# News&Notes

THE
ORIENTAL
INSTITUTE
OF THE UNIVERSITY OF CHICAGO

# FROM THE DIRECTOR'S STUDY

**T**he Oriental Institute researchers work across the Near East to uncover previously unknown ancient sites or archives and inscriptions. However, this is only one kind of discovery. The other way that our researchers expand our knowledge of ancient civilizations is through innovative applications of theory and analytical methods — what we could call "new ways of seeing."

Petra Goedegebuure's article "Hittite Anatolia: Cornucopia of Cultures in Contact" shows how new approaches to the comparative analysis of Hiero-glyphic Luwian and Hittite texts can give us a completely new perspective on the ways that different cultural groups in Anatolia interacted during the second millennium BC. We have known for some time that Hittite and Luwian people lived together in the same communities. However, until recently we could only speculate about the nature of cultural relations between these groups. Now, through close comparison of Luwian and Hittite texts, scholars can show that Hittite and Luwian speakers were both almost certainly fully bilingual, and that each spoken language influenced the written language of its counterpart.

Similarly Ilona Zsolnay's article "Seen, not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts" describes our thirteenth annual post-doctoral conference. This international workshop focused on a different way of seeing logosyllabic writing systems across the ancient world. Writing reflects spoken language. But, at the same time it functions as a visual system of communication, where elements of script, context, and interaction with iconographic elements can convey meanings that go far beyond the core function of representing spoken words.

