article on an embalming bowl with Demotic inscription appeared in the *Festschrift for Janet Johnson*. His article on the Rosetta Stone appeared online for the ARCE national website. A new introduction for a publication of Budge’s translation of the Book of the Dead was submitted to Skyhorse Publishing and is in press with a 2020 publication date.

In summer 2018, **GIL J. STEIN** directed the Oriental Institute's fourth 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.

In 2018 Gil started a second cultural heritage preservation project focused on the five post-Soviet republics of Central Asia (also known as the “C5”). The purpose of the C5 Cultural Training Partnership for Artifact Conservation (C5 CTPAC) project is to bring together conservators from the national museums of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and 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), are intended to teach best practices in the conservation of the key raw materials for the artifact types in the national museums of these countries. From September 3 to 16, 2018, the first two-week workshop was held at the State Museum, with conservators from the national museums of four out of the five republics (due to bureaucratic delays, conservators from Turkmenistan were unable to attend). The second and third workshops will take place in September 2019 and September 2020.

In 2018–19 Gil also served as Senior Advisor to the Provost for Cultural Heritage, and developed a proposal for a university-wide center for cultural heritage preservation. The proposal was submitted to the Provost in December 2018.

In tandem with his excavations at Surezha and his cultural heritage work, Gil had three publications in the past academic year:

- Smith, Alexia, Lucas Proctor, Thomas C. Hart, and Gil J. Stein. 2018. “The Burning Issue of Dung in Archaeobotanical Samples: A Case-Study Integrating Macro-Botanical Remains, Dung Spherulites, and Phytoliths to Assess Sample Origin and Fuel Use at Tell Zeidan, Syria.” *Vegetation History and Archaeobotany* 28, no. 3 (September): <https://doi.org/10.1007/s00334-018-0692-9>.
- Stein, Gil J. “Excavations at Surezha: Erbil Plain, Kurdistan Region, Iraq.” 2018. In *Oriental Institute 2017–18 Annual Report*, 55–69. Chicago: Oriental Institute.
- Stein, Gil J. “Oriental Institute Cultural Heritage Work in Afghanistan.” 2018. In *Oriental Institute 2017–18 Annual Report*, 119–25. Chicago: Oriental Institute.

EMILY TEETER's publications for the year include “The Raw, the Cooked, and the Immolated: The Preparation of Meat Offerings in Ancient Egypt,” in *Religion et alimentation en Égypte et Orient anciens*, ed. Marie-Lys Arnette (Cairo: Institut Français d'Archéologie Orientale), and “Collecting Ancient Egypt in Chicago” (with Ashley F. Arico), which appeared in *KMT*. Emily also submitted an essay on

the history of the Oriental Institute Museum for the Oriental Institute's centennial volume. She completed and submitted her catalog of First Intermediate Period seals and scarabs from Naga ed-Deir for a monograph edited by Vanessa Davies, and she finalized and submitted a lengthy manuscript on the history of the Egyptian collection at the Art Institute of Chicago accompanied by eighty-four object descriptions. She reviewed manuscripts for the journals *Etudes et Travaux* (Warsaw) and the *Journal of the Society for the Study of Egyptian Antiquities* (Toronto). She also continued to serve as an editor for the *CIPEG* (International Committee for Egyptology) *Journal*, and in late 2018, she agreed to serve as editor of the *Journal of the American Research Center*, the primary academic journal of Egyptian studies in the United States.

She delivered the annual Weinberg Lecture entitled "Ancient Egyptian Festivals" at the North Carolina Museum of Art in Raleigh, and she spoke to the North Texas chapter of ARCE on "Crafts and Consumerism in Predynastic Egypt," and to the Chicago chapter on "Egypt at Chicago's World's Columbia Exposition."

Emily attended the annual CIPEG meeting in Swansea, where she spoke on "Ancient Egypt at the Chicago Expositions of 1893 and 1933."

Emily led the Oriental Institute 2018 tour to Egypt, she attends the frequent reunions of the very compatible participants, and she also led the institute's first tour to Sudan. In early 2019, she accompanied a group of Oriental Institute supporters on a cruise on the Nile on the *SS Karim*, the last steam-powered ship on the river (built 1917), with an extraordinary itinerary from Aswan to Cairo.

She continues to be on the board of the American Research Center in Egypt, and she attended the organization's annual meeting in Alexandria, Virginia.

Upon retirement from the museum at the Oriental Institute in late 2017, she was appointed a research associate of the Polish Centre for Mediterranean Archaeology (University of Warsaw), and an associate of the Oriental Institute.

A big surprise awaited **THEO VAN DEN HOUT** on October 12 when he received a *Festschrift* for his sixty-fifth birthday! In secret, his colleague Petra Goedegebuure and students had been preparing this for some time and collected articles from almost forty colleagues worldwide. Theo felt truly honored and is deeply grateful to all contributors and especially to Petra.

Besides a heavy teaching load of six classes, the past year was very busy with several simultaneous book projects. The fourth and final fascicle of letter Š of the *Chicago Hittite Dictionary* (see the separate account in this annual report) was submitted to the OI Publications Office in the spring and should be out by the time you read this. After peer review by two anonymous scholars, Theo's manuscript *A History of Hittite Literacy: Writing and Reading in Late Bronze Age Anatolia* was accepted by Cambridge University Press and should come out in the next academic year. A third book project, a biography of Hans Gustav Güterbock, coauthored with Peter Raulwing and Lars Petersen, should also appear in 2020.

During the past year Theo chaired the committee charged with putting together a volume to celebrate the OI's centennial. The committee consists of Gretel Braidwood and Jim Sopranos, both longtime volunteers and members of the OI's Advisory Council; Anne Flannery, the museum's head archivist; Charissa Johnson, managing editor of our Publications Office; and John Wee, professor of Assyriology. The book opens with a chapter on James Henry Breasted and the OI, written by his biographer Jeffrey Abt. It will also contain historical overviews of the OI's involvement in the various geographical areas of the ancient Middle East over the past hundred years as well as essays on all sections of the institute, such as the museum, the Research Archives, the Archives, Publications,

CAMEL lab, and lots more. We were very fortunate to receive a ready and enthusiastic response from all authors, and the Publications Office has done an amazing job in making it an extremely attractive volume worthy of our centenarian.

Theo submitted the manuscript for an article in the Japanese journal *Orient*, to be published as part of the proceedings of a conference that he attended in Kyoto in March 2018. This year he read the following papers: “Context without Provenance? A New Reading of a Hittite Silver Vessel,” Humanities Day, University of Chicago, October 20; “Greed and Gold: Facts and Legends about Midas and the Ancient Phrygians,” Oriental Institute’s Barrington White House Curious Minds Series, March 10; and “Does the Anatolian Hieroglyph 326 Really Mean ‘Scribe’?,” at the 229th Meeting of the American Oriental Society, Chicago, March 15.

Since last year’s annual report, the following articles appeared in print: “The Silver Stag Vessel: A Royal Gift,” *Metropolitan Museum Journal* 53: 114–27; “Hitit Krallığı ve İmparatorluğu’nun Kısa Tarihi,” in *Hititler. Bir Anadolu İmparatorluğu*, ed. M. Doğan-Alparslan and M. Alparslan (Tüpraş-Yapı Kredi Yayınları, İstanbul), 11–29 (= Turkish-language only publication of 2013); “Did He Come or Go? Hittite *arḫa uwe/a-*,” in *And I Knew Twelve Languages: A Tribute to Massimo Poetto on the Occasion of His Seventieth Birthday*, ed. N. Bolatti Guzzo and P. Taracha (Warsaw: Agade Bis), 703–14; and a review of Marek, Christian (in collaboration with Peter Frei, translated by Steven Rendall), *In the Land of a Thousand Gods: A History of Asia Minor in the Ancient World* (Princeton and Oxford: Princeton University Press, 2016), in *Canadian Journal of History/Annales canadiennes d’histoire* 53, no. 3 (2018): 539–41.

In 2018, **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 including Science and Technology in the Medieval Islamic World; Languages of Ancient and Medieval Nubia: Adaptation and Innovation (with Brian Muhs); and Connecting the Medieval Mediterranean and Beyond: Jacques de Vitry and the Formation of a Treasury of Byzantine, Islamic, Crusader, and European Art. She also gave an “Object Histories” tour for Humanities Day 2018, led “A Sepulchral Grand Tour” with Foy Scalf at Graceland Cemetery, conducted “Demon Trapping 101,” participated in “Demons and Donuts” for Orientation Week, and did a Georgian Wine tasting, in addition to providing postcolonial tours of the OI Museum for University of Chicago core classes on request, as well as other special tours. Tasha also organized a teacher workshop “From Syria to the South Side” at the Logan Center and the Oriental Institute in conjunction with the Logan Center’s special exhibition “Atlas Unlimited.” As part of the Atlas Unlimited exhibition, she participated in the opening of the exhibition (“Plaisance”), gallery activations and the closing of the exhibition (“Strike”) and was the presenter at the Graham Foundation (“Entr’acte”). She also selected objects and wrote labels and panels for the Islamic installation at the OI Museum.

She gave the following lectures: “What Is Medieval Nubian Art?” (Afrofuturism Symposium, day 1, Oriental Institute, October 2018), “Coinage and Accounts in Late Roman Antioch” (ASOR annual meeting, Denver, November 2018), and “Coins and Papyri in Early Islamic Egypt” and “A Possible early Byzantine Hoard from the Carthage Mint” (7th Century Syrian Numismatic Round Table, Worcester, UK, April 2019).

The following articles were published this year: “What is Medieval Nubian Art?” *Oriental Institute News & Notes* 240 (2019): 16–29; “Georgia on my Mind,” *News & Notes* 241 (2019): 10–21; “Lamps from the Roman–Middle Islamic Periods,” in M. C. Eser and D. B. Erciyas, eds., *Komana Small Finds* (Settlement Archaeology Series 7; İstanbul: Ege Yayınları, 2019); “Experiencing the Medieval Churches of Komana,” in M. C. Eser and D. B. Erciyas, eds., *Komana Small Finds* (İstanbul: Ege Yayınları, 2019); “Buddhism on

the Shores of the Black Sea: The North Caucasus Frontier between the Muslims, Byzantines, and the Khazars,” in A. Asa Eger, ed., *The Archaeology of Medieval Islamic Frontiers from the Mediterranean to the Caspian Sea* (Louisville: University Press of Colorado, 2019), pp. 168–94; F. Rose-Greenland, J. Marrone, O. Topçuoğlu, and T. Vorderstrasse, “A Site-Level Market Model of the Antiquities Trade,” *International Journal of Cultural Property* 26 (2019): 21–47.

JOHN WEE is author of the book *Knowledge and Rhetoric in Medical Commentary: Ancient Mesopotamian Commentaries on a Handbook of Medical Diagnosis (Sa-gig)* (Cuneiform Monographs 49/1; Leiden: Brill, 2019) intended for historians interested in the ancient history of medicine or the history of interpretation, as well as its companion volume *Mesopotamian Commentaries on the Diagnostic Handbook Sa-gig: Edition and Notes on Medical Lexicography* (Cuneiform Monographs 49/2; Leiden: Brill, 2019) with a cuneiform edition and philological notes on thirty tablets or fragments for specialists in cuneiform studies. His essay on “Five Birds, Twelve Rooms, and the Seleucid Game of Twenty Squares,” in *Magic and Medicine in Mesopotamia*, eds. S. V. Panayotov and L. Vacín (Ancient Magic and Divination; Leiden: Brill), 833–76, was published in 2018.

Currently in press is another essay on “A Systemic Etiology of Sicknesses from Ancient Iraq: Organ Systems and the Functional Holism of the Babylonian Body,” in *Ancient Holisms: Contexts, Forms and Heritage*, ed. C. Thumiger (Cambridge, UK: Cambridge University Press); as well as the encyclopedia entry on “Medicine and Healing, Ancient Near East,” in *Encyclopedia of the Bible and its Reception* (de Gruyter). John has been invited to submit the following essays with deadlines within the year: “Prophetic Ecstasy and States of Consciousness in Mesopotamian Psychology,” in *Ecstatic Experience in the Ancient World*, eds. S. Costello, K. Foster, and D. Stein; and “Mesopotamian Medicine,” in *Oxford Classical Dictionary*, Digital Edition (Oxford: Oxford University Press).

In the past year, John presented the following academic lectures and conference papers: “Epistemics, Curriculum, and Scholasticism in Mesopotamian Commentaries on a Handbook of Medical Diagnosis,” at the conference 5000 Years of Comments: The Development of Commentary from Ancient Mesopotamia to the Age of Information at the Center for Hellenic Studies, Harvard University (Washington, DC, August, 7–10, 2018); “The Micro-Zodiac in Babylonian and Greco-Roman Late Antiquity,” at the Session on Measurement and Calculation at the Meeting of the History of Science Society (Seattle, WA, November 1–4, 2018); “Scholasticism and Medical Language in Cuneiform Commentaries from Ancient Iraq,” at an invited lecture for the History of Science, Technology, and Medicine Colloquium, at Johns Hopkins University (February 21, 2019); “Metrological Commentaries on the City Wall and Moat of Babylon,” at the 229th Meeting of the American Oriental Society (Chicago, March 15–18, 2019); and “The Hippocratic Oath and Professional Family Guilds in Ancient Mesopotamia,” at the Meeting of the Association of Ancient Historians, Emory University (Atlanta, GA, April 25–27, 2019). In addition, he spoke on “Geometry of Sound Holes in Mesopotamian Harps,” at an invited lecture for Volunteer Day at the Oriental Institute, University of Chicago (March 11, 2019).

During the academic year 2019–20, John will be on research leave in his home country of Singapore, where he will work on his next book-length project *Charting Planets Until the Zodiac*.

In the fall–winter quarters of 2018, **DONALD WHITCOMB** taught his usual course in Islamic ceramics. In October, I was invited to give a Connections seminar to the OI faculty and I gave a paper on the history of the Oriental Institute and its excavations on the subject of the Islamic city—perhaps

not as good as the Persian dinner that preceded it. During that quarter was Fred's conference on Industrialism, where I gave a paper on Islamic ceramics that surprised, but was well received by, historians (and archaeologists). Then, in November, I attended the MESA (Middle East Studies Association) meetings in San Antonio, where I received an award by MEM (Middle East Medievalists) for lifetime achievement in Islamic archaeology (much appreciated, though the field is not too competitive, yet).

Publications that appeared in 2018 were "Caliph and King: Effigies and Islamic Archaeology," offered in commemoration of Monik Kervran; "'From Shahrstan to Medina' Revisited," offered in a seminar on the Iranian city at Harvard University; and "Toward an Archaeology of Sasanian Cities," offered to the International Congress of Young Archaeologists, in Tehran in 2015.

In February, Taufiq Da'adli conducted the second season of our excavations at Sinnabra, in which he attempted to expand on the hypostyle building, which we hope to be the mosque (see separate report). Then, on April 27 was a special surprise—Jan and my daughter Felicia arranged for a birthday dinner at a local restaurant, La Petite Folie, with some sixty OI friends and students, celebrating my seventy-fifth year. This was much appreciated, though I hope not a signal to stop!

Spring quarter was otherwise occupied with catching up on a number of articles. Perhaps more dramatically, we gave up the old homestead and waited for changes in the new apartment. This meant living out in the Wild West, i.e., our little home in Hobart, Indiana. As I write this just before Halloween, we are filled with regrets from abandoning the "thousands" of trick-or-treaters (and many students and colleagues) who would come around Harper Ave. for some candy and festivities—this is one of the saddest parts of moving away from the Hyde Park house, or at least our happy street.

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.



RESEARCH SUPPORT



OVERLEAF: Image from the fifteenth Oriental Institute Seminar (Pomp, Circumstance, and the Performance of Politics: Acting “Politically Correct” in the Ancient World) on March 7–8, 2019, organized by Kathryn Morgan. Publications assisted in conference materials. Image: Steven Townshend.

COMPUTER LABORATORY

KNUT BOEHMER

The past year has seen a few large updates to the building's IT infrastructure that were exciting to plan and implement, as well as some interesting collaborations with other teams on campus and beyond. Besides that, as always, my goal was to ensure the best user experience when it comes to computers for everyone working in or associated with the building, as well as pushing the technical barrier and come up with new ideas what my colleagues would benefit most from.

Renovations/AV Upgrade Breasted Hall

Along with major renovations to floor, lighting, and seating, the entire AV system in Breasted Hall was replaced with a modern setup. Using the updated features allows us, among other things, to record and even live stream lectures, podium discussions, and other events happening in the room. As of April 2019, all Members' Lectures that happened have been live streamed to YouTube, allowing those who could not make it to the talk in person (or are located outside of Chicago) to attend virtually. While previously, camera recordings had to be processed and uploaded several weeks later, the new technology allows viewers to watch the entire event immediately after it ended, or even pause the live stream and pick up where they left off. As a next step we will attempt to drive audience engagement even further, including the option for online viewers to send in questions to be answered during the Q&A at the end of the lecture.

Hybrid Classes/Live Streaming

Following the constant aim to improve our Adult Education classes, a very solid system was developed to allow most classes to be live streamed and to allow for off-site participants to be involved in the running class, making comments and asking questions in near-real-time. The façade renovations the building is undergoing this summer made it necessary to move the class streaming to Breasted Hall, but the new AV system there has been very reliable as well.

From July 2018 to June 2019, a total of seventy-one classes have been live streamed to very positive responses.

Assisting with 3-D Printing for Afghanistan

As a very exciting project this year, I assisted our team in Kabul with a wonderful project to help schools in Afghanistan: in collaboration with the 3-D scans that the team at the National Museum of Afghanistan had created, Brendan Bulger and I worked with the university's Materials Preparation and Measurement Laboratory to re-create the objects as 3-D prints to be used as learning materials for children who could not travel and see the original objects due to financial reasons or travel hazards. As a bonus, I was able to combine hobby and work when I had the opportunity train the Kabul team's field director Alejandro Gallego-Lopez in how to use an airbrush during a visit to Chicago, so that the blank prints could be made more lifelike.

Network Upgrade

In spring of 2019, extensive changes were made to the network backend in order to prepare for a future campus infrastructure upgrade. Most notably, many of the network jacks were upgraded and provisioned with new cables, a few Wi-Fi dead spots on the second floor were removed, and cables were rerouted to ensure the best possible connection for everyone working in the OI.

Technical Assistance in Creating the OI Centennial Website

With the OI centennial being the major event of the upcoming year, the decision was made to create a satellite website that was targeted toward audiences unfamiliar with the OI and events around the centennial. I worked closely with Kiersten Neumann of OI Communications and assisted with any technical questions that came up during the decision phase on the partner hired to realize this project, as well as the concept, realization, and implementation phases, and I will continue to support and monitor the website.

Collaborating with IT Committees across Campus

Since the OI relies on cooperating with other IT departments across campus, I represented the building and my colleagues in several IT committees and working groups. The IT leadership council, a group of IT directors from all UChicago parts, is probably the most influential of these, but I also express the interests of the OI at FACT, in the Travel Security and the Storage Solutions workgroups, as well as several others.

INTEGRATED DATABASE PROJECT

FOY SCALF

For eight years (2010–18), the Integrated Database Project (IDB) was supported by four consecutive grants from the Institute of Museum and Library Services. These grants enabled the OI to set up a state-of-the-art collections management system as the institutional repository for the institute’s core data needs. This past academic year, our grant application for the capstone project mentioned in last year’s annual report was not successful, but we continue to look for new resources to implement the many exciting ideas and transformational designs we have developed with the help of focus group feedback over the last eight years. As the IDB is now integral to the successful management of the institute’s collections (museum, archives, library, digital assets, public GIS, and conservation), work on the project inevitably continues every day through the hard work of institute staff and volunteers. Details of individual departmental work can be found in their respective annual reports; here I will try to attempt a broader view of the past year’s accomplishments, the present state of the project, and its future.

There are now well over one million records in the Oriental Institute’s integrated database, which is organized through Axiell’s EMu client software (including the records for audits and statistics, there are many millions of records in the database!). Of these records, 560,000 are for the Research Archives catalog; 278,000 for registered objects in the museum; 84,000 for the museum archives; 21,000 for the CAMEL maps and satellite images; 22,000 for the Epigraphic Survey negatives; and 11,000 for museum conservation (with condition assessment photos). There are over 406,000 records for multimedia items, including 215,335 JPGs; 129,814 PDFs; and 9,863 PNG files. This digital collection is truly massive and growing every day as new objects are imaged, paper archives are scanned, books are digitized, image permission letters created, and permits for publication cataloged, among many other tasks. A total of 32,539 inventory cards for physical negatives in the museum archives have been scanned and transcribed. Of the 140,000 digitized museum registration cards, over 13,000 have now been transcribed. These digitization and transcription projects provide the institute as well as its staff, faculty, students, and researchers with a detailed catalog of its holdings that makes available searching and data retrieval methods that were impossible with analogue paper files.

Table 1. Approximate Total Records in the Integrated Database

| <i>Department</i> | <i>Records in EMu</i> | <i>Records on Website</i> |
|-----------------------|-----------------------|---------------------------|
| Research Archives | 560,000 | 556,257 |
| Museum Registration | 278,163 | 235,651 |
| Photographic Archives | 225,000 | 164,960 |
| Museum Archives | 83,642 | 83,725 |
| Epigraphic Survey | 22,026 | 21,502 |
| CAMEL | 20,889 | 8,869 |
| Museum Conservation | 11,250 | — |

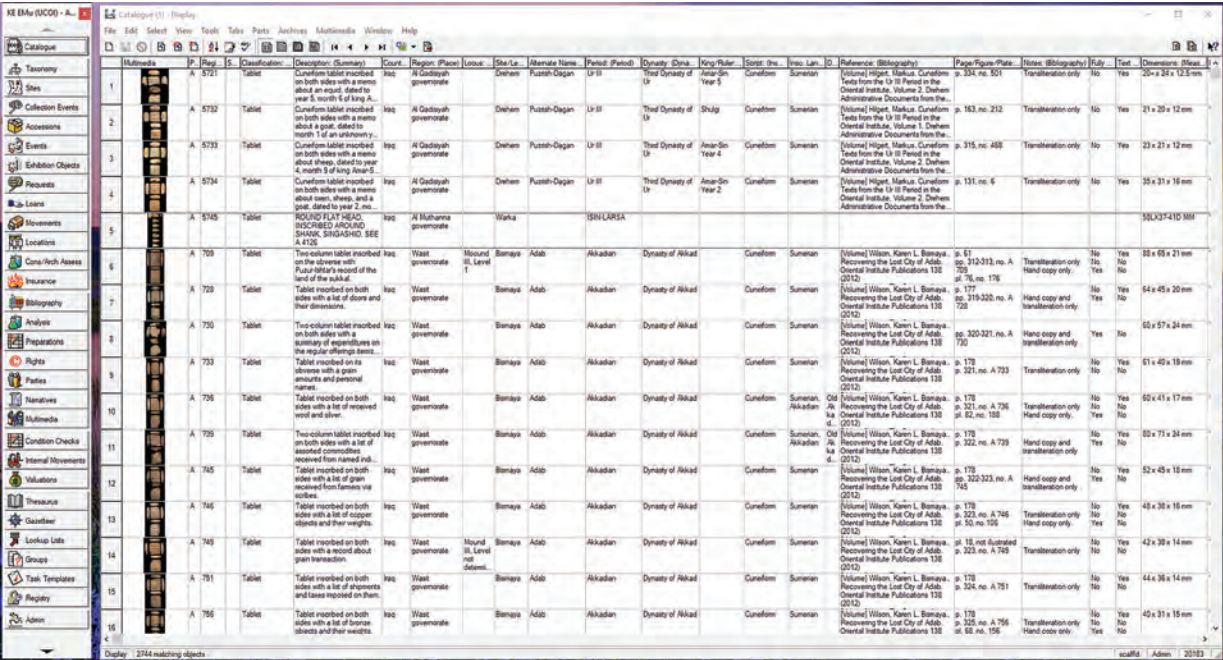


Figure 1. The EMu client software with modules and records for cuneiform tablets.

In terms of public users, the IDB website (oi-idb.uchicago.edu) had over 218,000 page views in the last year. Over 160,000 views were unique. The average time spent on a page was one minute and five seconds. Usage peaked in March 18, 2019, with over 1,400 views on that day. Average daily page views hovered at approximately 725. There were 14,460 total users who participated in 32,854 sessions (2.27 sessions per user) with an average session duration of over six minutes and with each user viewing an average of 6.65 pages per session. Approximately 20% of users were returning users and 80% were new users (although this metric counts IP addresses, not physical users). More than 50% of our users were from the US, with 300–700 users each from the UK, Germany, France, Turkey, Italy, Canada, Spain, Egypt, and Australia. Top cities were, in descending order, Chicago, New York, London, Istanbul, Paris, Los Angeles, Cedar Rapids, Ankara, and Sydney. Nearly 50% of users accessed with a computer using the Windows operating system, 25% used Macintosh, and over 23% used a mobile device with iOS or Android.

| Country | | Users | % Users |
|---------|----------------|-------|---------|
| 1. | United States | 8,345 | 57.10% |
| 2. | United Kingdom | 686 | 4.69% |
| 3. | Germany | 515 | 3.52% |
| 4. | France | 490 | 3.35% |
| 5. | Turkey | 452 | 3.09% |
| 6. | Italy | 360 | 2.46% |
| 7. | Canada | 340 | 2.33% |
| 8. | Spain | 295 | 2.02% |
| 9. | Egypt | 273 | 1.87% |
| 10. | Australia | 252 | 1.72% |

Figure 2. Country profile for users of the Search Our Collections website.

Over 43,070 new searches were conducted; 23,760 individual detail records were viewed; and 10,191 users revised their search. The most popular record remained the lamassu (A7369) with over 2,200 views, but the Persian roundel (inspiration for the former OI logo) was also popular with nearly 200 views. Records for Jim Allen's *A New Concordance of the Pyramid Texts*, which includes links to download PDFs directly from the IDB were accessed nearly 300 times. It is clear that individuals are making use of the "Browse the Galleries" feature on the homepage, as over 1,600 actions consisted of users looking for objects on display from either the Egyptian, Assyrian, or Mesopotamian galleries (in descending order of popularity). Rounding out the top ten records that received the most page views was the library catalog record for SAOC 69, *Creativity and Innovation in the Reign of Hatshepsut*. The most popular search was a photo archives tab search for "Egin" and a library catalog search for the author "Alexander Ahrens." For keywords, the most popular searches were for "Egypt," "Persepolis," "lamassu," "mummy," and "Mesopotamia." The saved records page was accessed over 2,200 times, which means visitors are making good use of the feature that allows records to be saved and downloaded for further research.

The primary takeaways from these analytics are as follows: The IDB has become an absolutely integral part of how the OI manages its collections and presents those collections to the public. It is an ever-expanding project that will require institutional support to ensure its sustainability for the foreseeable future. Internally, the database is allowing us to more efficiently and effectively manage the collection. In certain cases, we are only now getting a real grasp on the scope and content of these vast collections. Externally, more information about these collections is available to the public than ever before, with more released each week as the public database gets updated. Members of the public, an audience far more numerous than those who have the opportunity to visit the institute in person, are putting the database to good use. The analytics show clearly that it is not only researchers and library patrons hitting the database, but a quickly growing body of students, educators, and lifelong learners. When we study the early years of the institute today, we look at the paper record it left behind: its posters, advertisements, letters, newspaper articles, photographs, publications, and other ephemera. In fifty to one hundred years, when future scholars want to study the public ideology and collection management methodologies of the institute in the twenty-first century, they will be looking at our websites, social media pages, and the IDB. We will continue striving to build and develop a robust information network about the Oriental Institute and its collections, share that information with its global audiences, and preserve it for the future.

ACKNOWLEDGMENTS

The Integrated Database Project would not be possible without its generous funders: the Oriental Institute, the University of Chicago, the Institute for Museum and Library Services, and Aimee Drolet Rossi. Dozens of OI staff and volunteers have worked diligently on data entry, digitization, updates, linking, and countless other projects in the IDB, using the EMu software to manage their workflows and store information about the institute's invaluable collections. This data is the foundation upon which future discoveries will be made. We owe a debt of gratitude to everyone involved, both paid and unpaid, that have made the IDB the incredible resource it is today, and who have helped maintain the OI's high standards of information storage for future generations.

JOURNAL OF NEAR EASTERN STUDIES

SETH RICHARDSON

JNES comes out twice a year, in October and April. The journal covers an enormous territory of scholarship—from the Neolithic to the Ottoman period—from North Africa to the far edges of the Iranian plateau—covering history, archaeology, linguistics, and literature. A sampling of the delights in each issue should give a sense of the lively discussions this wide range of topics permits.

The October issue featured first the chronological reconstruction of a previously poorly understood revolt in Egypt against Petubastis IV, circa 522–518 BC (Uzume Wijnsma, University of Leiden). Helga Anetshofer (University of Chicago) gave us an illuminating study of late medieval and early modern Ottoman talismanic shirts, decorated with Qur’anic scripture, sacred symbols, and magical squares, worn by warriors going into battle. Another article explored the late Babylonian interest in the authors of ancient texts, given to us by Sophus Helle of Aarhus University. Other articles analyzed Hittite oil omens, the limits of Assyrian royal power, credit structures and foreclosure procedures in Late Bronze Age Arrapḫe, cuneiform astronomy at Late Babylonian Uruk, the importation of slave labor in the Sargonic period, and indefinite Hittite pronouns—from scholars in Tel Aviv, Helsinki, Minneapolis, Leiden, Jerusalem, Munich, and Moscow.

The April issue published a new inscription of the Assyrian king Sargon II found at Karkemish, which reveals that Sargon originally planned to build a royal palace there (Gianni Marchesi, University of Bologna). Chicago alumnus Joseph Lam (now at University of North Carolina, Chapel Hill) provided a penetrating analysis of multiple, mixed, and complex metaphors in Ugaritic literature, situating them within discussions of current literary theory. And we had the contribution of an edition of a fragmentary Syriac-Arabic dream-request text, and an analysis of its connection to Jewish Aramaic and other magical traditions (Michael Zellmann-Rohrer, University of Oxford). The other contributions included studies of innovative sculptural techniques on colossal statues of Akhenaten; the historiography of the figure of Hiram of Tyre; the connections between Neo-Assyrian “language ideology” and the account of Genesis 11:1–9; the linguistic connection between Armenian, Persian, and Akkadian names for mint; and “pseudo-scripts” in Mesopotamian magic bowls—from scholars in Virginia, Tel Aviv, Colorado, Armenia, and Groningen.

The journal can be justly proud of its topical, historical, and disciplinary breadth, as well as its scholarly depth. What continues to make this possible is that Chicago’s journal draws together scholarship from all over the world—that the broad ancient and medieval worlds that *JNES* illuminates are matched only by the diverse array of international scholars who construct the pages of every issue.

This year also marked a change in some of the editorial board of *JNES*: after more than a decade at the helm, Christopher Woods is retiring as editor, with James Osborne now taking over that role. James continues as the ancient book-review editor, while Fred Donner has assumed the role of modern book-review editor. Seth Richardson continues in his position as managing editor.

OCHRE DATA SERVICE

MILLER PROSSER and SANDRA SCHLOEN

WE INTERRUPT OUR REGULAR PROGRAMMING . . .

The Online Cultural and Historical Research Environment (OCHRE), the software platform supported by the [OCHRE Data Service](#), has a long history of development—long, that is, for the technology industry. From its beginnings in 2001 in its current incarnation as a Java-XML application for archaeologists, it has grown to be a full-featured, comprehensive database platform serving fifty plus active projects and over six hundred users in disciplines encompassing not only archaeology and philology—the specialties of the Oriental Institute—but also paleontology, ancient genetics, textual criticism, lexicon building, and language learning, in contexts that span a wide range of space and time. As a stable platform that currently manages over half a million images and documents, and over eight million database items, the OCHRE system is primed to meet the needs of research projects of all kinds. With the active phase of major software programming behind us, our priorities are shifting, allowing us to venture into new territory, both literally and virtually.

. . . TO TAKE ON NEW ADVENTURES

Since 2016, we have been cultivating a program whereby an OCHRE Data Service research assistant is embedded in an archaeological project onsite to manage the process of “born digital” data collection. Leading up to the beginning of the excavation season, the OCHRE Data Service trains an advanced student in a variety of skills needed to serve as an onsite data manager.

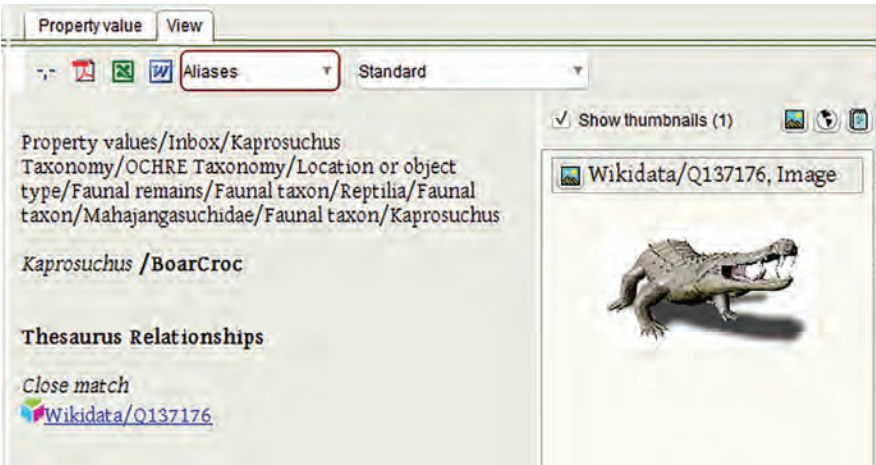
This highly successful arrangement is a win for the student who gains valuable experience in research data management and who is trained on other on-the-ground skills such as aerial photography (using camera-equipped drones) and geo-spatial data processing (using GIS tools). This is also a win for the archaeological field project, which wraps up its season with its data recording completed, photographs linked, specialist data integrated, and all the project’s data available to all project collaborators on the web as they go home to their respective institutions. OCHRE Data Service onsite data managers to date have been Nicholas Schulte, Tel Shimron, Israel (2017); Emma Kerr, Zincirli, Turkey (2018); Abraham Seare, Cor-



University of Chicago
PhD student Emma
Kerr, onsite OCHRE data
manager for the Zincirli
Expedition, Turkey, 2018.

ral Redondo, Peru (2018, 2019); Stephanie Baumgart, Gobero, Niger (2018); Andrew Wright, at both Nippur, Iraq (2019) and Tel Shimron, Israel (2019); and Alexander Ward, Tell Keisan, Israel (2019). Many of these students present their research experience in posters and presentations at academic conferences, giving them valuable experience in professional contexts.

The increasingly wide geographic spread of our operations continues to expand the breadth of data being recorded in OCHRE. As we began work in Peru, we added descriptors for textile conservation and new species like “llama” not previously encountered in our work, which had been primarily in the Middle East. For work in Niger, we added hitherto unrepresented descriptive values like “fel-site,” “crocodile,” “harpoon,” and “Jurassic,” not to mention “Nigersaurus” and its extinct relatives. In southern Iraq our staff GIS expert, Andrew Wright, spent nine days acquiring aerial footage of the massive and impressive site of Nippur, adding “looter’s pit” to our set of taxonomic descriptors. But whether a skull of a goat in Israel, a skull of a bear in Turkey, a skull of a human in Peru, or a skull of a dinosaur in Niger, a “skull” is a “skull,” and OCHRE allows extensive sharing and reuse of its descriptive taxonomies across projects. OCHRE is not bound to *any* specific time or space, and so it is widely applicable to research projects of all kinds.



“BoarCroc” nicknamed by University of Chicago paleontologist Paul Sereno and cataloged in OCHRE by research assistant Katherine Hodge (University of Chicago BA 2019); illustrated by a Semantic Web link to Wikidata from OCHRE.

... TO ADD SOME BELLS AND WHISTLES

As we have expanded our work into new parts of the world and taken on new collaborators, we have become more sensitive to the need for internationalization of the platform. Java provides good support for internationalization, and so the OCHRE *interface* is currently being translated into several languages, beginning with French, Spanish, Hebrew, and Chinese. This reflects our diverse client base and illustrates support for a range of language features including right-to-left writing systems and non-Latin scripts. The OCHRE *data* can be translated by projects into any language of choice. We provide tools to make this easy. Specifically, we have recently integrated the Google Translate API with OCHRE’s string processing features. Simply pick the language to which you wish to translate the current character string, and OCHRE will send it to Google Translate for translation. It can then be edited if you wish to improve on the automatic translation. Once again, we are inspired by our wide range of projects. Translating into French the widely used property “Location or object type” serves our French-Canadian colleagues who worked at Tell Acharneh (Syria), the local museum collaborators in central Niger (where French is the official language), and our own researchers in Chicago who are integrating data about Ras Shamra-Ugarit published originally in French.



Translating
“Location or
object type”
using OCHRE’s
multilingual
features.

... TO PERFORM RESCUE OPERATIONS

New adventures are always fun, but we are increasingly being called upon to rescue old data. Retiring professors who had been early adopters of technology find themselves saddled with legacy data facing an uncertain future. Data in old formats (do you remember Corel Draw or FoxPro or non-Unicode fonts?) on old hardware (floppy disks anyone?) is doomed to oblivion unless measures are taken to transform it to more stable formats on supported platforms. Modeled as a data warehouse, OCHRE is the perfect resting place for legacy data. Having been designed based on XML—a human-readable, non-proprietary format—OCHRE data is archive-ready. In the care and keeping of the University of Chicago library, OCHRE data will live “forever.”

... TO PLAY NICELY IN THE WIDER WORLD OF THE WORLD WIDE WEB

Regardless of its origin, as born-digital or legacy data, OCHRE’s fast-track publication features bring data to life! A user simply uses the “Publish” menu option to activate any OCHRE item’s **Citation URL**, making it uniquely addressable and accessible on the web. The OCHRE API (application programming interface) provides a variety of methods to retrieve OCHRE data dynamically for display in web-based applications. As part of the project “[An Organon for the Information Age](#),” generously funded by the Neubauer Collegium for Culture and Society, and with the assistance of UChicago master’s student Jie Heng, we are working to publish the OCHRE ontology thereby formally documenting the underlying data structures. As part of the project “[Critical Editions for Digital Analysis and Research](#)” (CEDAR), and in conjunction with our other philology projects, we are working to export OCHRE data into TEI/XML (Text Encoding Initiative) and RDF/XML (Resource Description Framework), both of which are familiar formats to those working in Digital Humanities. These efforts will make OCHRE data available to web developers, to archival finding aids, and to the Semantic Web at large.

... TO STOP TO THANK OUR COLLABORATORS AND RESEARCH ASSISTANTS

The work of the OCHRE Data Service would not be possible without the long-term technical support of the [Digital Library Development Center](#), led by Charles Blair at the University of Chicago Library, and we greatly value the services of system administrators Peggy Wilkins and Fred Seaton. We also benefit from the support and services of our colleagues at the [Research Computing Center](#) at the University of Chicago. Our project collaborators all over the world keep us inspired by new questions, new challenges, new data, and new problems to solve. Finally, we enjoy and appreciate the steady stream of hard-working students and assistants who cycle through our office to contribute to the many projects we support. Every day is a new adventure!

PUBLICATIONS OFFICE

CHARISSA JOHNSON

Publications went through several significant changes during the 2018–19 academic year. Most notable was Thomas G. Urban's retirement on November 15, 2018. Over the course of thirty-two years, Tom has edited 481 books, prepared 76 dictionary (CAD, CHD, CDD) volumes, printed 210 *News & Notes*, overseen 27 *Annual Reports*, and provided countless amounts of kindness, wisdom, wit, patience, and of course, candies and coffee. Additionally, his involvement in the Electronic Initiative—making all OI publications available online in free PDF form—in years past has allowed all of the OI's publications (over eight hundred) to be scanned and put online. Tom's career in Publications has made a lasting impact for generations to come.

Tom's retirement was celebrated on November 9 (to read more about it, see [News & Notes 241](#)). Fortunately, he has agreed to continue working on the Chicago Assyrian, Hittite, and Demotic Dictionaries, still gracing the office with his humor and helpfulness.

Full-time staff includes Charissa Johnson (third year), who took over as managing editor on January 1, 2019, and Steven Townshend (first year), whose experienced editorial eye, creative background, and congeniality are gladly welcomed. Part-time staff includes assistant editors Rebecca Cain (tenth year), Emily Smith (fifth year), and Alexandra Cornacchia, (third year). Alexandra Witsell (third year) continues contracted work on *The Second Cataract Fortress at Dorginarti*, by Lisa A. Heidorn (OINE 14); and *Excavations at Serra East*, by Bruce Williams et al. (OINE 12). I could not be more grateful to work with such an incredible crew.

RIGHT: Tom's retirement party on November 9, 2018.
Photos: Charissa Johnson.





Cleaning the Publications Office and Mike in front of the vault (BOTTOM RIGHT).

Before Steve's welcome, staff came together to deep clean the office and sort digital file storage, consolidating and backing up the files on Publications' computers and online server storage. The vault was also organized by Mike Ramberg, a volunteer who started on February 26. This was greatly needed after many of the items in the Publications Office were moved to the vault. Mike continues to volunteer, organizing files and making preliminary edits to manuscripts. We are grateful for his help.

Reorganization continued throughout the year, including the standardization of manuscript formatting templates, both in Word and InDesign.

Having manuscript templates now allows for proofing to be done in Word, enabling author and editor to utilize track changes, which cuts down on errors and also expedites editing time.

Additionally, setting paragraph styles in Word now allows for formatting to transfer to InDesign—the program used to lay out manuscripts—rather than having to make these formatting edits individually. The Word templates are available online for authors to download: <https://oi.uchicago.edu/research/oriental-institute-publications-office>.

This was an exceptionally busy year for publications with over twenty publications in print and online, and one title reprinted. The *Annual Report*, four issues of *News & Notes*, and the *Chicago House Bulletin* were published. Copy editing continues with museum labels, brochures, lecture series fliers, eTablet emails, and other notices. Publications also manages the printed material for the Postdoc Seminar, which includes copy editing and designing the program and poster and producing the name badges, informational packets, and miscellanea. 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).

Perhaps the largest Publications project this academic year, however, was the completion of two centennial publications. 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 took the most work and involved many a twelve-hour day over the summer: *Discovering New Pasts: The OI at 100* (Theo van den Hout, ed.). The latter involved sixty-two authors/contrib-



Centennial publications.

utors, contains over four hundred pages and nearly six hundred images, and is the first OI publication of this nature. A committee was created—Professor Theo van den Hout, chair; Gretel Braidwood and Jim Sopranos, long-time members of the OI community and OI Advisory Council; Anne Flannery, museum archivist; Charissa Johnson, Publications managing editor; and Professor John Wee—and the decision to format the book into three main sections was made (“Beginnings,” “The Institute,” and “Areas of Research”). Charissa designed a book template, Theo made initial edits, and both Charissa and Steve copy edited and laid out each article, also updating a world timeline and creating maps for each area of research.

SALES

In addition to the above Publications changes and projects, Publications changed book distributors at the beginning of the year. The bulk of OI book distribution is now handled by [ISD Book Distribution](#), working very closely with Ian Stevens, owner, who has increased advertising of OI books at conferences and online. UK and Europe sales are handled by University of Exeter Press. A limited number of titles are also available for in-house sales in the Suq museum gift shop.

For book order information, please contact:

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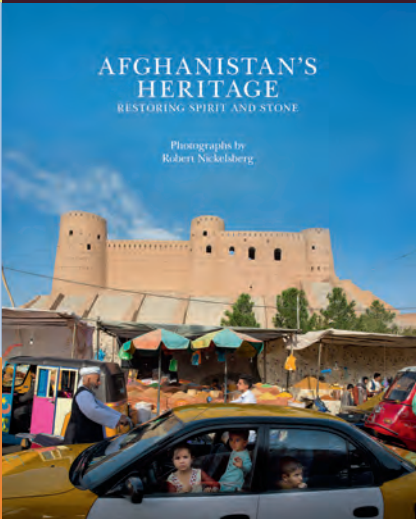
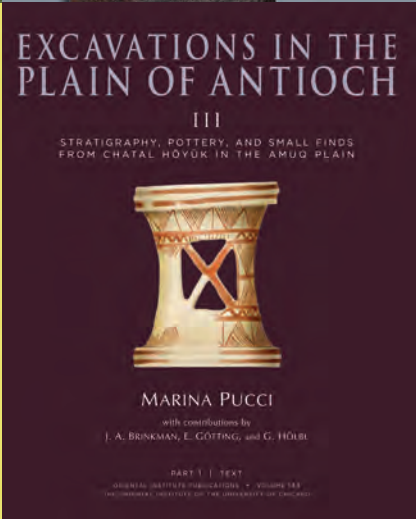
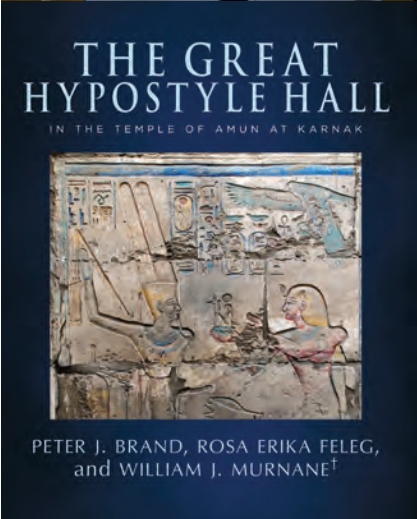
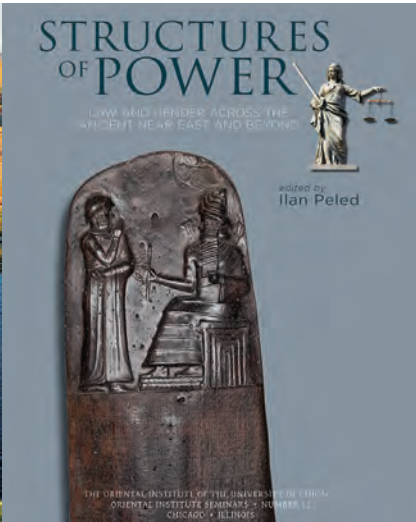
Members of the OI receive a 20% discount on all titles.

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 Oriental Institute titles, which includes *Annual Reports*, *News & Notes*, and *Chicago House Bulletins*, please visit:

<http://oi.uchicago.edu/research/catalog-publications>



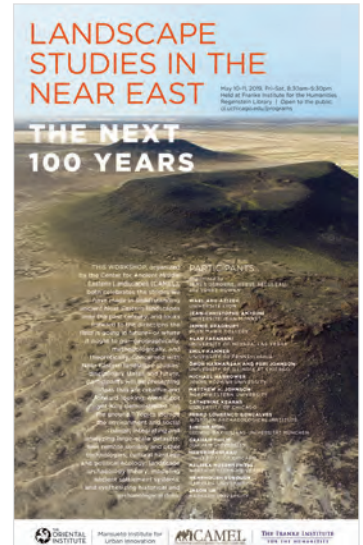
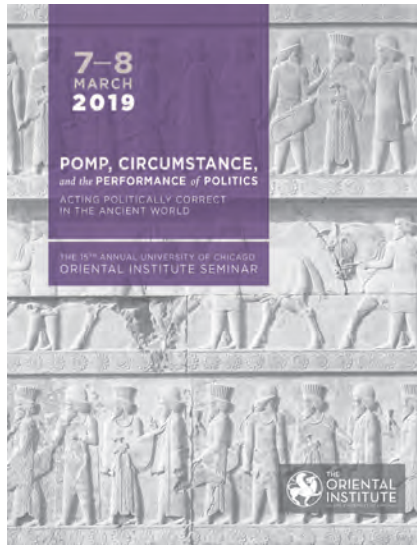
TITLES PUBLISHED IN PRINT AND ONLINE (JULY 2018—PRESENT)

- 1–2. *Afghanistan's Heritage: Restoring Spirit and Stone*. Photographs by Robert Nickelsberg. Design and layout by Sharon Okamoto. Edited by Tim McGirk. Two volumes: English and Dari. Miscellaneous (not for purchase).
3. *Structures of Power: Law and Gender Across the Ancient Near East and Beyond*. Edited by Ilan Peled. OIS 12.
4. *Oriental Institute Annual Report 2017–18*. Edited by Christopher Woods.
5. *The Great Hypostyle Hall in the Temple of Amun at Karnak*, Vol. 2. Translation and Commentary. Peter J. Brand, Rosa Erika Feleg, and William J. Murnane†. OIP 142.
6. *Excavations in the Plain of Antioch III: Stratigraphy, Pottery, and Small Finds from Chatal Höyük in the Amuq Plain*. Marina Pucci, with contributions by John A. Brinkman, Günther Hölbl, Theo van den Hout, and Dominique Collon. OIP 143.
7. *Unpublished Bo-Fragments in Transliteration II (Bo 6151–Bo 9535)*. Oğuz Soysal and Başak Yıldız Gülşen. CHDS 3.
8. *100 Highlights of the Collections of the Oriental Institute Museum*. Edited by Jean M. Evans, Jack Green, and Emily Teeter. Miscellaneous.
9. *Discovering New Pasts: The OI at 100*. Edited by Theo van den Hout. Miscellaneous.
10. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, Volume Š, fascicle 4. Edited by Theo van den Hout. CHD.
11. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, Volume Š, fascicles 1–4. Edited by Theo van den Hout. CHD.
12. *Chicago House Bulletin 29: The 2017–18 & 2018–19 Field Seasons*. OI Centennial Double Issue. Edited by W. Raymond Johnson.
- 13–18. *Oriental Institute News & Notes*. Edited by Matthew Welton, Charissa Johnson, Rebecca Cain, Steve Townshend, and Tasha Vorderstrasse. NN 239–243. Quarterly.
19. *Persepolis, Chicago, Tehran: The World of the Persepolis Fortification Tablets*. Edited by Jebrael Nokandeh and Christopher Woods.
20. *2019 Volunteer Directory*. Annually.
- 21–33. *Volunteer Voice*. Edited by Sue Geshwender et al. Monthly.

LEFT: A handful of the publications produced during the 2018–19 year.



34. Conference assistance: *Pomp, Circumstance, and the Performance of Politics: Acting Politically Correct in the Ancient World*. Organized by Kathryn Morgan. Postdoctoral Seminar 15.
35. Conference assistance: *Landscape Studies in the Near East: The Next 100 Years*. Organized by James F. Osbourne, Hervé Reculeau, and Yorke Rowan.



VOLUMES REPRINTED

1. *The Mechanics of Ancient Egyptian Magical Practice*. Robert K. Ritner. 1993. SAOC 54.

VOLUMES IN PREPARATION

1. *Where Kingship Descended from Heaven: New Light on Ancient Kish*. Karen L. Wilson and Deborah Bekken. OIP 144.
2. *The Damascus Psalm Fragment: Middle Arabic and the Legacy of Old Ḥigāzī*. Ahmad Al-Jallad, with a contribution by Ronny Vollandt. LAMINE 2.
3. *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 145.
4. *The Sheik's House at Quseir al-Qadim: Documenting a Thirteenth-Century Red Sea Port*. Katherine Strange Burke. OIP 146.
5. *From Herds to Landscapes: Studies on the Ancient Near East in Honor of McGuire Gibson*. Edited by Mark Altaweel and Carrie Hritz. SAOC 71.
6. *Tell Abada: An Ubaid Village in Central Mesopotamia*. Sabah Aboud Jasim. OIP 147.
7. *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.
8. *The Second Cataract Fortress of Dorginati*. Lisa Heidorn. OINE 14.
9. *Center and Periphery: Archaeology of Politics at Ešnunna*. Clemens Reichel. SAOC 74.
10. *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.
11. *The Demotic Dictionary of the Oriental Institute of the University of Chicago*. Edited by Janet H. Johnson. CDD.

12. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*. Edited by Theo van den Hout. CHD.
13. *Excavations at Serra East, Part 8*. Bruce Williams et al. OINE 12.
14. *Excavations at Serra East, Part 9*. Bruce Williams et al. OINE 13.
15. *Beads from Excavations at Q, B, A, SE, and D*. Joanna Then-Obluska. OINE 16.
16. *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).
17. *Medinet Habu X*. Epigraphic Survey. OIP 149.

BACKLOG

18. *Lowland Susiana in the Fourth Millennium*. Abbas Alizadeh.
19. *Kerkenes Final Reports 2. Excavations at the Palatial Complex*. Geoffrey D. Summers, with contributions by Susanne Berndt-Ersöz, Ahmet Çinici, Yılmaz Selim Erdal, Evangelia Ioannidou-Pişkin, Noël Siver, and Françoise Summers. Introduction by Nicholas D. Cahill and summary translated into Turkish by Güzin Eren.
20. *The Search for Hidden Landscapes in the Shahrizor: Holocene Land Use and Climate in Northeastern Iraqi Kurdistan*. Anke Marsh and Mark Altaweel.
21. *Irrigation in Early States: New Directions*. Edited by Stephanie Rost.
22. *New Insights into Islamic Archaeology and Material Culture: A Conference in Jerusalem*. Edited by Katia Cytryn-Silverman, Kristoffer Damgaard, and Donald Whitcomb.
23. *Ancient Iran: Highlights from the Collections of the Oriental Institute*. Abbas Alizadeh.

RESEARCH ARCHIVES

FOY SCALF

The pace of change has certainly quickened as we mark the centennial celebration of the Oriental Institute, which doesn't officially begin until autumn quarter 2019–20, but which has been marked by a frantic pace of activity here in our colony. It is an opportune time to harness this energy for change, including making much needed improvements to the Research Archives. Visitors will now notice a much improved and reorganized library entrance, where the desk and nonfunctional security gates were removed and replaced with updated signage and a display case highlighting one of the library's holdings. These developments open up the hallway and make for a much more pleasant environment. Prior to this, there wasn't even a sign with the name "Research Archives" on it; the library was only announced by a sign for the "Elizabeth Morse Genius Reading Room," named after the trust that funded major renovations to the library in the '90s, and which hangs over the double doors at the entrance. Now, several signs matching the university's maroon template identify the library for visitors and provide basic information on hours and access. A new graphic panel is now on display underneath the large rosette window in the reading room. This panel provides information on the Archaeological Corpus Project, a card catalog project intended to comprehensively catalog the architecture, iconography, cultural lexica, and material culture of the ancient Middle East. It was a visionary project, founded by Breasted, but closed with budget cuts in the '50s. Further details can be found in the volume *Discovering New Pasts: The OI at 100*. I'd like to express my appreciation to Josh Tuliak in the Preparation Department for his help in designing, printing, and hanging the new signage.

Just inside the library entrance, further changes have been underway. At the end of 2018, with the help of the staff in the Preparation Department, the library put on display a collection of hieroglyphic letterpress type in a forty-eight drawer Hamilton cabinet (fig. 1). This cabinet had been in off-site storage for many years. At some point, there was talk of disposing of it, at which time we made the offer to display it in the library. The University of Chicago acquired the font in 1928, used it at the press until roughly 1970, and then passed it to the OI where it has remained. The font was designed by Norma and Nina de Garis Davies for Alan Gardiner to be used in his *Egyptian Grammar*; the font was produced and cast by Oxford University Press. A more complete history of this font can be found in the *Oriental Institute News & Notes* 242 (Summer 2019).



Figure 1. The hieroglyphic letterpress font on display in the Research Archives.

Acquisitions

The Research Archives acquired 1,264 volumes in 437 accession lots of printed materials during the 2018–19 academic year (see table 1). This is up 15–20% over our historical average of 900–1,000 volumes per year. Of these accessions, 302 came in via purchase, 100 through gifts, and 35 through exchanges. Over one-third of these volumes consisted of additions to serial publications (455 volumes) and nearly one-third contributed to new journal issues (342 volumes). The remainder consisted of monographs (425 volumes) and theses (1 volume). Over \$49,000 was spent on book purchasing in addition to over \$3,000 spent on shipping charges. In preservation efforts, 350 volumes were sent for binding with HF Group in April.

| Table 1. Research Archives Acquisitions July 2018–June 2019 | | | | |
|---|--------------------------|-------------------------------|----------|---------------|
| Month | Number of Accession Lots | Monographs, Series, Pamphlets | Journals | Total Volumes |
| July 2018 | 48 | 94 | 54 | 148 |
| August 2018 | 43 | 86 | 76 | 162 |
| September 2018 | 46 | 80 | 33 | 113 |
| October 2018 | 39 | 49 | 35 | 84 |
| November 2018 | 24 | 56 | 27 | 83 |
| December 2018 | 29 | 38 | 22 | 60 |
| January 2019 | 38 | 39 | 40 | 79 |
| February 2019 | 42 | 61 | 40 | 101 |
| March 2019 | 30 | 107 | 24 | 131 |
| April 2019 | 33 | 75 | 22 | 97 |
| May 2019 | 26 | 67 | 18 | 85 |
| June 2019 | 39 | 93 | 28 | 121 |
| Totals | 437 | 845 | 419 | |
| Total Volumes | | | | 1,264 |

| Table 2. Catalog Records | | |
|--------------------------|------------------------------|------------------------------|
| Year | No. of Catalog Records Added | Total No. of Catalog Records |
| 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 |
| 2008–9 | 63,000 | 320,000 |
| 2007–8 | 62,000 | 257,000 |
| 2006–7 | 28,000 | 195,000 |

Online Catalog

In 2018–19, the library staff and volunteers worked together to create over ten thousand new records in the library’s catalog within the EMu database platform that powers the Oriental Institute’s Integrated Database (see table 2). Every volume acquired by the library is analyzed according to its contents, and any section that has an attributed independent author is analyzed for our catalog. This includes all conference proceedings, Festschriften, and encyclopedias. In addition to the general bibliographic data captured for standard library purposes, we also catalog abbreviations and abstracts, all of which are searchable through the online catalog (<https://oi-idb.uchicago.edu>). This data is publicly accessible so that users can select and download data in a variety of formats—including comma-separated values, CSL JSON, EndNote, and simple text—for use in software applications of their choosing.

Analyzing the individually authored content from newly acquired volumes results in many more database records than overall volumes in the library (see table 3). The library holds over 68,000 individual volumes, but the database contains over 555,000 individual records. Predictably, articles account for the vast majority of these records (480,000 records), but these records are among the most useful for researchers, as they are not typically indexed in other library systems (although articles are indexed on third party platforms such as JSTOR and are more frequently being integrated with library catalogs). With the download feature, users can import such records into their own bibliographies and software applications. This data expands the usefulness and purpose of the tool beyond that of a library catalog. On the one hand, the information provided tells users what is in the library and where to find it—a typical and necessary resource for any catalog. On the other hand, analyzing individual articles and reviews, along with their abstracts, provides a more comprehensive index to ancient Middle Eastern studies that empowers efficient, user-driven research.

Through Google Analytics, we are now able to examine how users access our catalog information. We hope that over time this analysis will provide insights for how to better develop and improve the tools available to users. Over 14,000 new users accessed the oi-idb.uchicago.edu site over the academic year in more than 32,000 sessions with an average six pages viewed per session, amounting to 218,495 page views and an average session duration of 00:06:09. The users are overwhelmingly from the US but do represent a global audience: US 57%, UK 4.69%, Germany 3.52%, France 3.35%, Turkey 3.09%, Italy 2.46%, Canada 2.33%, Spain 2.02%, and Egypt 1.87%.

Fifty-five percent of events consisted of new searches, 30% consisted of views of individual record details, and 12% consisted of revised searches. Direct links to individual records consisted of only .86%. With the implementation of stable URLs employing GUIDs, we hope that users will feel more confident in linking directly to our records.

Currently, it is clear that new searches for keywords are by far the most common searches. It is not always possible to tell if users are looking for library materials, as popular keyword searches for “Egypt,” “Persepolis,” “Iamassu,” “Megiddo,” “Hammurabi,” and “mummy” will find results in every department. For searches specific to the Research Archives, some of the most common terms were “Mesopotamia,” “Sumerian literature,” “Osiris,” “king list,” “Ctesiphon,” and “Egypt.”

Table 3. Research Archives Analytics

| <i>Type</i> | <i>Total No. of Records</i> |
|---------------------------|-----------------------------|
| Total Volumes | 68,129 |
| Monographs | 17,023 |
| Monograph Sections | 69,810 |
| Series | 1,705 |
| Series Volumes | 21,314 |
| Series Volume Sections | 94,398 |
| Journals | 1,021 |
| Journal Volumes | 28,734 |
| Journal Volume Articles | 319,621 |
| Thesis | 1,058 |
| Pamphlets | 2,594 |
| Reviews | 121,613 |
| Festschriften (Volumes) | 648 |
| Digital Invoice Records | 1,812 |
| Digital Cover Art Records | 9,996 |
| Adobe PDF | 37,364 |

RESOURCES ON THE WEB

The online catalog remains the primary resource for the distribution of information about content related to the study of the ancient Middle East. The catalog includes records for various websites and other online resources. The Research Archives maintains a limited set of open access online resources available from its webpage (<https://oi.uchicago.edu/research/research-archives-library>).

Introduction & Guide

https://oi.uchicago.edu/sites/oi.uchicago.edu/files/uploads/shared/docs/research_archives_introduction%26guide.pdf

An updated introduction and guide to the Research Archives contain a brief history, a guide to the Research Archives collection, and instructions for using the online catalog.

Acquisitions Lists

<https://oi.uchicago.edu/research/research-archives-library/acquisitions-lists-research-archives>

The acquisitions reports of the Research Archives are distributed in Adobe Portable Document Format (PDF) on a monthly basis. This process has been active and continuous since September 2007.

Annual Reports

<https://oi.uchicago.edu/research/research-archives-library/research-archives-annual-reports>

Annual Reports for the Research Archives are available from 1969 to 2014.

Oriental Institute Staff Newsletter

<https://oi.uchicago.edu/research/research-archives-library/oriental-institute-staff-newsletter>

From February 1998 until March 2005 an Oriental Institute Staff Newsletter was circulated among faculty, staff, students, and the wider academic community. In the interest of preservation, remaining copies of the newsletter have been scanned and archived online.

Dissertations

<https://oi.uchicago.edu/research/research-archives-library/dissertations>

With the permission of the authors, the Research Archives provides access to Adobe Portable Document Format (PDF) copies of dissertations completed in the Department of Near Eastern Languages and Civilizations of the University of Chicago.

Dissertation Proposals

<https://oi.uchicago.edu/research/research-archives-library/dissertations/dissertation-proposals>

With the permission of the authors, the Research Archives provides access to Adobe Portable Document Format (PDF) copies of dissertation proposals completed in the Department of Near Eastern Languages and Civilizations of the University of Chicago.

Adopt-a-Book Campaign

<https://oi.uchicago.edu/research/research-archives-library/adopt-book-campaign>

The Research Archives has an “Adopt-a-Book” campaign in order to increase support for the Research Archives. Donors are recognized through personalized book plates made in their honor and placed in volumes of their choosing.

Social Media Sites

<https://www.facebook.com/pages/Research-Archives-of-the-Oriental-Institute/153645450792>

The Research Archives now maintains an official page on Facebook. Information about recent publications of Oriental Institute scholars or reviews of recent Oriental Institute publications is distributed through this page. Currently, 3,315 individuals follow the Research Archives through this presence on Facebook.

DONATIONS

The Research Archives has received a record number of volumes in book donations in 2018–19, with major gifts from the Robert McCormick Adams estate, Andrea Dudek, James Holland, Janet Johnson and Donald Whitcomb, Roger Johnson, and Miriam Reitz, along with dozens of smaller donations, totaling one hundred accessions in total. This represents a significant portion of the overall total acquisition efforts. Donations allow us to fill important gaps in our collection—acquiring duplicates of well-used volumes—and to replace aging or damaged volumes. We would like to take this opportunity to thank all of our donors for thinking of the Research Archives with their gifts.

VISITORS

The Research Archives has been more popular than ever. A report for the academic year 2018–19 of all the patrons who scanned ID cards to enter the library runs to an astonishing 1,166 pages! This represents 2,279 patrons who scanned IDs 40,907 times. Given the extremely limited staff (one full-time librarian, and three to four part-time assistants) running our library, we are beyond proud to have served such a robust community so well over the past year.

Many visiting researchers, members, and friends of the Research Archives visited over the course of the academic year. These include (in alphabetical order): Jennifer Andruska, Ashley Arico, Colleen Bailey, Cynthia Bates, Christina Cheng, Ashley Demma, Robert Demos, Ellen Fleischmann, Courtney Fullilove, Dora Goldsmith, Susanne Görke, Ann Hamilton, Rolland Long, Saphinaz Amal Naguib, and Michael Watson. In addition to these individuals, the Research Archives also hosted tours for new volunteers, prospective students, the Admiral, the Breasted Society, a group with David Wilson, members of ATLA, and a great libraries class from Elmhurst College.

VOLUNTEER PROGRAM

The Research Archives continues to manage 25% of all the OI's volunteers. We have had over a dozen volunteers during the past year. With the help of Sue Geshwender, we review new applications on a roughly quarterly or biannual basis. We typically take in six to ten new volunteers each year, to replace turnover and to fill positions. These volunteers are responsible for much of the direct labor involved in the many projects running in the Research Archives. They have transformed the Research Archives by providing the necessary manpower to expand our capabilities and extend our services. Many thanks to Gabe Arcaro, Betty Bush, Gabriella Cigarroa, Gaby Cohen, Kim Crawford, Rafer Dandy, Irene Glasner, Dannica Hannah, Kat Jarboe, Aiko Johnston, Emily Kane, Kris Kerkman, Jane Klinkert-White, Jacqueline Mendoza, Marge Nichols, Stephanie Reitzig, Roberta Schaffner, Sharon Shapiro, Gabriele Correa da Silva, George T. Thomson, Julian Thibeu, Theresa Tiliakos, Jeremy Walker, Kayleigh Watson, and Annie Zhu.

STAFF ACKNOWLEDGMENTS

I would like to thank the staff of the Research Archives for helping me keep all of this afloat. It would not be possible without their help and persistence: Sunwoo Lee, Tanya Olson, Rosemary Ott, Emilie Sarrazin, Rebecca Wang, and Amy Zillman. In the winter semester (January–May), the Research Archives hosted and supervised the practicum of Andrew Wagner, a graduate student in the Library and Information Science program at Dominican University. Andrew worked on a number of projects including library cataloging, accessioning, and digitization. Andrew graduated in May 2019 with his MLIS.

TABLET COLLECTION

SUSANNE PAULUS

The last year witnessed a flurry of activity in the Tablet Collection. These activities include the gallery enhancement project, research support for scholars, research and digitization projects, object-based teaching, and public-outreach efforts.

The most significant event of the year was the gallery enhancement project. Together with Christopher Woods, Hervé Reculeau, and John Wee, Susanne Paulus redesigned the displays of several cuneiform tablets in the museum, improving the accessibility of the textual sources by adding translations. Other excavated materials were also added to the displays, and interesting storylines showcased around the topics of the invention of writing, education, science, law, administration, and letters. The conditions of all tablets were also reassessed, and, if necessary, they were stabilized by conservation, in addition to receiving new mountings and labels. The Gilgamesh tablets are, for the first time, displayed in a central pedestal case, and a new fragment, the oldest in the collection of the OI, was added to the exhibit. In addition to the cases dedicated to cuneiform tablets, tablets and other objects of the Tablet Collection were added to new displays all over the Mesopotamian gallery by Chief Curator Jean Evans, keeping the Tablet Collection team busy. Objects of the Tablet Collection also form part of two contemporary exhibits: *Aeon* by Ann Hamilton features a clay nail of Gudea from Lagash, and two Sumerian laments are displayed in conversation with the works of Mohamad Hafez. Additionally, Susanne Paulus wrote a history of the Tablet Collection for the centennial volume, *Discovering New Pasts: The OI at 100*.

In connection with the centennial, the curator performed significant outreach. The highlights include a class for the adult education program Discover Cuneiform with Objects from the OI's Tablet Collection and a guided excursion to discover the exhibition *Ancient Mesopotamia Speaks* as part of the OI travel program. These efforts were supplemented by presentations for the University Chicago Booth School of Business, the Bibliophiles François, UChicago Alumni Day, UChicago undergraduates, and smaller colleges. The tablets also figured prominently in docent training classes, introducing our new docents to the redesigned cases and the cuneiform writing system.

In addition, the Tablet Collection ran three major projects during the last academic year. Susanne Paulus (OI), together with Lee B. Drake (University of New Mexico) and Katharyn Hanson (Smithsonian Institution), received a research and development grant from the National Endowment for the Humanities to research the application of nondestructive X-ray analysis on cuneiform tablets to determine the geo-chemical composition of the clay. The goal of this project is to develop methods to determine the provenance of tablets. This is highly relevant for our collection, because around 50 percent of the tablets that were legally acquired in the early days of the OI do not have a secure provenience. It is also extremely important for law enforcement, as thousands of tablets looted from Iraq, Syria, and Iran are currently on the market. The project used excavated tablets with known findspots from the OI collection to prove that pXRF (portable energy dispersive X-ray fluorescence) is a viable method for determining the provenience of an individual tablet. Susanne Paulus, together with Colton Siegmund (assistant curator) and Suay Erkuşoz (PhD student in archaeology), analyzed hundreds of tablets from different sites, including Adab, Nippur, Nuzi, Khafajeh, Ischchali, and Tell Asmar. At the same time, Lee Drake developed a method for interpreting the obtained results using

artificial intelligence and machine learning. The initial results are very promising and show that this method is able to distinguish between clay from nearby sites, such as Khafajeh and Tell Asmar, as well as Nippur and Adab. Indeed, at a larger site like Nippur, it was even possible to discern differences in clay composition between tablets belonging to different archives. In the second phase of the project, they will apply this method to a variety of test cases to determine the provenience of groups of Ur III tablets, mixed acquisitions, and modern forgeries.

Furthermore, two important database and digitization projects initiated last year continued. As the assistant curator, Colton Siegmund, supported the NEH project as well as incoming research requests, Nicole Brandt, a master's student, joined the team to support the work of our four dedicated volunteers, Terry Friedman, Janet Helman, Susan Padula, and Toni Smith.

Susan Padula has now assessed the physical conditions of over 2,800 individual tablets, reporting on both physical damage and inadequate housing. Sadly, the numbers indicate that there is an urgent need for better housing and conservation for a significant number of our tablets. Regarding tablet housing, 87 percent of our tablets are bedded on organic cotton wool; related problems caused by moisture in the bedding material and even individual cases of bug infestation were observed. Furthermore, 40 percent of our tablets are housed in acidic paper-glass boxes, which are not suitable for the long-term storage of museum objects. Ten percent of our tablets are also housed in boxes that are too small, which can lead to damage to the objects. Based on visual inspection, only 16 percent of our tablets are in good condition, while 20 percent are in urgent need of conservation. Finally, in addition to this challenging and time-consuming work, Susan Padula also checked whether individual tablets were published on the OI Integrated Database (IDB) and was able to make many then-unpublished texts available to the wider public.

The second important project is the ongoing digitization of our unpublished tablets. High quality photographs of the tablets in the collection are very important for interested researchers, especially given that our catalog largely lacks images. The volunteers Terry Friedman, Janet Helman, and Toni Smith scanned over seven hundred additional tablets, bringing the project up to 30 percent completion. Using a modern flatbed scanner, they scanned each individual tablet six times to provide complete coverage. Special objects like clay nails, door sealings, and envelopes needed special attention. After the scans were completed, Nicole Brandt and Colton Siegmund checked their quality before uploading the raw data to a file storage system. Post-production was completed over the summer by Yujeong (Erin) Lee, the tablet collection's first summer intern. Yujeong stitched the individual photos together, creating so-called fat-crosses, which allow for a complete overview of the tablet from all sides. She also produced detailed guidelines for the post-production of our scans, which will be used by the undergraduate research assistant joining the Tablet Collection in fall 2019. In addition, Yujeong designed outreach materials for the collection, supported outreach efforts, and was overall a wonderful presence throughout the summer.

Beyond these major projects, normal routines continued in the Tablet Room. Visiting researchers included Sebastian Borkowski (Geneva, Switzerland), Juliane Eule (Berlin, Germany), David Musgrave (Amherst University), Albert Planelles Orozco Gonzales (Alcalá, Spain), and Klaus Wagensonner (Yale Babylonian Collection). The visiting researchers worked on published and unpublished material spanning a wide range of places, genres, and periods, from Sumerian poetry to Bronze Age letters to Early Dynastic royal inscriptions. Thanks to the generous support of Jim Sopranos, the Tablet Room now possess an excellent camera, which also allows us to provide high-quality photographs to scholars unable to visit Chicago. In addition to providing photographs, the Tablet Room team, and especially the assistant curator Colton Siegmund, provided database research and collations to many colleagues worldwide. Researchers supported in 2018–19 include Nicole Brisch (Copenhagen, Denmark), Dominique Charpin (Paris, France), Franco D'Agostino (Rome, Italy), Benjamin Foster

(Yale University), Grant Frame (University of Pennsylvania), Lionel Marti (Paris, France), and Wiebke Meinhold (Tübingen, Germany).

Work on the tablets has led to notable publications. These papers include the publication of an important Sumerian school dialogue by Manuel Ceccarelli, as well as two complex old Babylonian incantation tablets likely from Adab by Walter Farber. Hervé Reculeau and Antoine Jacquet published the remaining Old Babylonian tablets from the R. F. Harper Collection. Finally, Ulrike Steinert included our fragment of the Assur medical catalog in her volume of Assyrian and Babylonian Scholarly Text Catalogues. This fragment, together with other pieces from the same tablet, is currently on loan in New Haven as part of the exhibition *Ancient Mesopotamia Speaks*.

Again, scholars at the OI used tablets for a variety of graduate classes. These include an Old Akkadian class taught by Rebecca Hasselbach and Elementary Hittite taught by Theo van den Hout. A new format for using the tablets for object-based learning was introduced in the signature class offered by Susanne Paulus titled The Age of Innovation—Famous Firsts 5,000 Years Ago. This class is entirely based on drawing knowledge directly from inscribed objects. As the comments from the evaluation show, it was highly successful and will be offered again in the near future:

Amazing course! You learn how to evaluate objects, the fundamental inventions of ancient Mesopotamia, and you get to touch and handle ancient artifacts!

I learned a lot about the history and culture of Mesopotamia, but also where the very first versions of objects we use today came from. It was very interesting to see how things have developed, and to be able to see and handle the objects in class.

I want to close this annual report with a personal note: All these efforts would not be possible without our dedicated volunteers, graduate students, and summer intern. Thank you all for your hard work and dedication to the tablet collection. I am also indebted to my colleagues at the museum, Jean Evans, Kiersten Neumann, Helen McDonald, Susan Allison, Laura D'Alessandro, Alison Whyte, and Stephanie Black. Warm thanks to all of you for your collegiality and support.



MUSEUM



OVERLEAF: The Egyptian Gallery after the Gallery Enhancements Project.

MUSEUM

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

The staff of the Oriental Institute Museum had a productive year of activity focused on completing the Gallery Enhancements Project (GEP). While beyond the scope of this Annual Report, the GEP was completed on schedule, and special viewings for the reinstalled galleries were offered at the OI Centennial Gala and at a subsequent public open house, both in September 2019. Because of the GEP, activities including special exhibitions, object loans, and research visits were reduced in fiscal year 2018–19.

The GEP was initiated in 2014 and was made possible through the generosity of an anonymous donor and additional funding. The majority of some fifty-five new cases manufactured by Helmut Guenschel, Inc., based in Baltimore, were delivered and installed this past fiscal year. In this final year of the GEP, we also continued to work with our same outside exhibition design team of Elizabeth Kidera (Museum Exhibit Design and Architecture) as exhibition designer, Franck Mercurio (Mercurio-Exhibits) as exhibition developer, and Lori Walsh (Walsh Graphic Design) as senior graphic designer. Many thanks to them as well as to the entire museum staff. Not only did the museum staff give up their summer work hours in order to finish the GEP on schedule, but their professionalism, hard work, and drive made the final months a wonderful experience. Their efforts were very much appreciated! Finally, thank you to the many members of the OI community who have shared their enthusiasm for the GEP with us and also shared their expertise in order to improve the displays.

MUSEUM ATTENDANCE

The total number of visitors to the museum in the past fiscal year (July 1, 2018–June 30, 2019) was 46,995. The overall decline in the number of visitors for the period in which the Gallery Enhancements Project was being realized is likely a reflection of necessary gallery closings. Many thanks to Vick Cruz, director of visitor services and security, for recording our visitor statistics.

CONSERVATION

Conservation's responsibilities in support of the Gallery Enhancements Project continued throughout the year. From conservation assessments to material identifications, the Conservation staff was kept busy. Conservation treatments continued to be performed throughout this time (fig. 1). Priority was given to those objects requiring treatment in order to be placed back on exhibit. In the case of objects coming out of storage for the first time (or after a long absence from the galleries), some type of treatment was often needed before going on exhibit. One of the more familiar objects in the galleries, Petosiris's coffin, was probably the most high-profile patient in the lab this year. After years of triage (urgent care) on the areas most at risk on the coffin's painted surface, the coffin was finally able to undergo a more extensive conservation treatment. While the coffin base was on exhibit continuously, the lid had been removed from display over ten years earlier due to structural concerns. Both the coffin lid and bottom section spent several weeks in the lab, undergoing extensive cleaning and



CLOCKWISE FROM TOP LEFT: Figure 1. Assistant conservator, Stephanie Black, cleaning and stabilizing an Eighteenth Dynasty Egyptian basket (E2106) from the foundation deposit of Queen Hatshepsut at Deir el-Bahri on the West Bank in Thebes. Figure 2. Associate conservator, Alison Whyte, preparing the base of Petosiris's coffin (E267B) for turning on its face to access the back surface. This process occurred after consolidation of the painted surface and structural stabilization of the wooden sections. Figure 3. Conservation pre-program intern, Mackenzie Fairchild, working on the conservation of a baked clay kernos (A28709-A28714) from Mesopotamia.

stabilization of the painted surface and the structural components of the coffin sections (fig. 2). The coffin is now back on exhibit in the Joseph and Mary Grimshaw Egyptian Gallery, both the lid and base once again exhibited in the proper orientation surrounding the mummified remains of Petosiris.

While priority was given to Gallery Enhancement activities, time was spent on other projects. What follows are some of the highlights of the year. In September, D'Alessandro attended the International Institute for Conservation's conference on Prevent Conservation: The State of the Art, held in Turin, Italy. The topics ranged from latest advances in environmental guidelines for museums and state-of-the-art display cases for mummified remains to scientific advances in techniques for studying cultural heritage. It was an opportune time to meet new colleagues and reconnect with former colleagues from the international conservation community.

In October, the packing of the first shipment of Persepolis Fortification tablets began. With a devoted and dedicated team of volunteers—Sue Padula, Kate Leiber, Stephen Scott, and Jeremy Walter—the packing of the nearly two thousand tablets commenced. By the spring, their scrupulous attention to detail and hard work paid off in the tablets being ready for transport right on time. It was very rewarding to see the excellent condition of the tablets in Tehran as the boxes were opened in the presence of our Iranian colleagues later that year.

In November, we were introduced to the Materials Research Science and Engineering Center (MRSEC) here at the University of Chicago. With the kind encouragement of Dr. Heinrich Jaeger of the Department of Physics, Justin Jureller, the facility manager, provided a tour of their facility and offered staff the potential for training on a variety of equipment. This access will potentially allow us to identify organic materials, such as binding media in pigments and organic residues in ceramics. In this same spirit of collaboration, Justin arranged for us to have two objects X-rayed—a ceramic

rattle and a copper alloy “clamshell” container, slated for display in the newly reinstalled Edgar and Deborah Jannotta Mesopotamian Gallery. The resulting images, provided by Kieran Murphy, the operator of the X-ray machine, showed clear evidence of the contents of the two objects. While not specifically identifying the actual material inside the two objects, the shape and densities visible in the images allowed inferences to be drawn. This information was incorporated into the text copy for the display case labels. We look forward to a close collaboration with the center in the coming year and the opportunity to expand the analytical capabilities of the Conservation laboratory.

In January, Stephanie Black, assistant conservator, attended a three-day workshop, sponsored by the American Institute for Conservation, that provided both theoretical and practical training in the identification of wood samples of any species, including proper sampling techniques.

Also in January, Alison Whyte, associate conservator, was invited to give a presentation on the Gallery Enhancement Project at Elks Memorial to the Chicago Area Conservation Group. Alison’s presentation was part of a larger program where conservation colleagues from the Art Institute and the Field Museum also gave updates on their institution’s current projects.

That same month, Mackenzie Fairchild joined the lab as a pre-program conservation intern (fig. 3). Mackenzie was working on her conservation graduate school admission requirements, one of which is several hundred hours of practical experience in a variety of conservation laboratories. Mackenzie came to the OI after graduating from an undergraduate program in art conservation and restoration and had already completed many hours of conservation treatments at a variety of conservation studios in the city and abroad. After seven months at the OI, Mackenzie accepted an internship at the Field Museum.

In February, the conservation staff presented a workshop for the Material Science of Art course (Suzanne Deal Booth Conservation Seminar). We demonstrated several analytical techniques to the students, including the use of ultraviolet imaging and the theory behind portable X-ray fluorescence, as well as examples of conservation research and treatment issues.

April was a busy month. Whyte and Black attended a one-day workshop on the theory of photogrammetry taught by J. P. Brown, senior conservator at the Field Museum. Photogrammetry allows for the creation of 3-D data from 2-D images. It is a less expensive alternative to 3-D laser imaging and is used in many cultural heritage applications. We hope going forward that this will be another skill set added to the conservation lab’s repertoire.

Also in April, the Louvre borrowed seven objects from the OI from the site of Tell Tayinat in Turkey for inclusion in their exhibition *The Forgotten Kingdoms, Heirs of the Hittite Empire*. While the

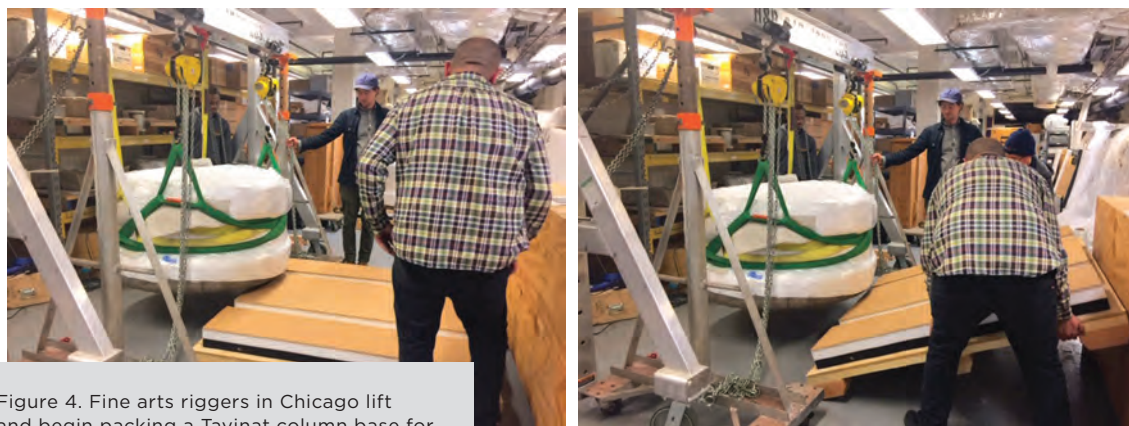


Figure 4. Fine arts riggers in Chicago lift and begin packing a Tayinat column base for transport to the Louvre, April 2019.

total number of objects requested was modest, the total weight of the loan was not. The loan translated to over 15,000 lbs. of artifacts, including two 4,000 lb. column bases. The sheer weight of the stone objects (all carved from basalt) made it one of the more interesting loans in recent history. Just getting the objects crated and ready for transport required a fine arts rigging company, both here in Chicago (fig. 4) and at the Louvre in Paris. While in Paris, the curator of the exhibit learned that one of the column bases was actually upside down and requested that the column base be flipped for exhibition. The French fine arts riggers happily complied (fig. 5). Conservators D'Alessandro and Whyte served as couriers for the loan. On the outbound trip, D'Alessandro's trip coincided with the horrific fire at Notre Dame, an experience that will never be forgotten.

The highest profile activity that Conservation was involved in this year was the return of the Persepolis Lion and Bull to Chicago. Planning for the return of the



Figure 5. Fine arts riggers at the Louvre in Paris turning over one of the OI column bases for the exhibition *The Forgotten Kingdoms, Heirs of the Hittite Empire*.

sculpture began nearly a year before the sculpture departed its temporary home in Boston, where it was on long-term loan to the Boston Museum of Fine Arts. After a preliminary visit in November to assess the condition of the sculpture, D'Alessandro conferred with colleagues at the Boston Museum of Fine Arts over the course of several months to finalize the shipping arrangements. It is not possible to overstate how collegial and helpful our colleagues in Boston were throughout the entire process. In preparation for the arrival of the nearly 4,000 lb. sculpture, a study was carried out by the engineering firm of WJE Associates to determine whether or not the floor load of the Persian Gallery would be sufficient to support the added weight. WJE determined that additional support would be required to safely support the sculpture in its planned location in the gallery. During the summer, the support was constructed in the basement underneath the location for the new display on the first floor of the museum. Under Conservation's supervision, the sculpture was packed in Boston, shipped to Chicago, and finally installed with much fanfare in the galleries. We were all very relieved that the entire process proceeded without a hitch and the sculpture withstood the rigors of the trip unharmed. It now looks very much at home in its pride of place in the Robert and Deborah Aliber Persian Gallery.

REGISTRATION

This year most of Museum Registration's time has been taken up by the Gallery Enhancement Project activities (GEP). Over 10,500 object movements took place in relation to the GEP; this included over a thousand new objects that came out for exhibit consideration. Other GEP related object

moves involved over seventy pots drawn by Shannon Martino for new display case labels and some three hundred objects for 3-D scanning as part of the development of Ann Hamilton's art installation at the Mansueto Library. We have continued to take the opportunity to photograph objects while they were off display, so that images of them can be added to the Integrated Database (IDB).

The New Exhibition Objects Module

Over the past year we've continued testing the Exhibition Objects module. In June 2019, we went live with the new module and it is now ready to be incorporated into our exhibit workflow.

Photo Permissions

From July 2018 through June 2019, we processed 199 image requests. This includes requests for existing images as well as requests for new photography. During the past year the Photographic Archives assistant position was filled by Jacob Smith and Emily Kane.

Loans Outgoing

In the autumn, tablet A7821 was loaned to the Yale Babylonian collection for the *Ancient Mesopotamia Speaks* exhibit. The Horus falcon that is usually on display in the Egyptian Gallery (E10504) was lent to the Reva and David Logan Center for the Arts on campus for the Atlas Unlimited art installation during the winter term. In spring 2019 a few basalt objects from Tell Tayinat went out on loan to the Louvre Museum (Paris) for the *Royaumes Oubliés/ Forgotten Realms* exhibit. These included two large column bases (A27858, A27860), a camel head (A60936), and a duck weight (A27852) from storage, as well as one of the small reliefs of an Assyrian soldier (A27856), a block with lion's head (A27857),





by Professor Tristan Carter of McMaster University (Canada) and a long-term study loan of flint tools from the Braidwood excavations at Warwasi returned from the Penn Museum.

Acquisitions

The registrar went to Utah in March to assist Conservator Stephanie Black to pack the Blosser donation of ceramics, metal objects, and coins.

Requests

In total, the Registration Department has responded to 125 different requests this year involving 11,250 different objects and generating over 25,000 object movements. Apart from the requests relating to the GEP already mentioned, other requests included research (532 objects), class use (90 objects), and photography by both staff and researchers (over 500 objects).

(In addition, the tablet collection has generated some 77 request records, most for scanning or storage evaluation [over 400 tablets for storage evaluation, 130 for pXRF analysis, 86 for class use, and 229 for research, a total of 1,776 object movements]. While the tablet curator's assistants moved the objects in question, the registrars made the location changes in the IDB.)



and a block with Luwian inscription (A23427) from display. A relief from Persepolis (A73100) that had been on loan at the MFA Boston for over eighty years returned to us in May and is now installed in the Persian Gallery. The weight of this object necessitated the construction of a floor support down in the basement. While this was being put in, four storage cabinets had to be emptied and moved elsewhere. Three of them have now been moved back; the fourth has moved permanently to another storage location. An analysis loan of obsidian from the Amuq sites was returned

Visiting Researchers

While the focus was on the gallery renovation it was necessary to restrict the number of visiting researchers, so there were only a couple of short visits this year. David Lightbody and Brain Alms came to study a stone vessel with carved falcon (E13947) in July 2018. Martina Rugiardi looked at sherds from

the site of Rayy in February. We did, however, give priority to the Collections Research Grant (CRG) 2018–19 recipients as follows: Serenella Mancini visited in January/February to study and analyze ceramics from Istakhr (Iran) and, while visiting to study the Persepolis archive for her CRG on the waterscapes of ancient Persia, Marie-Laure Chambrade also took the opportunity to examine a small collection of sherds from Pasargadae (February).

Classes and Special Events

Professor Donald Whitcomb used a selection of sherds from Jundi Shapur (Iran) and Beth Yerah/ Khirbet Kerak (Israel) for an Islamic ceramics class in October. He also used some sherds from Fustat for a class in April. A variety of manuscripts, book bindings, tablets, and tablet casts were used by Foy Scalf for manuscript classes in October and November. A similar selection was also made available for a Dominican University evening class taught by Foy in February. Stelae were made available to students in the Middle Egyptian class taught by Brian Muhs as follows: stela E16958 for study by Tara Olson and E16953 for Emily Thibreau. The Hadrian papyrus (E8349) and an Islamic writing board (E49447) were displayed in a Breasted Society event in June. In the same month, Brian Muhs also used the Hadrian papyrus for a gallery talk. Colleagues Helen Gries, from the Vorderasiatisches Museum (Berlin), and Ariane Thomas, of the Louvre Museum, visited to look at Khorsabad glazed bricks in May, while in Chicago to attend a curatorial workshop hosted by Northwestern University and the Oriental Institute.

Oriental Institute Faculty, Staff, Researchers, and Students

Bruce Williams and Lisa Hiedorn have continued to access the pottery from Serra and Dorginarti for their respective volumes in preparation. Karen Wilson continued with checking certain Nippur objects as the OIP volume on the Inanna Temple nears completion. In February Tasha Vorderstrasse studied coins from Carthage for a paper given at the Seventh Century Numismatic Round Table in Worcester (UK) in April 2019. Doug Inglis came in to take photos of some fifty objects selected by Tasha Vorderstrasse; this relates to a grant obtained by Carol Ng. The photos will be used to create 3-D images of objects for STEAM



teacher resources that will appear on the OI website. In the spring, Michael Johnson photographed nearly 250 objects and sherds from Tell al-Judaidah (Amuq, Turkey) for the Judaidah database in OCHRE.

And during the academic year we have had the assistance of work study student Maja Sunleaf. She has been taking record shots of objects while they were off display for the GEP and started to add them to the IDB.

EXHIBITION DESIGN AND PRODUCTION

2019 has been a momentous year for Exhibition Design and Production, formerly known as the Prep Shop. The successful completion of the Gallery Enhancements Project, which saw the complete re-design and reinstallation of the entire museum, was a massive undertaking that has resulted in a beautiful museum that will remain engaging for years to come. In addition to this enormous project, we also built and installed the temporary centennial exhibition, *The OI at 100*. Together, these projects necessitated bringing on four additional preparators and three mount makers, and we truly couldn't have done it without them. So we would be remiss if we failed to thank preparators Kathleen Cescon, Erin Bliss, Olivia Gallo, and Claire Ritchie, who all contributed to these massive projects. Our mount makers, Andy Talley of Talley and Talley Mount making, Judy Radovsky of Fulcrum Mountmaking and Exhibitions, and Earl Locke, all made it possible for us to reinstall nearly every single object in the museum. Finally, I would like to particularly thank our manager of exhibition design and production, Josh Tulisaiak. Without his long hours, and in particular his graphic design knowledge and skills, none of this would have come together. It has been a pleasure to work with all of these people, which given the scale of this project, is a testament to their care and professionalism. Thank you all!



MUSEUM ARCHIVES

2018–19 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.

Access

Students and volunteers tirelessly cataloged the Museum Archive's collections this year, in particular the Oriental Institute's Directors Correspondence. We are nearing 70 percent completion on this project, which means that over seven thousand folder-level records have been cataloged since the beginning of 2019. This also means greater access to a correspondence collection that begins in the 1890s and continues until the present day. It is one of the collections that is most widely used by research and scholarly communities. This is a huge boost in transparency for the archives since this information was not previously accessible to the public.

The Museum Archives has also provided the Research Archives access to negative cards and expedition records for digitization. The generosity and resources of the Research Archives continue to make records available to researchers online.

New Research/Visitors

The Museum Archives hosted visitors from all over the globe this past year. Researchers and requests came from a variety of institutions including the Louvre, the University of Lyon, Bryn Mawr, the





Institute of Science and Technology, the Metropolitan Museum, the New York District Attorney's Office, and the University of Sydney, as well as the Chicago area.

Collections that were most requested this year included the Papers of Robert and Linda Braidwood, the Papers of Benno Landsberger, records of the Directors Correspondence, records of the Diyala Expeditions, James Henry Breasted Papers, records of Jarmo, records of Medinet Habu, records of Megiddo, records of Persepolis, and records of the Oriental Institute's Negative Collection.

Projects

The Cultural Heritage Experiment (CHE) was started in the fall of 2018. This is an archival object-lending program that loans out pieces of the OI Museum Archives to undergraduates for the academic year. 2018–19 was our first year, and it was a huge success! Almost a hundred students participated in the lending program while also taking part in associated programming throughout the year. All objects were returned at the end of spring quarter, and a successful 2019–20 season of the project has begun. The CHE was so well received that the Johns Hopkins University Archives is starting a Cultural Heritage Experiment in the spring of 2020.

The centennial year also brought with it many tasks for the Museum Archives including the curation of the exhibit *Discovery, Collection, Memory: The Oriental Institute at 100* at the Special Collections and Research Center at the University Library and the contribution of images and text to the centennial volume, *Discovering New Pasts: The OI at 100*. The Museum Archives also supported the special exhibit at the OI.

Additionally, the Museum Archives has been involved in a variety of outreach efforts in order to reach the campus community and beyond. Archival materials are regularly supplied for tours, exhibits, undergraduate and graduate classes, and volunteer training.

Acknowledgments

Special thanks goes to Foy Scalf and the Research Archives for teaming up to work on digitization projects like the negative cards and IMLS grant requirements, as well as IDB support and regular archival advice. Thank you to everyone who assists in evaluating archival materials including Helen MacDonald and Susan Allison. Special thanks to Josh Tulisak for all of his help with the CHE promotional materials. Thank you to Knut Boehmer for his ability to walk into a room and fix all technical issues. 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

Denise Browning's goal for the Suq this year has been to adapt the downsizing of the Suq to make way for the new lobby design. We were tasked with removing the bookcases, jewelry case, children's book turnaround, poster display, and the new book display table, while finding creative ways to display all of these items within the walls of the Suq. We met our deadline and created nice, new textile-covered shelving in the store for the jewelry.

We are very fortunate to have added two new docents this year. We welcomed Merle Cherney and Amber Patania, who have been great assets to the store. Ray Broms celebrated his tenth anniversary with the Suq this year! Our other docents, Alice Mulberry, Louis Despres, and Ann Schumacher, along with Ray, add their many talents to the Suq, to educate and give the best service to our customers. Extra thanks to Norma van der Muelen, who designs our wonderful jewelry for the Suq and who celebrated her fortieth year with the Suq this year!



COMMUNICATIONS



OVERLEAF: The OI centennial mark designed to celebrate the OI's one hundred years of research, fieldwork, and scholarship.

COMMUNICATIONS

KIERSTEN NEUMANN

Over the past year, the OI's communication efforts increased exponentially as we prepared for the kickoff of the official Centennial campaign at the end of summer 2019 and subsequently to celebrate the centennial throughout the 2019–20 academic year. Throughout 2018–19, we continued existing partnerships and developed new ones with teams across the UChicago campus and within the city of Chicago, to assist us with our marketing, public relations, and branding strategies, the overarching goal of which was to raise the awareness and support of the OI locally and internationally. As Steve Johnson so eloquently wrote in his fall 2019 feature on the OI in the *Chicago Tribune*, “The Oriental Institute has a 100th birthday makeover wish—to no longer be Chicago’s ‘hidden gem.’”



Through the end of 2018, we continued developing new branding and messaging for the OI with central University Communications, UChicago Creative, and consulting firm Lipman Hearne. The product of these efforts is a brand story that effectively and artfully captures the history and romance of the OI, both a pioneering interdisciplinary research center and a world-renowned museum devoted to understanding, revealing, and protecting the earliest civilizations in the ancient Middle East. A visually significant aspect of our rebranding was the creation and launch in April 2019 of a new logo—a new look for a new century! A principal objective in designing the new logo was to increasingly refer to the Oriental Institute as the OI. The term “Orient” originally referred to the OI’s geographical area of research focus—one hundred years ago, the Middle East was known as the Orient, meaning “east” (as opposed to occident, meaning “west”). However, the meaning of orient is no longer part of common American English usage. Our intention is to acknowledge and embrace our heritage and set the stage for our next hundred years. We’re increasingly referring to the Oriental Institute as the OI, similar to MoMA, the Met, and MCA, and the new logo afforded an opportunity to move in this direction.

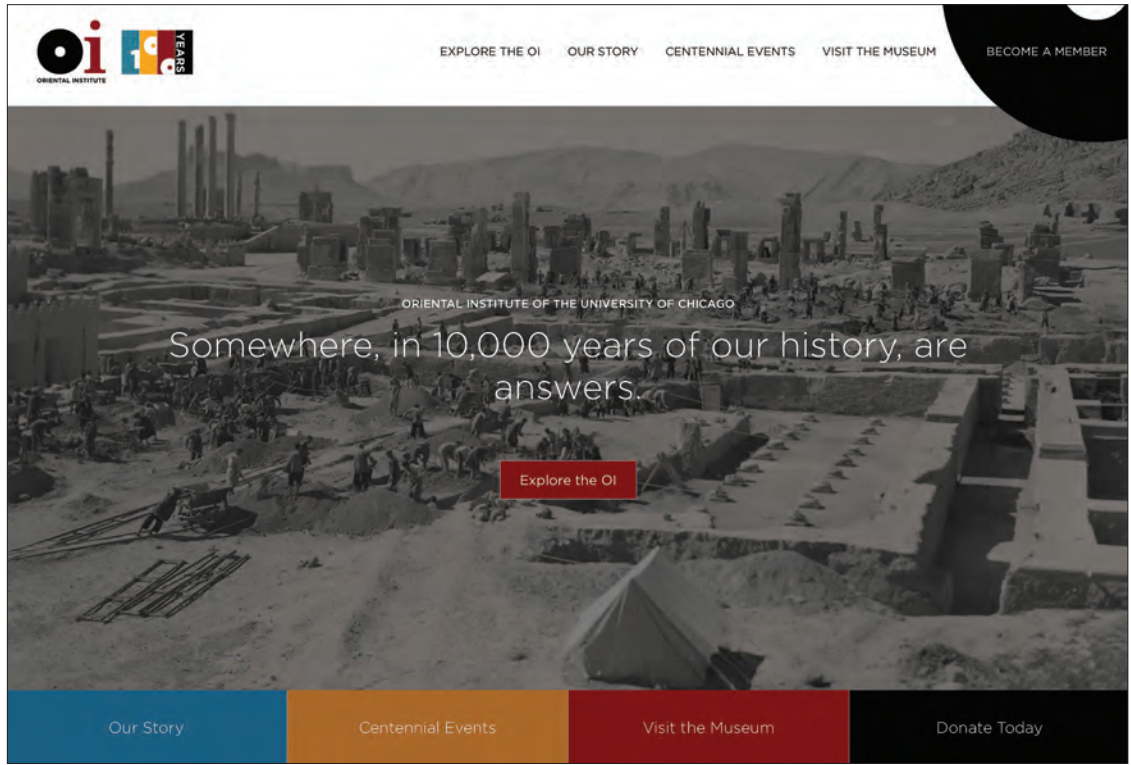
The completed logo—the bold black “O” and serif maroon “i”—is iconic, representative of the institute, and visually impactful in both print and digital platforms. Inspired by artifacts of the OI Museum collection—beads, cylinder seals, maceheads, spindle whorls, and, of course, the wheel—the “O” acts as both letter and graphic element. The lowercase “i” conveys a feeling of humanity through its serif curve and round dot. The “i” is also reminiscent of the “i” symbolizing “information,” a fitting association for an institute whose mission is to advance knowledge and discovery related to the ancient Middle East. The Gotham font and black and maroon color scheme with which “ORIENTAL INSTITUTE” and “THE UNIVERSITY OF CHICAGO” are written situate the logo firmly within broader UChicago branding. The museum logo draws on this same design concept, with

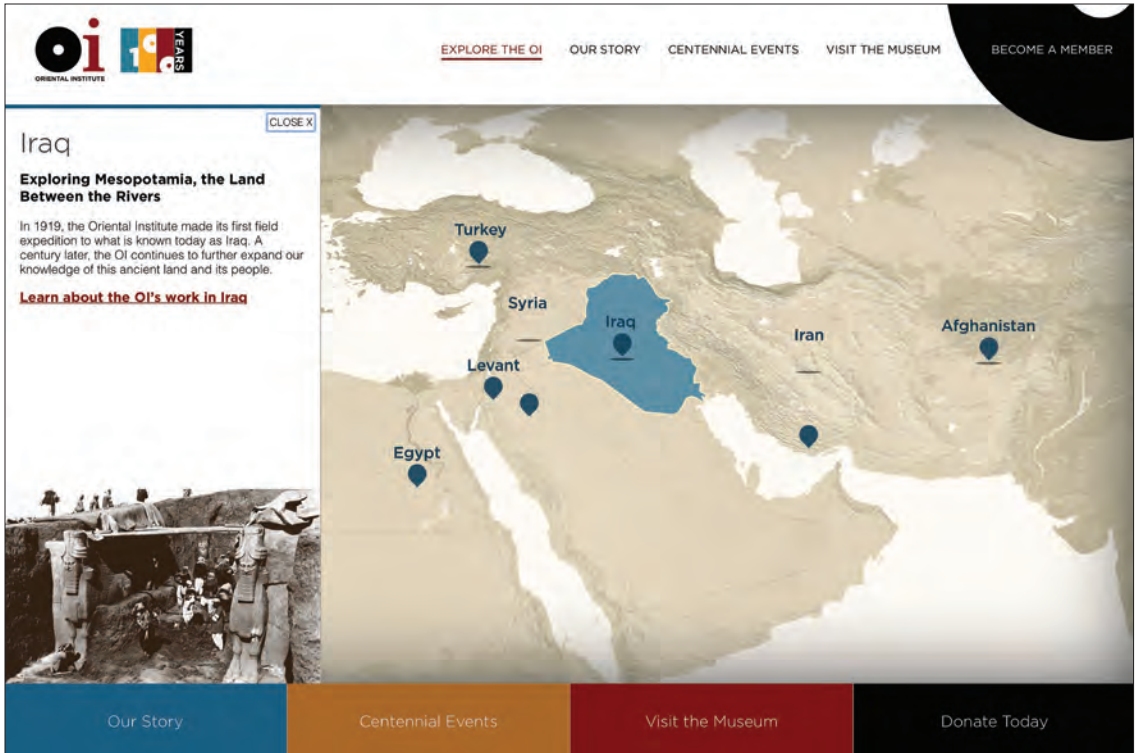


the word “MUSEUM” written in black using the Gotham font. While the OI logo as a whole embraces a sense of the tradition and romanticism of the institute, its clean, modern qualities connect to the present, reflecting an institution whose scholarship and outreach continues to offer new ways of seeing what connects us and why, our lives as humans together. We also designed a special centennial mark to celebrate the OI’s one hundred years of research, fieldwork, and scholarship. The mark is referential to the OI logo, using the same graphic “O.” The horizontal bands employ the maroon and black of the university’s primary palette and the blue and yellow of the secondary palette. The result is a vibrant and contemporary design that stands as a striking complement to the OI logo.



Coinciding with the unveiling of the new OI logo and centennial mark was the launch of the OI Centennial website (oi100.uchicago.edu). We teamed up with Chicago-based digital branding agency, Sandstorm, to work with us in creating a digital experience to celebrate the OI’s Centennial year, sharing not just the legacy and historical impact of the OI in understanding, revealing, and protecting the earliest human civilizations, but also recognizing that through our ongoing research and public outreach we can offer new ways of thinking about what makes us, *us*—the beginnings of our lives as humans together. Sandstorm and the OI team underwent a thorough UX and creative UI process, while leveraging the OI’s new branding. The primary goal was to achieve an interactive, high-tech, narrative experience while showcasing the incredible depth of research projects and overall work of the OI. In addition, a key goal was to drive users to engage with the OI: attending exhibits and events (including the Centennial Gala), donating, becoming a member, and visiting the museum. Making sure these






CTAs and conversions link back to the main OI site was key, while also elevating the centennial as a major milestone for the institute. Sandstorm implemented a new Drupal 8 instance for the OI Centennial site and configured the CMS for design flexibility in the future. Over the course of a few months, we worked with Sandstorm to transform key content related to the OI's history, research projects, fieldwork, cultural heritage initiatives, and museum collection into a well-curated, digital microsite experience; a key feature is the interactive map that presents a visual navigational tool to explore the OI's work in different regions of the Middle East. Additional objectives included a mobile-first approach that ensures the user has the same level of interactivity and scannability from any device, and WCAG 2.0AA accessibility standards. The OI Centennial site was recognized with a 2019 Gold MARCOM award by




the Association of Marketing and Communications Professionals.





In spite of these many efforts, our social media presence did not lapse. We saw a continued increase in our audience engagement across all platforms—Facebook, Instagram, Twitter, and YouTube—throughout the year. On Instagram, we saw an exceptional rise of 485 percent in follower growth. One of our top engaging posts was a photo of the decadent *lamassu* cake created for the OI birthday celebration on May 13, 2019. Our Facebook base rose 12.4 percent, reaching a total of 26,073 followers; our net page likes (the number of new users who liked our page) rose 144 percent, with a peak in May 2019—also the month of the OI’s actual one hundredth birthday! Our number one most engaging Facebook post was a photo of the world’s oldest known fragment of *A Thousand and One Nights* (E17618) from the

**Oriental Institute - University of Chicago**
May 17 · 🌐

This is the world's oldest known [#ArabianNights](#) fragment (E17618, on display) as well as one of the oldest known paper documents from the Middle East. The fragment was re-used in 879 AD, meaning that we know it must date before that time. On the left, we can see the title page which informs the reader that this is "a Book of Tales from A Thousand Nights," rather than the usual "Thousand and One Nights," which is what the story is known as in Arabic.

Come see the Arabian Nights fragment which is newly on display at the Oriental Institute!



 321

17 Comments 277 Shares

**theorientalinstitute**







 Liked by [ale_gallegolopez](#) and 220 others

theorientalinstitute This past Monday, May 13th, OI faculty, staff, supporters, volunteers, and friends gathered in the Museum to celebrate the day when the University of Chicago Trustees officially founded the OI 100 years ago! The absolute star of the evening was the birthday cake fashioned in the shape of a lamassu (!). The cake was created by [@alliancebakery](#) and generously donated by one of our amazing Advisory Council members!

 [@charissajohnsonphotography](#)
[#birthdaycake](#) [#lamassu](#) [#oi100](#)

OI Museum collection, which is now on display in the new Islamic exhibit section of the galleries. With the April launch, we were excited to implement our new messaging and visual branding on each of our pages, including the uploading of the new OI logo as our profile picture.

In the first part of 2019, we entered into new partnerships with the Silverman Group, to develop and implement a PR strategy for the centennial year; and Tom, Dick & Harry Creative Co., to design print and digital creative for our centennial marketing campaign. We also continued working with UChicago Creative to develop brand guidelines, stationary, and marketing materials. Guided by these well-curated and strong partnerships, we paved the way for a much anticipated and successful campaign kickoff in August 2019—to be discussed at length in the 2019–20 Annual Report.

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THE ORIENTAL INSTITUTE



PUBLIC EDUCATION



OVERLEAF:
Singers from
the Chicago
Persian School
children's
choir perform
a song at
the Nowruz
Celebration.
Photo: Steven
Townshend.

ADULT EDUCATION

TASHA VORDERSTRASSE

In 2018–19, the adult education program continued to offer continuing education classes with the livestreaming element. In the summer of 2018 the classes taught were, “Pottery and Society in the Ancient Eastern Mediterranean,” by Natasha Ayers, PhD, “Science and Technology in the Medieval Islamic World,” by Tasha Vorderstrasse, PhD, and “Art and Archaeology of Ancient Turkey,” by Shannon Martino, PhD. In the fall of 2018 the two classes were a one-day class: “The Art and Architecture of Greco-Roman Egypt,” by Megaera Lorenz, PhD, and “Introduction to Egyptian Hieroglyphs,” by Foy Scalf, PhD. In the winter of 2018 the classes were “Watercraft in Ancient Egypt,” by Doug Inglis, PhD candidate, and “Languages of Ancient and Medieval Nubia: Adaptation and Innovation,” by Brian Muhs, associate professor of Egyptology, and Tasha Vorderstrasse. In spring 2019, there were a variety of different types of classes offered, including an online-only class, “Forensic Archaeology,” which was offered by Sasha Rohret, PhD candidate and two on-site-only classes: “Drinking in Antiquity,” by Lucas Livingston of the Art Institute, and “Discover Cuneiform with Objects from the Oriental Institute’s Tablet Collection,” offered the students an opportunity to look at OI artifacts. There was also a class offered both on-site and online (with live streaming): “Connecting the Medieval Mediterranean and Beyond: Jacques de Vitry and the Formation of a Treasury of Byzantine, Islamic, Crusader, and European Art,” by Tasha Vorderstrasse. 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 objects such as “Food and Diet in Ancient Egypt,” “Egyptian Boats—on the Nile and in the Afterlife,” “Ancient Egyptian Statues Abroad,” “Power and Pottery in Early Mesopotamia,” and “The Monuments of Tell Tayinat.” There were also two talks on Nubia: “Enclaves, Military Outposts, and Colonial Settlements: Autonomy and Cultural Encounter in Nubia,” and “From a Different Angle: Nubians Living in Egypt.” In several cases, it was possible to bring out objects from the OI collections, such as in the talk “Pottery from Archaeological Excavations in the Near East,” which allowed attendees an opportunity to handle pottery from the OI education department collection, and “Hadrian’s Autobiography?” where the only known fragment of Hadrian’s autobiography was brought out for attendees to see, since the papyrus is not on display. This lecture was in honor of Pride Month, and is the first time that it has been celebrated at the OI. There was also an interactive art gallery talk, “Drawing from the Oriental Institute Museum Collection,” which allowed attendees to create art based on museum collection.

In addition, Community Scholars lectures continued with a variety of events including a set of three lectures at the Barrington White House. Other activities included specialist tours given by Tasha Vorderstrasse to UChicago Core classes, which were tours focusing on a postcolonial approach to the OI, as well as free tours open to the public: “Demon Trapping 101,” which looked at demons in the OI museum galleries, and a “Sepulchral Ground Tour: Exploring Egyptian and Classical Monuments at Graceland Cemetery,” by Foy Scalf and Tasha Vorderstrasse. This year, UChicago’s first year orientation event, “Bulls and Buns,” became “Demons and Donuts,” and was done in conjunction with Membership.

YOUTH AND FAMILY PROGRAMS

CALGARY HAINES-TRAUTMAN

This year, engagement at the museum through programming and outreach at offsite events were key focuses of OI Youth and Family Programs. We sought to build community, attract new attendees to our family programs and field trips, and reach new audiences.

FIELD TRIP HIGHLIGHTS

Interactive field trip programs are among the most popular offerings at the OI, serving over 2,100 students during the 2018–19 academic year. For groups coming to the OI for a guided field trip experience, 58.5 percent of visits were for interactive field trip experiences led by University of Chicago student facilitators. In the 2018–19 academic year, five new facilitators, Andres Cruz Leland, Katherine Hodge, Rami Kablawi, Noa Soloman-Auger, and Alexandra Warminski, were trained to lead programs alongside returning facilitators Sophia Lubarr and Sarah Mason.

Four interactive field trip programs are offered to K–12 groups: Ancient Innovators, Artifact Analysis, Junior Archaeologist, and Time Travelers. Junior Archaeologist, which teaches about archaeology using the Kipper Family Archaeological Discovery Center, was the most popular facilitated program, with 50 percent of all interactive program visits. Ancient Innovators, our newest field trip offering, was the next most popular program, at 22.4 percent of interactive program visits.

Our work with Amplify, the collective of University of Chicago arts organizations who offer K–12 programming, continues to be an important venue for outreach for field trip programs. This year, 640 students from nine schools visited the OI across ten visits through an Amplify program. 11.2 percent of all student visitors came to the OI through this Amplify collaboration. In addition to visiting the OI, students on Amplify programs also took tours at the Smart Museum, Robie House, and/or with University Admissions.

This year was also the first full year of offering Field Trip Funding Applications, which allow school groups to waive or reduce fees for visits to the OI. Twenty schools had fees waived or reduced through this program out of 273 K–college visits.

PROGRAM HIGHLIGHTS

Family programs continue to be an important avenue for outreach and engagement in the Education Department. This year, youth and family programs and workshops served 1,717 children and adults, a 12.2 percent increase from last year. We focused on developing our large-scale programs, Mummies Night, the Nowruz Celebration, and Ancient Game Day, while also offering a variety of paid hands-on workshops.

In 2018, Mummies Night was funded in part by a \$1,500 grant through the Campus-Wide Inclusive Climate RFP, supported by the Vice Provost for Academic Leadership, Advancement, and Diversity. With this funding, we were able to offer a variety of high-quality activities and entertainment for families, engaging with our Egyptian collection while offering a fun, welcoming way to visit the museum (figs. 1–3). With 638 visitors throughout the three-hour event on Saturday, October 27, 2018,



this was the largest Mummies Night at the OI ever! 46 percent of visitors reported that Mummies Night was their first time visiting the OI, continuing to demonstrate the effectiveness of this event as an outreach tool. The Office of the Provost renewed their support for Mummies Night in the fall 2018 Campus-Wide Inclusive Climate RFP, this time at \$2,000. These funds will be used to maintain the many successful aspects of the program, while adding features that allow us to meet the needs of our growing audience.

The fourth annual Nowruz Celebration on March 9, 2019, also was the largest yet, attracting 275 attendees. Visitors celebrated the coming Persian New Year with tours of the Persian Gallery with museum curator Kiersten Neumann (fig. 4), a haft-seen table, Persian tea and cookies, and performances by the Donya Dance Ensemble and children from the Chicago Persian School (figs. 5–8). This event was made possible by our ongoing collaboration with the Zoroastrian Association of Chicago and the Federation of Zoroastrian Associations of North America, who provide funding, planning assistance, materials, and staff at the event. We look forward to many future Nowruz Celebrations!

A year of family programs was capped off with Ancient Game Day on June 8, 2019, during the University of Chicago's Alumni Weekend. Over 160 attendees played games like Senet, the Royal Game of Ur, and Mancala on the OI lawn (figs. 9–10). This Ancient Game Day was the largest in recent years, and it also engaged kids with a make-your-own-game activity and brought visitors into the galleries on an Ancient Fun and Games tour.

A total of eleven free drop-in programs and twelve paid hands-on workshops were offered in the 2018–19 fiscal year. Workshops offered included the ever-popular Junior Archaeologist program (which makes use of the simulated Tell in the Kipper Family Archaeological Discovery Center), Intro to Hieroglyphs, Ancient Animals, All Bones About It, and Time Travelers (fig. 11). Time Travelers, traditionally a field trip program, was again offered for the first time in several years as a paid family workshop, to great success. Time Travelers offers engaging programming for children as young as four, while programs like Intro to Hieroglyphs and All Bones About It are geared for kids ages 8 and up.

CLOCKWISE FROM LEFT: Figure 1. Docents Stephen Ritzel and Darren Vilmin lead a mummy simulation at Mummies Night. Figure 2. Docent Debby Halpern shows a tour group the Predynastic burial during a mummy tour at Mummies Night. Figure 3. Docent Carole Yoshida reads a story to a captivated audience at Mummies Night. Figure 4. Dancers from the Chicago Persian School perform onstage in Breasted Hall during the Nowruz Celebration. Figure 5. Singers from the Chicago Persian School children's choir perform a song at the Nowruz Celebration. Figure 6. Kiersten Neumann leads a tour of the Persian gallery during the Nowruz Celebration. Photos 1–3: David Turner, Photos 4–6: Steven Townshend.



In 2018, a new drop-in family program was created, *Nubia: Land of the Bow*, which spotlights the Nubian collection with tours, storytimes, scavenger hunts, and an opportunity to touch and try out replicas of Nubian artifacts. The Ancient Earth Day program was also redeveloped, offering kids and families ancient recycling-themed tours, crafts, scavenger hunts, and ancient earth-related stories (fig. 12). Both of these programs will continue to be offered in the coming year.

Another important program to be redeveloped are OI Birthday Parties. This year, a Birthday Party program was piloted, offering a celebration that included a simulated archaeological dig, mini-tour,



scavenger hunt, mummy simulation, and mummy wrap race. The pilot was a success, and we look forward to formalizing this offering in the coming year.

All of these programs could not be possible without our amazing Public Program Volunteers. In 2018, five new Public Program Volunteers joined the Education Team: Ariadne Argyros, Anna Berlekamp, Stephanie Reitzig, Luiza Silva, and Tiffany Wang. Public Program Volunteers assisted with 14 programs, serving over 1,500 OI visitors and volunteering over 220 hours. Special thanks also goes to Catie Witt and Kiersten Forsberg, PhD candidates at the University of Chicago who volunteered to be our experts at Intro to Hieroglyphs and All Bones About It, respectively. Catie Witt joined the Education Department as the

LEFT COLUMN, TOP TO BOTTOM: Figure 7. A spontaneous dance party breaks out in the aisle during a break between performances at the Nowruz Celebration. Figure 8. Dancers from the Donya Dance Ensemble perform at the Nowruz Celebration. Photos: Steven Townshend. RIGHT COLUMN: Figure 9. Kids play Senet outside the OI at Ancient Game Day. Figure 10. University of Chicago students try out a game of Mancala at Ancient Game Day. Figure 11. Facilitators Kate Hodge and Alex Warminski show animal bones to families at an Ancient Animals program. Photos: Calgary Haines-Trautman.

Education Program facilitator lead in June 2019, and Kiersten Forsberg and Stephanie Reitzig will be Education Program facilitators in the 2019–20 academic year.

OUTREACH

Offsite events continue to prove valuable for reaching audiences who may have never heard of the OI. This year, Youth and Family Programs focused on increasing our outreach efforts with a variety of programs.

In July 2018, the OI hosted a week of activities for the Millennium Park Family Fun Festival. Over 2,673 visitors came through the Family Fun Tent and had the opportunity to take part in interactive mummy simulations and a different craft each day as part of our “Inside a Mummy Workshop” program (figs. 13–14). OI Education and Membership also participated in the annual Silver Room Block Party in downtown Hyde Park, offering family activities during this popular event.

In December 2018, the OI co-hosted a booth and workshop with the Society for American Archaeology, the Archaeological Institute of America, and the Society for Historical Archaeology at the National Council for the Social Studies in downtown Chicago. The booth and workshop shared Project Archaeology materials, which offer elementary- and middle-school teachers high-quality curricula that use archaeology to teach a variety of subjects and skills. The OI engaged over 230 teachers through the conference and workshop.

In March 2019, the OI deepened its relationship with the Girl Scouts by offering activities at the Girl Scout’s annual STEMapalooza event, which celebrates girls in STEM (Science, Technology, Engineering, and Math) and showcases STEM resources and related cultural institutions throughout the city. Over seventy-five girls learned to write their name in hieroglyphs and received information about OI programs. Girl Scouts continue to be an engaged audience, often coming with their troops to OI workshops that offer fun patches for their vests.



TOP TO BOTTOM: Figure 12. A parent and child show off their recycled materials house model at the Ancient Earth Day program. Figure 13. Public Program volunteer Tiffany Wang guides a family through writing their names hieroglyphs at the Millennium Park Family Fun Festival. Figure 14. Facilitator Rami Kablawi helps a child remove the brain from our dummy mummy during a mummy simulation at the Millennium Park Family Fun Festival.

ND.
NATURELLE, PLANCHES.
TOME PREMIER.



A PARIS,
DE L'IMPRIMERIE IMPÉRIALE.
M. DCCC. IX.

VOLUNTEER PROGRAM



OVERLEAF:
Janet Helman
looks at a
volume of
*Description de
l'Egypte*.

VOLUNTEER PROGRAM

SUE GESHWENDER

Every other summer, the volunteers take a little break and are treated to “enrichment events,” which are ways of interacting with training materials differently than we do during official volunteer training. July 2018 was one of those fun enrichment periods. Volunteers watched the 1955 film *Land of the Pharaohs* and were treated to a film review by Professor Robert Ritner about what the movie got right and what it did not! In August Professor Nadine Moeller escorted groups of volunteers across campus to view select volumes of *Description de l’Egypte* from the university’s special collections at the Regenstein Library. These mammoth volumes from 1809–29 were brought out for our viewing pleasure. Volunteer Jean Nye suggested this visit to Reg during a book-club discussion of the well-liked book concerning Napoleon’s 1798 expedition to Egypt. The summer book club and visit to see these volumes sparked an interest in learning more about the Egyptian Mamluks, which resulted in a fascinating lecture by one of our NELC neighbors (a.k.a. a “modern”), Professor Ahmed El Shamsy, in September.



TOP TO BOTTOM:

Janet Helman looks at a volume of *Description de l’Egypte*.

Terry Gillespie helps out at OI summer event at Millennium Park.

Stephen Ritzel, Marilyn Murray, Dee Spiech, Kim Crawford, speaker Ahmed El Shamsy, and Lee Herbst.



VOLUNTEER PROGRAM

Fall saw us busy as usual with school field trips. We were not able to use Breasted Hall to start off tour groups for several months while it was undergoing renovations. We found that starting groups from the orientation area in the museum gets groups on their actual tour much quicker. The fall concluded with a holiday party featuring cookies and cocoa with an update on happenings at the OI from Director Chris Woods.

Monthly volunteer training days focused on the ongoing gallery enhancements. Docents got in the habit of checking the museum before each tour to stay on top of the latest changes. Research Archives and Museum Archives volunteers continue to chip away at long-term data-management projects, and Suq volunteers remain a cheerful and welcoming presence to guests. A couple of projects got underway to help document and pack Persepolis Fortification objects working with the OI's



Mummies Night! Junior league volunteer, Gabrielle Cigarroa, Stephen Ritzel, Darren Vilmin, Tippo Wang, and Rami Kablawi.

conservation department. Other special projects of note include a Volunteer Handbook revision and a clean-up and organization of publications in the vault.

The attendance at the book-club discussions continued to grow. For the first time ever, the group read a book of fiction, local author Sara Paretsky's *Shell Game*, which featured the OI. By spring we shifted our focus to heavily recruiting volunteers for the Docent Training class of 2019, who began on June 3rd and spent the rest of the summer spent immersed in the ancient Near East.

The volunteer program lost a loyal friend this year, Dalia Shefner. Dalia exemplified the true spirit of volunteerism by devoting her passion, intellect, and support to help further the goals and mission of the Oriental Institute.



TOP LEFT: November book sale organized by docent librarians Marilyn Murray, Roberto Cepeda, and Sara Lindholm. TOP RIGHT: Mike Ramberg organizes publications in the Vault. BOTTOM LEFT: Tablet packing group, Jeremy Walker, Kate Lieber, Steve Scott, and Sue Padula. BOTTOM RIGHT: Volunteer managers, past and present: Carlotta Maher, Terry Friedman, Cathy Duenas, Janet Helman, and Sue Geshwender.

VOLUNTEER PROGRAM



TOP LEFT: Research Archives, Museum Archives, and student helpers; (back row) Anne Flannery, Marge Nichols, Mike Ramberg, Gabriella Cigarroa, Emily Thibau, Cat Crofton, George Thomson, Fan Ge, Jeff Cumonow, Foy Scalf, (front row) Amy Zillman, Rosemary Ott, and Kim Crawford.

MIDDLE LEFT: Docent Training 2019.

BOTTOM LEFT: Docent class of 2019: Jonathan Teram, William Lewis, Blandine Nothhelfer, Genevieve Costello, Le Trieu Phung, Kay Holz, Rachel Mustafa, Jim Houston, Jennifer Fiedler, Barbara Jillson, Erica Granchalek, Diane Gottlieb, Jennifer Castellanos, Beverley Walter, and Philip Dittman.

TOP RIGHT: Book club members Debby Halpern, Dee Spiech, Sue Padula, Marilyn Murray, Jane Clinkert-White, Sara Lindholm, Gil Stein, Steve Wolfgang, Alice Mulberry, Catherine Brehm, Roberto Cepeda, Deloris Sanders, Irene Glasner, Janet Helman, Semra Prescott, Nancy Baum, Roberta Buchanan, and Crystal Betz.

MIDDLE RIGHT: Anne Schumacher, Jane Clinkert-White, Shirlee Hoffman, Margaret Schmid, Sara Lindholm, Janet Helman, McGuire Gibson, Jean Nye, Roberta Buchanan, Semra Prescott, Catherine Brehm, and Debby Halpern.

BOTTOM RIGHT: A crowd gathers to celebrate the annual Volunteer Recognition Ceremony.

VOLUNTEER RECOGNITION

The following volunteers celebrated milestone anniversaries:

45 Years

Terry Friedman

40 Years

Janet Helman

Mary Shea

Norma van der Meulen

35 Years

Rebecca Binkley-Albright

Cathy Duenas

Carole Yoshida

20 Years

Gabriele DaSilva

Bill Gillespie

Terry Gillespie

Debby Halpern

Lee Herbst

15 Years

Dennis Kelly

10 Years

Ray Broms

Sue Geshwender

Stuart Kleven

Craig Tews

5 Years

Joseph Barabe

Craig Bean

Elizabeth Bush

Kim Crawford

Shirlee Hoffman

Ralph Klein

Karen Righeimer

Peg Romm

Margaret Schmid

VOLUNTEERS

*indicates active Museum Docent

Luella Adan*
 Ariadne Argyros
 Joseph G. Barabe*
 Nancy Baum*
 Susan Bazargan*
 Craig Bean*
 Anna Berlekamp
 Christel Betz
 Rebecca Binkley-Albright
 Ray Broms
 John Buchanan
 Roberta Buchanan*
 Elizabeth Bush
 Joseph Calderone*
 Jennifer Castellanos
 Roberto Cepeda*
 Benjamin Chametzky*
 Merle Cherney
 Gabriella Cigarroa*
 Grace Clements
 Jane Clinkert-White
 Gabriella Cohen*
 Genevieve Costello
 Kim Crawford
 Gabriele DaSilva
 Louise Despres
 John DeWerd
 Philip Dittman
 Catherine Duenas
 Fred Eskra*
 Steve Essex*
 Makenzie Fairchild
 Jennifer Fiedler
 Margaret Foorman
 Kirsten Forsberg
 Terry Friedman
 Lauren Friesen*
 Colleen Gallagher*
 Fan Ge
 Bill Gillespie

Terry Gillespie
 Irene Glasner
 Diane Gottlieb
 Erica Granchalek
 Elizabeth Green
 Debby Halpern*
 Philip Halpern*
 Danica Hannah
 Janet Helman
 Wahied Helmy
 Lee Herbst
 Shirlee A. Hoffman*
 Kay Holz
 Jim Houston
 Katherine Jarboe
 Barbara Schubeler Jillson
 Christine Johnston
 Emily Kane
 Dennis Kelley
 Rhyne King
 Alanna Kish
 Ralph Klein
 Stuart Kleven*
 Carissa Knickerbocker
 Judith Kolar
 Kristin Leasia*
 William Lewis
 Katherine Lieber
 Sara J. Lindholm*
 Laurence Lissak*
 Carlotta Maher
 Sherry McGuire*
 Jacqueline Mendoza
 Alice Mulberry
 Marilyn Murray*
 Rachel Mustafa
 Bonnie Nelson
 Marge Nichols
 Blandine Nothhelfer
 Jean Nye*

Sue Padula*
 Amber Patania
 Mina Peak*
 Olivia Perozo
 Miranda Pettengill*
 Le Trieu Phung
 Semra Prescott*
 Olivia Puccetti
 Michael Ramberg
 Stephanie Reitzig
 Karen Righeimer
 Stephen Ritzel*
 Peg Romm*
 Deloris Sanders
 Roberta Schaffner
 Hilda Schlatter*
 Margaret Schmid*
 Anne Schumacher
 Stephen Scott*
 Mary Shea
 Toni Smith*
 O. J. Sopranos
 Dee Speich*
 George Sundell
 Jonathan Teram
 Craig Tews*
 Emily Thibeau
 George Thomson
 Norma van der Meulen
 Darren Vilmin*
 Jeremy Walker
 Beverly Walter
 Tiffany Wang
 Kayleigh Watson
 Ron Wideman
 Steve Wolfgang*
 Carole Yoshida*
 Annie Zhu



DEVELOPMENT



OVERLEAF: OI
Centennial Year
birthday party
lamassu cake. Photo:
Charissa Johnson
Photography.

DEVELOPMENT

WALLY VERDOOREN, MATTHEW WELTON, POLINA KASIAN,
AND ALI MALLETT

The Oriental Institute's development program oversees and manages all activities related to philanthropic support, membership programming, and special events. These three inter-related 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 OI development team comprises:

- Wally Verdooren, director of development
- Matthew Welton, membership program and marketing manager
- Polina Kasian, assistant director of development and events
- Ali Mallett, development associate, who joined the team in January of 2019

The OI development team works across the organization with senior administrative leaders, faculty, researchers, program staff, Advisory Council members and other volunteers, and 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

In the previous 2018–19 program year, the OI's many members and partners have generously supported our mission to heighten the scholarly understanding of the ancient Middle East through research initiatives, cultural-preservation efforts, educational programming, and the museum and collections. Contributions from the Advisory Council, annual members, 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:

- 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 is scheduled to be completed at the end of the 2019 calendar, and the OI surpassed its \$38 million goal in June 2019 and six months before the official campaign end date.
- 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 program year, the OI's leadership decided to extend its campaign period through the end of calendar year 2020, embarking on a special Centennial Campaign that has a goal of securing at least \$10 million in new gifts, pledges, and documented estate commitments from July 2018 through December 2020. This enhanced fundraising effort aims to leverage the momentum and the heightened activities and visibility of the OI's centennial

year being commemorated and celebrated throughout the 2019–20 academic year. In the first year of the Centennial Campaign, the OI is pleased to report that a total of \$4,919,675 in new gifts, pledges, and estate commitments were secured toward the \$10 million goal. 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 2017–18 \$ Amounts | FY 2018–19 \$ Amounts |
|--|-----------------------|-----------------------|
| Expendable Cash | \$1,280,203 | \$2,272,000 |
| Realized Bequests | \$387,271 | \$406,685 |
| Payments on Multi-Year Pledges | \$45,119 | \$1,348,838 |
| New Pledge Commitments | \$225,000 | \$1,839,160 |
| New Deferred Gifts and Documented Bequests | \$100,000 | \$1,600,000 |

All these philanthropic achievements during the 2018–19 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

Thanks to our dedicated member base and successful continuing efforts at new member acquisition, Oriental Institute membership has exceeded financial goals for the 2018–19 fiscal year. Member retention remains strong at over 80 percent, with new member acquisition activities resulting in a 19 percent increase over the previous year. The OI is excited to welcome our new members into a community of dedicated individuals and inquisitive supporters intent on furthering our mission to advance and communicate the research and discoveries of the ancient Middle East. Membership support enables the OI to continue to provide both free daily museum admission and free monthly lectures presented by world-renowned scholarly luminaries that are open to the community at large.

In the 2019–20 academic year, which will commemorate and celebrate the OI’s centennial, a members’ film series will be introduced to supplement our monthly lectures. This inaugural film series seeks to reach a wider audience by screening popular classic and world cinema titles as well as more recent documentaries. Supplemental programming during our film screenings will include question-and-answer sessions with filmmakers, introductions and talks by OI faculty, and moderated panels on themes presented in the films.

The upcoming academic year also will see the roll-out of online live streaming for all of our monthly OI Members’ Lectures. Live streaming from Breasted Hall will allow our members who live a distance from Chicago to view and enjoy each lecture as it happens. In addition to live streaming, OI Membership will continue to sponsor a podcast featuring discussions with OI faculty and research associates. Live streaming and our OI podcast represent a part of our continuing effort to engage with and give value to our national and international members.

The OI is grateful to and appreciative of each of our members. We are thankful for your continued advocacy and commitment to new discoveries of the ancient Middle East. Scholarly and programmatic activities during our centennial year and each of the one hundred years that preceded it have been strengthened by the support of OI members. For the previous 2018–19 program year, some of the most significant member activities included the following:

MEMBERS' LECTURES

The 2018–19 academic year was an exciting time for OI Members' Lectures. Renovations in Breasted Hall resulted in the closing of the beloved venue for four months, during which time lectures were held off-site in the nearby Social Sciences building. Despite the change of venue, OI Members' Lectures saw a dramatic increase in attendance, resulting in a number of sold-out events. Member support is directly responsible for lecturer honorariums, travel costs, reception budgets, and other logistical expenses.

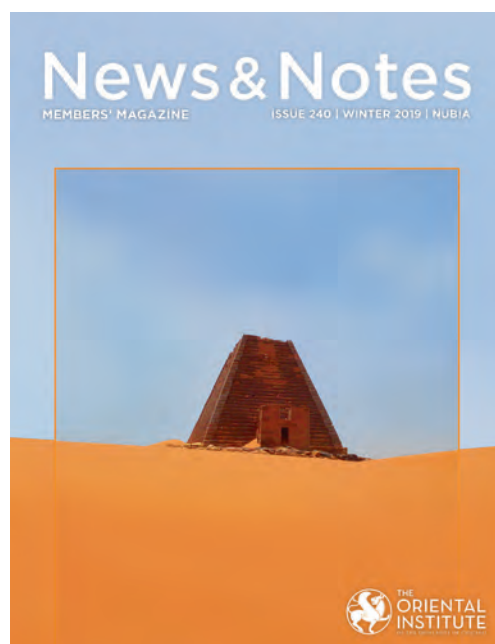
Without member support, we would not be able to provide free lectures to the general public, and now live streaming to the world at large. We thank each member for their ongoing generosity and commitment toward OI learning and education for our entire community of learners across the globe.

Our Members' Lectures for the 2018–19 academic year included:

- Stuart Tyson Smith, "Tangled Lives: Intercultural Interactions in the Nubian Borderlands" (October 7, 2018)
- Stephen Chrisomalis, "How to Choose a Number: Multimodal Variations in Ancient Written Numerals" (December 5, 2018)
- Brian Rose, "Troy and Gordion: The Historiography of Excavation at Two Legendary Sites in Anatolia" (February 6, 2019)
- Morag Kersel, "Pots from the City of Sin: The Consequences of Buying Holy Land Antiquities" (March 6, 2019)
- Karen Radner, "Assyrian Imperial Power and How to Oppose It" (May 1, 2019)



OI Members' Lecture, "Assyrian Imperial Power and How to Oppose It" (Karen Radner, May 1, 2019). Photos: Charissa Johnson Photography.



In addition to these offerings, members were also invited to attend a number of named lectures that took place at the OI during the past program year, and these special lecture programs are described in the Special Events section of this annual report. All of our OI Members' Lectures can be viewed on the OI's YouTube channel: youtube.com/jameshenrybreasted.

We would like to extend a very special thank you to each of our lecturers over this past year. The OI Members' Lecture series aims to bring a varied selection of the most recent and pioneering work and scholarship on the ancient Middle East to our members and our community. The 2019–20 Members' Lectures will celebrate one hundred years of OI exploration with a series of speakers largely comprising OI faculty and senior researchers. The 2019–20 series will begin in October 18 with a lecture by Ayelet Gilboa on ancient Israel and will culminate with a lecture by W. Raymond Johnson on the OI's continuing work in Egypt with a focus on the Epigraphic Survey at Chicago House in Luxor.

YOUNG PROFESSIONALS

The Oriental Institute'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 have proven to be 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 about the ancient Middle East while participating in exclusive educational, social, and volunteer activities with some of the world's foremost academics in their fields.

This past year the Young Professionals took part in events that included a private dinner and salon-style talk with Chris Woods in the director's office, an exploration of ancient spices, a visit to the Newberry Library to view rare texts pertaining to the decipherment of hieroglyphs, and a downtown tour of ancient Middle Eastern motifs in Chicago's art deco architecture.



The YP group strives to find ways to illuminate the ancient Middle East throughout the greater Chicago area. In addition to continued educational and cultural programming, during the upcoming centennial year, YP members will sponsor the first ever pre-Halloween event, *Mummies and Martinis*, an evening that will be both educational and social and open to YP members from various institutions across the greater Chicago area.

MEMBERS' PUBLICATIONS

News & Notes, the OI members' quarterly magazine, continues several creative changes, strengthening thematic material in each issue and fostering accessibility with creative formatting. The intention to retain a scholarly tone remains at the forefront of each new enhancement. This year also saw new thematic issues that explored the OI's continuing work in Sudan, the OI and ancient travel, manuscripts in the OI collections, and the OI's rebranding.

News & Notes is designed and produced by the OI Publications staff. Membership is grateful to the hard work, creativity, and dedication that Publications puts into each page. In addition to Publications, we would like to thank each of the faculty, staff, graduate students, and research associates who contributed to each article and thereby provided engaging and educational content for every issue.

MEMBER TRAVEL

During the 2018–19 program year, the Oriental Institute continued its tradition of providing once-in-a-lifetime informative travel opportunities with a sold-out comprehensive tour of Egypt. In November 2018, twenty-seven travelers joined OI research associate Emily Teeter on a journey through the ancient sites of Egypt. The travelers cruised the Nile, drove through the desert, and flew to distant destinations for special access and behind-the-scenes tours of current excavations and conservation efforts in operation from Cairo to Aswan. In the Grand Egyptian Museum's conservation center, the

OI participants got face to face with magnificent gold-covered chariots and funerary offerings excavated from the tomb of King Tut. Travelers received once-in-a-lifetime access to closed-off areas in a special guided tour by the current director of excavations at the Mortuary Temple of Hatshepsut, special access to the OI excavations at Tell Edfu, and special access and presentations of the OI conservation efforts at Medinet Habu and Luxor Temple. Our OI tour members bonded over their journeys and continue to meet regularly in Hyde Park and other local places for discussions on the ancient world over regular dinners.

In December 2018, several Egypt travelers joined tour leader Emily Teeter and a group of explorers farther down in Africa with an exciting and awe-inspiring trip to Sudan and ancient Nubia. OI travelers journeyed from Khartoum to camp at the base of the pyramid field at Meroe, cruise the confluence of the Blue and White Nile, and greet the day at Gebel Barkal.

A group of OI travelers went to New Haven CT for a visit to Yale University led by Professor Susanne Paulus. At Yale, OI travelers received a curator-led tour of the special exhibit, “Ancient Mesopotamia Speaks,” and they received special access to the Yale Babylonian Collection and toured the Yale University Art Gallery. In-country travel offers the unique opportunity for OI members outside of Illinois to join the OI for special one-day events in their own local communities. The 2019–20 year will see more OI travel events planned within the United States as a way to bring the OI to our members who live across the country.

OI travel programs are unique in that our tour participants experience exclusive site visits and on-site learning privileges not available 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 visit sites the OI has been excavating and researching for decades (and sometimes for almost a century). During our centennial year, OI tours will include a return to Egypt for our most comprehensive tour ever led by Emily Teeter that will feature an exploration of middle Egypt and a special Thanksgiving dinner at Chicago House in Luxor. The OI also will offer an exploration of Turkey and Greece, which marks the OI’s first tour to Crete and mainland Greece, led by the OI’s Theo van den Hout and Seth Estrin, a faculty member of the University of Chicago’s Art History Department. Our 2019–20 tours are currently sold out, but please visit the OI website for future additional travel opportunities. OI tours often sell out quickly—to be placed on our early tour notification list, please email oi-membership@uchicago.edu.

SPECIAL EVENTS

During the 2018–19 program year, the OI offered a variety of special events for members, donors, and the general public. We celebrated one hundred years since the founding date of the OI, brought our member community together with an indoor picnic, re-opened a completely renovated and updated Breasted Hall, and explored the museum as a learning collection. In addition, and with the generous assistance of OI faculty and staff, the OI organized a research fair, demon hunt, and exploration of ancient beer during the annual University of Chicago Alumni Weekend, which saw thousands of alumni return to campus. We would like to express special thanks to our generous members and donors, whose support makes the OI’s museum exhibits, programming, research, and special events possible. Please do check our website, News & Notes, and various digital notices and printed mailings for an enhanced schedule of centennial special events in the upcoming year, which will feature explorations of archaeology, history, music, film, and contemporary art. The previous 2018–19 program year included the following notable OI special events:

OI Members' Picnic

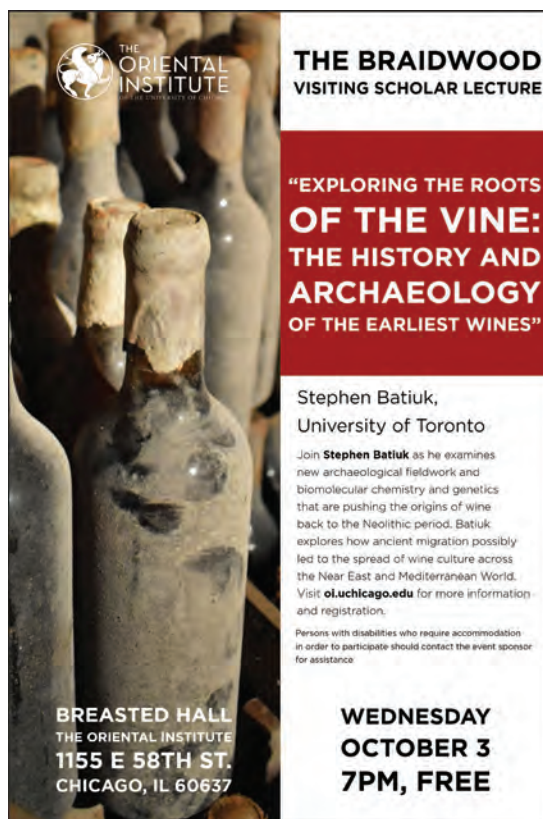
Even though rain filled the sky during our first-ever OI members' picnic at the start of the new program year on September 7, 2018, it did not stop us from moving inside and enjoying an exceptionally well-attended thank-you meal event for our members. Originally intended to be held under a tent with live music on the lawn outside of the OI building, our members moved into the galleries, lobby, and second-floor landing for tacos, burritos, enchiladas, music, and conversation.

The Braidwood Visiting Scholar Program and Lecture

Stephen Batiuk from the University of Toronto presented the Braidwood Memorial Lecture on October 3, 2018, which was titled "Exploring the Roots of the Vine: The History and Archaeology of the Earliest Wines." Stephen Batiuk's extremely well-attended lecture explored the origins of wine, the most commonly enjoyed beverage in much of the ancient and the modern world. Batiuk showed how new archaeological fieldwork, biomolecular chemistry, and genetics are helping unlock the story of wine's origins, and how one of our earliest examples of an ancient migration probably led to the spread of wine culture across the ancient Middle East and the Mediterranean world. Batiuk also provided two graduate-student workshops on his current work in Georgia and recent developments in the field of ancient archaeology. The Braidwood Visiting Scholar Program in Archaeology aims to encourage and perpetuate the educational values of Robert and Linda Braidwood, particularly their commitment to the mentorship and training of graduate students specializing in the archaeology of the ancient Middle East.

Exploring Ancient and Contemporary Georgian Wines

As a supplement to the topic of the 2018 Braidwood Visiting Scholar Lecture, the OI held a wine-tasting event exploring Georgian wines on October 18, 2018. Tasha Vorderstrasse, the OI's university and continuing education program coordinator and research associate, started the evening with a brief presentation on ancient wines, which was followed by a guided tasting of several varietals from Georgia, the birthplace of wine. The success of this wine tasting and reception has led to the planning of a regular wine-tasting series, which will be offered during the OI's upcoming centennial year.



THE ORIENTAL INSTITUTE
OF THE UNIVERSITY OF CHICAGO

THE BRAIDWOOD VISITING SCHOLAR LECTURE

"EXPLORING THE ROOTS OF THE VINE: THE HISTORY AND ARCHAEOLOGY OF THE EARLIEST WINES"

Stephen Batiuk,
University of Toronto

Join **Stephen Batiuk** as he examines new archaeological fieldwork and biomolecular chemistry and genetics that are pushing the origins of wine back to the Neolithic period. Batiuk explores how ancient migration possibly led to the spread of wine culture across the Near East and Mediterranean World. Visit oi.uchicago.edu for more information and registration.

Persons with disabilities who require accommodation in order to participate should contact the event sponsor for assistance.

**BREASTED HALL
THE ORIENTAL INSTITUTE
1155 E 58TH ST.
CHICAGO, IL 60637**

**WEDNESDAY
OCTOBER 3
7PM, FREE**

Breasted Society and Young Professionals Spice House Event

On January 24, 2019, members of the OI's Breasted Society and the Young Professionals group met at the Spice House in the Old Town neighborhood of Chicago for an event that explored the history and uses of ancient spices. The staff at the Spice House brought ancient trade to life with history and an opportunity to experience the physical properties of spices used and grown in the ancient Middle East.



Afrofuturism Seminar

On October 7, 2018, the OI hosted a seminar exploring the impact and history of Afro-Futurism and its connection to the reinterpretation of ancient Egyptian and Sudanese art and culture. This day-long event included a panel discussion led by OI researchers and scholars, a lecture about Afro-Futurism in pop art, a special showing of work by renowned Afro-Futurism artist John Jennings, and a reception in the museum galleries for all seminar participants.

Young Professionals Newberry Library Event

On February 2, 2019, the Young Professionals group met Foy Scalf, the OI's head of the Research Archives, for an exploration of the rediscovery of ancient Egypt onsite at the Newberry Library. Newberry Library curators provided special access to a variety of rare volumes integral to the rediscovery of the ancient world and the decipherment of hieroglyphs. The manuscripts were set up with a questionnaire and a workshop program led by Scalf, which allowed attendees to search the volumes and research the history and ideology of pioneers in the field of Egyptology while uncovering key images and elements in these selected original resources. After the event, the YP group continued the discussion over lunch at a downtown eatery.

Film Screening of Cleopatra

On March 24, 2019, the OI opened the newly renovated Breasted Hall with a members' screening of the classic Hollywood epic, *Cleopatra*, starring Elizabeth Taylor in the title role. This screening showcased the new audio and visual capabilities of Breasted Hall and paved the way for the OI's inaugural centennial year film series during the upcoming 2019–20 academic year.

William Sumner Memorial Lecture

On April 3, 2019, Melinda Zeder from the Smithsonian Institution presented the inaugural William Sumner Memorial Lecture. The William Sumner Memorial Lecture celebrates the life and legacy of



OI Centennial Year birthday party: lamassu cake (LEFT) and reception. Photos: Charissa Johnson Photography.

past OI director William Sumner and the OI's historic and continuing work and research in Iran. Melinda Zeder presented the lecture "What Braidwood Got Right: Rehabilitating Iran and the Eastern Fertile Crescent as a Center of Agricultural Origins." Zeder focused on the work and research of the OI's own Robert and Linda Braidwood as the starting point to a lecture that explored the shift in focus of archaeological studies of early agriculture in the western Fertile Crescent region. Zeder discussed how recent applications of new scientific methods to original collections from Robert and Linda Braidwood's OI excavations in the 1950s have changed the perception of the western Fertile Crescent as a backwater region.

OI Centennial Year Birthday Party Celebration

OI members, supporters, and volunteers gathered in the Edgar and Deborah Jannotta Mesopotamian Gallery to commemorate the OI's hundredth "birthday" and to participate in a celebratory kick-off of the OI's centennial year. The event took place on May 13, 2019, exactly one hundred years after the date on which the University of Chicago's Board of Trustees formally established the OI as the university's first interdisciplinary research center. This celebration included an impressive birthday cake in the shape of our beloved lamassu, remarks from Director Christopher Woods and several long-time OI volunteers and supporters, and a champagne toast to the history and the milestone centennial of the OI.

David A. Kipper Ancient Israel Lecture Series

On June 5, 2019, David Ilan, director of the Nelson Glueck School of Biblical Archaeology in Israel and director at Tell Dan, presented the annual David A. Kipper Ancient Israel Lecture. David Ilan's lecture, titled "The Iron Age and Origins of Israel," explored his recent archaeological work on Iron Age I and presented theories on how Israel began. This sold-out lecture had the highest-ever recorded members' lecture attendance, and Ilan offered a graduate-student workshop about the presence of ancient Egyptians in Israel on the next day.



TOP: Demon Hunt.
BOTTOM: Research Fair.

Research Fair and Alumni Weekend Events at the Oriental Institute

As a part of the University of Chicago's annual Alumni Weekend program, the OI organized a Research Fair in its galleries on June 7, 2019. Faculty and research staff presented materials on their work to University alumni and interested members, discussing their current projects with visitors. Later that same day, a joint talk and beer tasting in the Alumni Weekend beer tent explored ancient Mesopotamian brewing and was led by OI professor Susanne Paulus and Patrick Conway, owner of Great Lakes Brewing Company. The OI held a "demon hunt" throughout the galleries for interested alumni on Saturday afternoon of June 8, 2019, as part of the celebratory weekend.

Breasted Society Event: Learning in History

On June 13, 2019, members of the James Henry Breasted Society met at the OI for a program featuring several learning stations exploring the museum and research archives as Breasted's teaching collection. This event included:

- Jean Evans, the museum's chief curator, who led guided tours of the museum collection to explain the historical development of the galleries and exhibits;
- OI Egyptology Professor Brian Muhs, who presented a talk and exploration of two rarely seen Egyptian objects used by students in the ancient world;
- OI Assyriology Professor Susanne Paulus, who examined several tablets used as teaching aids for children in ancient Mesopotamia;
- Foy Scalf, research associate and head of the Research Archives, who displayed and described several influential historical research volumes still used by OI students exploring the development of ancient Middle Eastern languages, histories, and cultures.

This event concluded with a special private reception in the OI's Research Archives Reading Room.

Young Professionals Walking Tour of Chicago: The Ancient Influences in Art Deco

The OI Young Professionals joined OI alumna Cynthia Bates on a guided walking tour of several iconic buildings in downtown Chicago on June 22, 2019. Tour participants explored the exteriors and lobbies of buildings, gaining weekend access and space to focus on locating and learning about ancient Middle Eastern motifs used by artists and architects during the twentieth-century Art Deco Period.

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Advisory Council at the Centennial birthday party. Photo: Charissa Johnson Photography.

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f-donner@uchicago.edu | 773.702.9544

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m-gibson@uchicago.edu | 773.702.9525

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pgoedegebuure@uchicago.edu | 773.702.9550

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ahallmann@uchicago.edu | 773.834.7497

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hasselb@uchicago.edu | 773.834.3290

Janet H. Johnson, Morton D. Hull Distinguished Service Professor of Egyptology; Editor, Chicago
Demotic Dictionary Project
j-johnson@uchicago.edu | 773.702.9530

Nadine Moeller, Associate Professor of Egyptian Archaeology
nmoeller@uchicago.edu | 773.834.9761

Kathryn R. Morgan, Postdoctoral Scholar (2018–2020);
krmorgan@uchicago.edu | 773.702.7497

Brian P. Muhs, Associate Professor of Egyptology
bpmuhs@uchicago.edu | 773.702.9533

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jamesosborne@uchicago.edu | 773.702.0568

Dennis G. Pardee, Henry Crown Professor of Hebrew Studies
d-pardee@uchicago.edu | 773.702.9541

Susanne Paulus, Assistant Professor of Assyriology; Tablet Collection Curator
paulus@uchicago.edu | 773.702.2778

Richard Payne, Neubauer Family Associate Professor of Ancient Near Eastern History
repayne@uchicago.edu | 773.834.9897

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r-ritner@uchicago.edu | 773.702.9547

Martha T. Roth, Chauncey S. Boucher Distinguished Service Professor of Assyriology; Director and
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mroth@uchicago.edu | 773.834.2448

David Schloen, Professor of Near Eastern Archaeology
d-schloen@uchicago.edu | 773.702.1382

Gil J. Stein, Professor of Near Eastern Archaeology; Senior Advisor to the Provost for Cultural
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gstein@uchicago.edu | 773.702.4098

Sofia Torallas, Professor of Classics and Near Eastern Languages and Civilizations
sofiat@uchicago.edu | 773.702.4375

Theo P. J. van den Hout, Arthur and Joann Rasmussen Professor of Western Civilization, Hittite and
Anatolian Languages; Chief Editor, Chicago Hittite Dictionary Project
tvdhout@uchicago.edu | 773.834.4688, 773.702.9527

John Z. Wee, Assistant Professor of Assyriology
johnwee@uchicago.edu | 773.702.0131

Christopher Woods, Director; John A. Wilson Professor of Sumerology; Editor, *Journal of Near Eastern Studies*
woods@uchicago.edu | 773.834.8560

Ilona Zsolnay, Postdoctoral Scholar (2016–2018)
izsonay@uchicago.edu

ASSOCIATES

Abbas Alizadeh, Research Associate Professor; Director, Nippur and Iranian Prehistoric Projects
a-alizadeh@uchicago.edu | 773.702.9531

Mark Altaweel, Associate; Nippur Project; Nippur and Umm al-Hafriyat Project
tcnma3@ucl.ac.uk

Annalisa Azzoni, Associate, Persepolis Fortification Archive Project
annalisa.azzoni@vanderbilt.edu

Richard H. Beal, Senior Research Associate, Chicago Hittite Dictionary Project
r-beal@uchicago.edu | 773.702.9527

Tawfiq Da'adli, Associate, Sinnabra Archaeological Program
tawfikd@gmail.com | 972(0)52-2404829

Elsbeth R. M. Dusingberre, Associate, Persepolis Fortification Archive Project

Geoff Emberling, Associate, Oriental Institute Nubian Expedition
geoffe@umich.edu

Jean M. Evans, Deputy Director and Chief Curator, Museum; Research Associate, Nippur Project
jmevans@uchicago.edu | 773.702.9863

Gertrud Farber, Associate, Sumerian Lexicon Project
g-farber@outlook.com | 773.702.9548

Mark Garrison, Associate, Persepolis Fortification Archive Project
mgarriso@trinity.edu

François Gaudard, Associate; Associate Editor, Chicago Demotic Dictionary Project;
Coeditor, Mummy Label Database Project
fgaudard@uchicago.edu | 773.702.9528, 773.702.9528

Emily Hammer, Associate
ehammer@sas.upenn.edu

Lisa Heidorn, Associate, Oriental Institute Nubian Expedition
l.a.heidorn@uw.edu.pl

Wouter Henkelman, Associate, Persepolis Fortification Archive Project
wouterhenkelman@gmail.com

Austin “Chad” Hill, Associate, Galilee Prehistory Project
dentedachiii@gmail.com

Carrie Hritz, Associate, Nippur Survey Project
carriehritz@gmail.com

FACULTY, ASSOCIATES, AND STAFF

W. Raymond Johnson, Research Associate Professor; Field Director, Epigraphic Survey
wr-johnson@uchicago.edu
773.793.6525

Charles E. Jones, Associate, Persepolis Fortification Archive Project
cej14@psu.edu

Morag M. Kersel, Associate, Galilee Prehistory Project
mkersel@depaul.edu | 773.702.0086

Mark Lehner, Associate, Giza Plateau Mapping Project
marklehner@aol.com | 773.702.9514

Grégory Marouard, Research Associate, Egyptian Settlements and Harbor Archaeology, Dendara Project, Tell Edfu Project, and Kom ed-Dahab Survey
marouardg@uchicago.edu | 773.834.4270

Gregory McMahon, Associate, Çadır Höyük Project
gregory.mcmahon@unh.edu

J. Brett McClain, Research Associate; Chicago House Assistant Director, Senior Epigrapher, Epigraphic Survey
jbmcclai@uchicago.edu | 773.702.9524

Carol Meyer, Associate, Oriental Institute Nubian Expedition
cam5457@msn.com

Kiersten Neumann, Curator, Museum; Research Associate; Communications Associate
neumann@uchicago.edu | 773.834.8950

Artur Obluski, Associate, Qasr el-Wizz Publication Project
artur_obluski@yahoo.com

Rana Özbal, Associate, Tell Kurdu Project
rozbal@uchicago.edu

Marina Pucci, Associate, Chatal Höyük Publication Project
marina.pucci@unifi.it

Clemens D. Reichel, Associate, Diyala Project, Hamoukar
clemensr@rom.on.ca | 416.586.7938

Seth Richardson, Editor, Journal of Near Eastern Studies; Associate
seth1@uchicago.edu | 773.702.9592

Yorke M. Rowan, Research Associate Professor; Director, Galilee Prehistory Project; Director, Eastern Badia Archeological Project
ymrowan@uchicago.edu | 773.702.0086

Foy Scalf, Research Associate; Head of Research Archives
scalffd@uchicago.edu | 773.702.9537

Geoffrey D. Summers, Associate, Kerkenes Project
summers@metu.edu.tr

Emily Teeter, Associate
eteeter@uchicago.edu

Joanna Then-Obluska, Associate, Oriental Institute Nubian Expedition
j.then-obluska@uw.edu.pl

Donald Whitcomb, Research Associate Professor, Islamic and Medieval Archaeology
dwhitcomb@uchicago.edu, d-whitcomb@uchicago.edu | 773.702.9530

Bruce B. Williams, Associate, Oriental Institute Nubian Expedition
wecurb1@gmail.com

Karen L. Wilson, Associate
wilsonk94@yahoo.com | 773.702.3526

Richard Zettler, Research Associate
rzettler@sas.upenn.edu

STAFF

Keli Alberts, Artist, Epigraphic Survey
kelialberts@hotmail.com

Susan Allison, Associate Registrar, Museum
srallison@uchicago.edu | 773.702.3513

Alain Arnaudies, Digital Archives Database Specialist, Epigraphic Survey
arnaudies@laposte.net

Emmanuelle Arnaudies, Egyptologist, Digital Archives Database Specialist, Epigraphic Survey
taaptah@gmail.com

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bpbulger@uchicago.edu | 773.834.9886

Rebecca Cain, Assistant Editor, Publications Office
rebeccacain@uchicago.edu | 773.702.5967

Jennifer Castellanos, Assistant Manager, Suq
jcastellanos1@uchicago.edu | 773.702.9509

D'Ann Condes, Assistant Director of Administration and Finance (retired October 31, 2019)
dcondes@uchicago.edu

Alexandra Cornacchia, Editorial Assistant, Publications Office
acornacchia@uchicago.edu | 773.702.5967

FACULTY, ASSOCIATES, AND STAFF

Vick Cruz, Visitor Services and Security Manager
vick.cruz@uchicago.edu | 773.702.5112

Laura D'Alessandro, Head, Conservation Laboratory, Museum
lada@uchicago.edu | 773.702.9519

Margaret De Jong, Senior Artist, Epigraphic Survey
mdejong98ch@hotmail.com | 773.702.9524

Christina Di Cerbo, Epigrapher and Egyptologist, Epigraphic Survey
tinadicerbo@hotmail.com | 773.702.9524

Anne Flannery, Head of Museum Archives
asflanne@uchicago.edu | 773.702.9924

Nate Francia, Finance and Grants Administrator
nmfrancia@uchicago.edu | 773.834.0451

Alejandro Gallego López, Field Director, NMA Project, Afghanistan
agallegolopez@uchicago.edu | +93 793718058, (cell) +34 647071889

Sue Geshwender, Volunteer Manager, Public Education
geshwender@uchicago.edu | 773.702.1845

Christian Greco, Epigrapher, Epigraphic Survey
christian.greco@museoegizio.it

Samir Guindy, Administrator, Epigraphic Survey
samsgu1952@hotmail.com

James M. Gurchek, Associate Director of Administration and Finance
jgurchek@uchicago.edu | 773.702.1404

Calgary Haines-Trautman, Youth and Family Program Coordinator, Public Education
calgary@uchicago.edu | 773.702.1158

Lotfi Hassan, Senior Conservator, Epigraphic Survey
hslotfi@gmail.com | 773.702.9524

James B. Heidel, Architect/Artist, Epigraphic Survey
jbheidel@gmail.com | 773.702.9524

Anait Helmholz, Head Librarian, Epigraphic Survey
anaithelm@gmail.com | 773.702.9524

Frank Helmholz, Master Stonemason, Epigraphic Survey
frankhelmholz8@gmail.com | 773.702.9524

Richard Jasnow, Epigrapher Consultant, Epigraphic Survey
rjasnow@jhu.edu | 773.702.9524

Charissa Johnson, Managing Editor, Publications Office (from January 1, 2019)
crjohnson@uchicago.edu | 773.702.5967

Hiroko Kariya, Project Conservator, Epigraphic Survey
hkariya8@gmail.com | 917.216.3584

Polina Kasian, Assistant Director of Development and Events
pkasian@uchicago.edu | 773-834-9775

Jen Kimpton, Epigrapher, Epigraphic Survey
jkimpton@uchicago.edu | 773.702.9524

Yarko Kobylecky, Photographer, Epigraphic Survey
museumphoto@hotmail.com | 773.702.9524

Susan Lezon, Photo Archivist and Photographer, Epigraphic Survey
suelezon@gmail.com, lezonse@plattsburgh.edu | 773.702.9524

Jill Carlotta Maher, Assistant to the Director, Epigraphic Survey
jillcarlottamaher@yahoo.com | 773.702.9524

Samwell Maher, Assistant Administrator, Epigraphic Survey
samwell.maher@hotmail.com | 773.702.9524

Ali Mallett, Development Associate
malletta@uchicago.edu | 773.834.3817

Helen McDonald, Registrar, Museum
helenmcd@uchicago.edu | 773.702.9518

Hilary McDonald, Digital Photographer, Epigraphic Survey
hilarymcdonald@gmail.com | 773.702.9524

Owen Murray, Digital Photographer, Epigraphic Survey
omurray@ommphoto.ca | 773.702.9524

Dominique Navarro, Artist, Epigraphic Survey
dominiquenavarro@yahoo.com | 773.702.9524

Susan Osgood, Senior Artist, Epigraphic Survey
susanosgood2011@gmail.com | 773.702.9524

Mariana Perlinac, Executive Assistant
oi-administration@uchicago.edu | 773.834.8098

Conor Power, Structural Engineer, Epigraphic Survey
conorpower@msn.com | 773.702.9524

Miller Prosser, Research Database Specialist, OCHRE Data Service
m-prosser@uchicago.edu | 773.702.1352

Martina Roshdy Maher, Assistant Librarian, Epigraphic Survey
martina.roshdy@outlook.com | 773.702.9524

Gina Salama, Digital Data Engineer, Epigraphic Survey
ginagamill@icloud.com | 773.702.9524

Essam El Sayed, Finance Manager, Epigraphic Survey
essam_nadosb@yahoo.com | 773.702.9524

Sandra Schloen, Manager, OCHRE Data Service
sschloen@uchicago.edu | 773.702.1352

Julia Schmied, Blockyard and Archives Assistant/Epigrapher, Epigraphic Survey
julia.schmied@gmail.com | 773.702.9524

Ariel Singer, Epigrapher, Epigraphic Survey
awksinger@uchicago.edu | 773.702.9524

FACULTY, ASSOCIATES, AND STAFF

Elinor Smith, Photographic Archives Registrar, Epigraphic Survey
elliesmith34@gmail.com | 773.702.9524

Emily Smith, Editorial Assistant, Publications Office
emsmith1@uchicago.edu | 773.702.5967

Amanda Tetreault, Photographer, Epigraphic Survey
amandamtetreault@gmail.com.com | 773.702.9524

Steve Townshend, Editor, Publications Office (from January 14, 2019)
steventownshend@uchicago.edu | 773.702.5967

Josh Tulisiak, Manager, Exhibition Design and Production
tulisiak@uchicago.edu | 773.702.9516

Thomas G. Urban, Editor, Publications Office (retired from Managing Editor on November 15, 2018)
turban@uchicago.edu | 773.702.5967

Wally Verdooren, Director of Development
wverdooren@uchicago.edu | 773.702.5062

Krisztián Vértés, Senior Artist for Digital Drawing, Epigraphic Survey
krisztian.vertés@gmail.com | 773.702.9524

Tasha K. Vorderstrasse, University and Continuing Education Program Coordinator
tkvorder@uchicago.edu | 773.702.0788

Matthew Welton, Membership and Marketing Program Manager
mwelton@uchicago.edu | 773.834.9777

Johannes Weninger, Assistant Stone Mason, Epigraphic Survey
johannesweninger@yahoo.com | 773.702.9524

Alison Whyte, Associate Conservator, Museum
aawhyte@uchicago.edu | 773.702.5181

— NOTES —

[illegible]

INFORMATION

THE ORIENTAL INSTITUTE
1155 EAST 58th STREET | CHICAGO, IL 60637

Social Media:

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OI CONTACT INFORMATION

Administrative Office | oi-administration@uchicago.edu | 773.702.9514
Archaeology Laboratory | 773.702.1407
Computer Laboratory | 773.702.0989
Conservation Laboratory | 773.702.9519
Department of Near Eastern Languages and Civilizations | 773.702.9512
Demotic Dictionary Project | 773.702.9528
Development Office | oi-development@uchicago.edu | 773.834.9775
Director's Office | 773.834.8098
Epigraphic Survey | 773.702.9524
Facsimile | 773.702.9853
Hittite Dictionary Project | 773.702.9527, 773.834.4688
Journal of Near Eastern Studies | 773.702.9592
Membership Office | oi-membership@uchicago.edu | 773.702.9513
Museum | oi-museum@uchicago.edu | 773.702.9520
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Volunteer Office | oi-volunteers@uchicago.edu | 773.702.1845

EASTERN BADIA ARCHAEOLOGICAL PROJECT (EBAP): 2018 AT WISAD POOLS*

YORKE ROWAN

The Eastern Badia Archaeological Project (EBAP) began investigations at Wisad Pools in 2008 and 2009 when our small team focused on surveying the area, recording the locations of chipped stone concentrations, structural features, and petroglyphs. Our multiyear project alternates exploration of Wisad Pools and the Wadi al-Qattafi region.

The survey seasons at Wisad in 2008 and 2009 demonstrated that while the core of the area was about 1.5×1 km, the greater vicinity contained structures across a region measuring approximately 4 km N-S \times 3.5 km E-W (Rollefson, Rowan, and Wasse 2008, 2011, 2014). In the core area, we recorded more than five hundred structures using handheld GPS devices. We originally assumed many of these to be mortuary structures, alongside the many animal enclosures and smaller hut-like buildings.

In 2011 we undertook the first excavations at Wisad. Assuming that we were investigating a tomb preserved to a height of about 1.5 m, we soon realized that what we were excavating was not a burial structure at all, but a corbeled building with a central standing stone (W-66). Patches of gypsum plaster floor were preserved, and an alcove on the edge above the interior floor had at least four different plastering episodes. From these plaster layers, a radiocarbon date of 6530 \pm 70 cal BC confirmed the Late Neolithic dates indicated by arrowheads and a Yarmoukian ceramic vessel sherd. The central standing stone presumably supported a low corbelled roof, and a cache of basalt pestles was found tucked under the wall (Rollefson, Rowan, and Perry 2011; Rollefson, Rowan, Perry, and Abu-Azizeh 2012). This structure was our first indication that the many collapsed structures at Wisad Pools might not be mortuary in nature, but used for living and working.

In 2013 we initiated excavations of W-80. Initially, W-80 appeared to be a large mound of basalt blocks approximately 12 m in diameter preserved to a height of 1.94 m above local ground level. Visible in the collapse of the basalt slabs was a wall alignment 3 to 4 courses high that was mostly curved, but that also had a rectilinear section on the eastern side of the mound. This proved to be a much later tomb constructed on top of the earlier Neolithic structure below. To the west of the mound, an arc of basalt slabs set on edge formed a semicircular wall that enclosed a forecourt of the structure. Our crew was larger than in 2011, and we were able to move an immense amount of both basalt and sediment. Nevertheless, the size of the mound was such that we were not confident that we could excavate the entire building in a single season, so we focused on the southern half, leaving the northern portion of the structure as a stratigraphic control and for future investigations.

In 2014 we concentrated on excavating the northern half, following natural, cultural, and arbitrary archaeological layers/levels. The interior of the visible walled part of the mound was filled with basalt blocks of varying sizes, ranging from several tens of kilograms up to a half ton. An upper wall was part of a tomb, disturbed (perhaps looted) in the past. Although there were human bones in the sediment, they were no longer articulated, and quickly disintegrated. In addition to the artifacts recovered from the 2013 season, in 2014 we recovered a bronze arrow point, a silver (?) ring or earring, a copper finger ring, two more cowrie shell beads, and more carnelian beads. Based on parallels

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to these finds, we now believe that the age of the burial remains is probably early Iron Age (Rowan et al. 2015a, 2015b), further supported by the technical analysis of a glass bead (Dussubieux et al. 2018).

Below this mortuary use of W-80, we continued to expose architecture. As was the case of W-66 excavated in 2011, the structure seemed to be used after it collapsed, perhaps as a windbreak for various tasks (butchering, flint knapping, and bead production). Some of the collapsed roof slabs were set on edge to subdivide the area inside the house walls, and one alcove was created in the southwestern corner of the building for some as yet unknown purpose. A low bench or platform was also installed along the interior of the southern wall. But the building no longer served as a residence in view of the amazingly rich amount of animal bone in the sediments; the faunal remains included a considerable focus on gazelle, but larger animals such as onager and *Bos* were also present in addition to small amounts of domesticated sheep/goats. Of interest is the relative importance of bird bones and gizzard stones, possibly suggesting that the occupation of Wisad extended into the spring migration period from Africa to Eurasia. Other activities carried out in the windbreak included grinding (based on many grinding stones, including a cache of three massive basalt pestles in one niche), bead manufacture, and stone tool manufacture (including the production of arrowheads, knives, and scrapers).

Below this last use of the collapsed structure, excavation revealed an elaborate complex that underwent a series of renovations and changes to the earliest use of the building. Large grinding slabs with “cupmarks” were especially prevalent in the northern half of the building. Arrowheads were numerous, particularly transverse arrowheads (almost 90 percent of the recovered arrowheads). Several hundred cores clearly indicate that stone tool production was a major pastime in this structure, with drills and borers being especially popular, as were endscrapers, sidescrapers, cortical scrapers and knives, and denticulates and notches.

It seems likely that this was a corbelled house, in part, that parallels the somewhat similar dwelling W-66, dug in 2011 (Rollefson et al. 2012), although W-80 is much larger and more multifaceted (fig. 1). A west-facing doorway (e) was located, leading from the interior of the structure onto a small “porch”-like area (f) that may have been an outdoor food processing (suggested by grinding stones) area protected from the wind by a low wall of basalt slabs set on edge. The porch itself was also surrounded by a walled compound or forecourt (g) farther to the west.

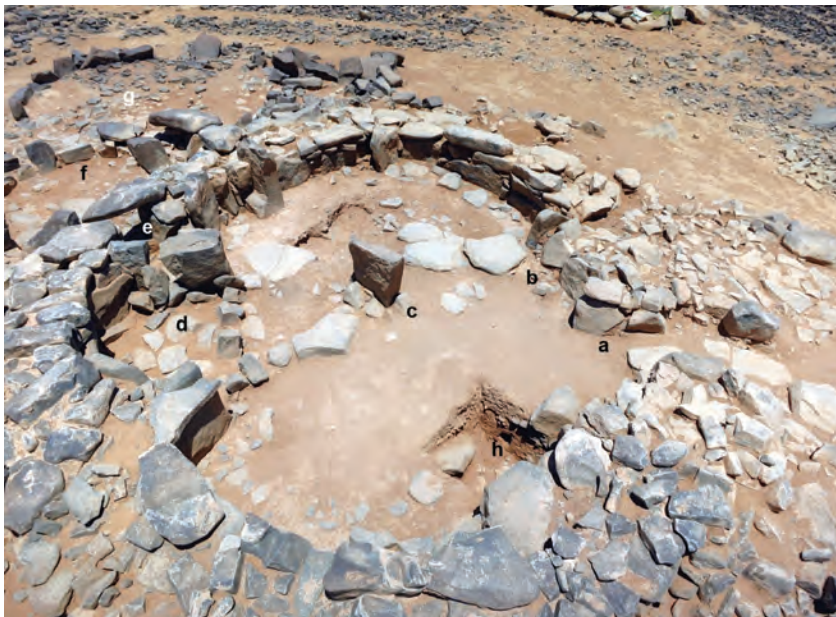


Figure 1. Overhead view of W-80 (view to northwest): (a) eastern doorway, (b) blocking of the opening in the north wall, (c) central pillar, (d) the alcove, (e) the western doorway leading to (f) the porch, (g) the western forecourt, and (h) sondage.

THE 2018 SEASON AT WISAD POOLS

The primary objective of the 2018 season was to continue the excavation of structure W-80, hopefully to the earliest phases of occupation and building. In addition, we hoped to investigate a pen and house structure, a feature quite different to W-80 and W-66, but potentially similar to features examined at Wadi al-Qattafi. This was done to examine whether or not hut and enclosure compounds appear relatively late in the Late Neolithic sequence, as proposed by Betts et al. (2013, 189). For this, we selected a structure designated W-400, 600 m to the north of W-80.

We were unable to reach the earliest floor of the original W-80 structure in 2014, and so our objective for the 2018 season was to complete the excavation of the interior cultural deposits, and hopefully examine other aspects of building and reconstruction of the structure, including exterior additions. Initially, this seemed a simple task, but the deposits and complexity of W-80 continue to surprise us.

Our initial aim was simple: to complete excavation of the structure by careful removal of what was believed, on the basis of a 1 × 1 m sondage excavated in 2014, to be the final 20–30 cm of cultural deposit remaining within W-80 above the natural, sterile sediment. However, it rapidly became clear that these last remaining cultural deposits were associated with an earlier Late Neolithic phase of the structure that had undergone considerable architectural modification prior to the accumulation of the later Late Neolithic deposits excavated in 2013 and 2014, especially in the area of the two doorways. The first task of the 2018 season was therefore to determine the architectural layout and extent of W-80 in its earlier Late Neolithic iteration before the deposits of that phase could be removed. A 1 × 1 m grid was dropped into the structure, and excavation proceeded by subdividing the single-context record into 1 × 1 m squares excavated in 5 cm spits. As has been the case since 2013, all sediment was dry-sieved through a 5 mm mesh. Numerous flotation samples were also taken.

This substantial structure was repeatedly occupied, abandoned, modified, and rebuilt over a prolonged period. No two sections of wall were built exactly alike, and in the later stages of use, the internal space of W-80 was increasingly subdivided. In some cases, deep cuts were made into earlier deposits in order to erect internal dividing walls using substantial upright basalt slabs. These reconstructions and mixing of deposits make it difficult to understand the sequence of building and changes across the structure. Nonetheless, after three seasons working on the structure, some general observations about the stratigraphy and phasing is possible.

Our first order of business was understanding the doorway on the northeast, exposed in 2014. The narrow (ca. 70 cm wide) entrance is associated with the later phases of the structure and was apparently created by blocking a much wider entrance (ca. 2.4 m), possibly paved (fig. 2). On the outside section of this blocking, a partially paved activity area (or platform) seemed to be used as a work area. When this blocking wall was removed, a large, pierced mother-of-pearl pendant was found secreted at the base of the narrow, later Late Neolithic entrance (fig. 3).

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, stone-lined hearths, fire-cracked rock, 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. The abundance of ashy refuse in the interior suggests that refuse disposal may not have been a priority, possibly reflecting relatively intermittent use and concomitantly low site-occupation intensity (Munro 2004, S7). 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.



Figure 2. View of later phase entrance to W-80, narrowed by blocking stones behind the meter stick. Platform visible behind blocking stones on the northeast exterior.



Figure 3. Perforated mother-of-pearl pendant, found tucked behind northwest jamb of doorway. Photo: G. O. Rollefson.

Within W-80, a substantial irregular pit containing a large number of equid cranial fragments and teeth was cut through the early LN / later LN deposits in the area between the southwest doorway and central pillar. This pit was at least secondarily associated with the erection or underpinning of the central pillar and north wall of the alcove (Rollefson et al. 2013, 12, figs. 6, 7a) and is one reason for our imperfect understanding of whether or not these architectural elements were part of the early LN / later LN structure. Hopefully additional radiometric samples will shed light on the matter.

There is good evidence (Rowan et al. 2015a, fig. 5) to suggest that a corbelled basalt-slab roof existed over at least part of the southeastern quadrant of the structure during this phase, probably utilizing the central pillar as a support. It seems unlikely this extended over the

entire structure, suggested by the lower volume of potential roofing slabs in the north half. Nevertheless, it does seem probable that—at the very least—a cantilevered overhang of large basalt slabs existed around the internal perimeter in this area. Such a construction would have provided shelter from the elements for stored items.

Paving seems to characterize the later phases of the building, although earlier paving may have been removed and repurposed. Paved areas or low benches were built along the northern and south-eastern internal wall perimeter (Rollefson, Rowan, and Wasse 2013, 12, figs. 6, 7b) of the main structure. External areas such as the “porch,” the alcove, and the area inside the southwest entrance all seemed roughly paved.

Whether or not there was an intervening lapse in occupation before the later LN activity remains unclear. Moreover, we remain uncertain how long it endured, or if occupation was continuous or intermittent. Two radiometric dates are attributed to this phase: 5765–5670 cal BC from a fire pit southwest of the central pillar; and 5710–5570 cal BC from a slightly later subphase (Rollefson et al. 2018, tab. 2). This later phase began with remodeling of the building that included the narrowing of the main northeast doorway (Rowan et al. 2015a, 4, 6, fig. 12) and possibly the narrow, secondary doorway on the southwest side. That secondary doorway provided access to the external area that we often referred to as the “porch,” with the in situ cupmark on a grinding slab in the center (Rollefson, Rowan, and Wasse 2013, 12, figs. 6, 9b). The “porch” in turn, leads to the larger west enclosure. We still must establish the relationship with these external areas to the phases of building.

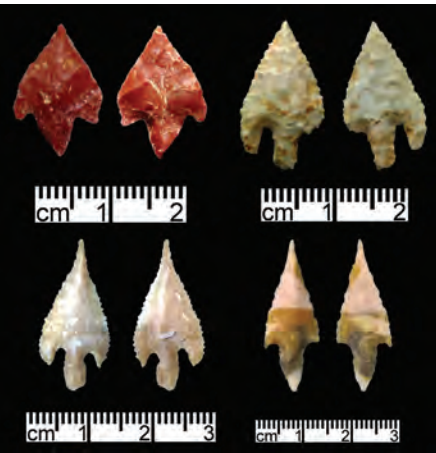
Considerable careful work was done around the central standing stone in the interior of W-80. Buttressing stones were certainly placed around its base at the start of the later Late Neolithic phase, suggesting that the standing stone was part of the earliest Late Neolithic architectural plan, maintained through centuries of interior use and rebuilding. What was discovered, however, was a foundation deposit directly under the buttressing stones. This consisted of multiple gazelle mandibles and cranial fragments placed carefully at the base of the standing stone (fig. 4).

In an intriguing twist, it was discovered in the final days of the 2018 season that the earlier Late Neolithic deposits within W-80 do not represent the earliest phase of the structure. Separated from these deposits by 10–15 cm of aeolian deposit and in-washed natural, likely representing a temporary abandonment of the structure, was an underlying, very substantial paved surface, consisting of smooth basalt slabs, some up to 1 m in length. Some of these slabs underlay the base of the interior face of the southeast wall of W-80 by up to 18 cm and, indeed, seemed to run under those wall slabs. The relationship of this paved surface to the structural components of W-80 exposed so far remains to be determined.

Analysis of the chipped stone assemblage by Gary Rollefson suggests that over eight



Figure 4. Deposit of gazelle cranial elements and mandibles at base of central pillar. Note typical disturbance by *Polyphylla* sp. beetle larvae. Photo: B. Heidkamp.



LEFT: Figure 5. Haparsa points from W-80. RIGHT: Figure 6. Red ochre block found immediately inside the W-80 northeast doorway. Photos: G. O. Rollefson.

hundred formal tools were recovered during the 2018 season at W-80. Blanks for formal tools are predominantly manufactured from blades and bladelets, while flakes make up the majority of other blanks. A small number of formal tools were made on older recycled flakes and cores. Projectile points are a substantial percentage of formal tools, yet fewer than the upper layers of the structure excavated in 2013 and 2014. Still, like those later phases, two thirds of the arrowheads are transverse arrowhead types, a form not found at the Wadi al-Qattafi structures excavated by EBAP. Haparsa arrowheads were the most common, non-transverse form (fig. 5). Other tool types, particularly burins, drills, and scrapers are represented in low to medium levels, which Rollefson points out is consistent with the samples from the earlier excavations. Additional details about the chipped stone assemblage from 2018 will be available in the upcoming publication in *Neo-Lithics*.

As in past seasons, handstones dominate the ground stone assemblage excavated in 2018. At W-80, the highest relative frequency of ground stone items (44 percent) is also handstones made of basalt. Grinding slabs and grinding slabs with a cupmark, also of basalt, are next in terms of frequency. Nonetheless, the very large grinding slabs with central cupmark are less common as in the later phases of the structure. A small percentage of ground stone artifacts from W-80 are not made of basalt. Smaller, thin-worked pieces of sandstone, about 14 percent of the ground stone assemblage from 2018, appear to be palettes or small ground stone fragments.

A few finds are notable. One is a particularly large block of red ochre (fig. 6) that weighs 580 gm. Not only is this large, but this has numerous broad negative flake scars on both surfaces. Ochre potentially serves a variety of purposes, from hide tanning to polishing decorative objects and as a mastic for hafting stone tools. Another special find is the perforated plaque of mother-of-pearl mentioned above. Although fragments are commonly recovered at Wisad, the nearly complete state and the hidden nature of its find spot suggests something special to the original owner(s). A similar object, identified as *Unio* sp. freshwater mussel of similar dating was recovered at El Kowm 2 in the Syrian steppe (Stordeur 2000, 201–11, fig. 2a, 304, fig. 1).

The placement of these finds underscores a phenomenon that has been noted since excavation started in 2013, the intentional deposition of specific items, particularly relative to the entrance and the central pillar. The ochre, for example, was discovered set vertically immediately inside the doorway. Nearby, the mother-of-pearl pendant was set in the wall adjacent to and slightly above the same threshold. Somewhat higher (ca. 18 cm) than the red ochre, a cache of gazelle astragalae (Rowan et al. 2015a, 6, fig. 11a) were recovered, clearly cached next to the doorway. A similar cache

of gazelle/caprine astragala was deposited at the base of the pillar (Rowan et al. 2015a, 6, fig. 11b), where the earlier gazelle cranial fragments and mandibles were discovered (fig. 4). In this area a polished macehead fragment and bone spatula were also recovered. These deposits were not only intentional, but established in specific places within the structure, and places that endure through time because they were not all in the same phase or stratum.

W400

Due to the primary focus of work on W-80, our excavations at W-400 were limited in scope (fig. 7). This complex was selected because it was an unlooted, smaller building attached to an animal pen—a configuration we identified during our research along Wadi al-Qattafi (Wasse et al. 2012). Figure 7 shows the sectioned structure, with northern excavated area and minimal collapsed basalt slabs, indicative of a much more modest structure than W-80. Only a relatively small amount of sediment was excavated, and the number of chipped stone artifacts was low. They included two Badia points and a bifacial seam knife (fig. 8), the latter a close parallel to one from Late Neolithic Dhuweila (Betts et al. 1998, fig. 4.28: 1). Small finds were also limited in number, but included clinopyroxene spheres, carnelian chunks, Dabba marble fragments, a small fragment of red ochre, and two stone beads.

Although the material recovered from W-400 is indicative of a Late Neolithic date for this structure, whether this structure is contemporary with, or overlaps with the other LN structures (W-80, W-66), remains to be determined. The two Badia points hint at closer affiliation with the sites at Wadi al-Qattafi (Rollefson et al. 2016, table 2, fig. 7, 2017, table 5, fig. 7c–d), and the attached enclosure hints at use by herders. The distance of W-400 some distance north of the pools is perplexing; whether herders or hunters, one would assume close proximity to the water in the pools would be of key interest. Perhaps that space was occupied? This is a question we hope to answer with additional dates and excavation.

Our understanding of the Late Neolithic in the Black Desert has been transformed since launching the EBAP ten years ago. The situation at Wisad Pools indicates that the development of pastoral-hunting exploitation of the desert/steppe area was far from tentative. Combined with the Eastern



LEFT: Figure 7. Overhead view of W-400, looking north. Pen, attached to structure, is to right of photo. Photo: Y. M. Rowan. right: Figure 8. (a), (b) Badia points from W-400, and (c) bifacial seam knife from W-400. Photo: G. O. Rollefson.



Badia Archaeological Project's investigation of the pastoral settlements among the mesas in 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. We are increasingly convinced that the changes at Wisad Pools and Wadi al-Qattafi are not idiosyncratic desert shifts, but reflect much wider regional processes extending from upper Mesopotamian and Levantine desertic space. Indeed, our evidence is increasingly suggestive that Wisad Pools and Wadi al-Qattafi, rather than backwater margins, may have been on the crossroads of the steppe and important nexuses for cultural exchange during at least part of the Late Neolithic.

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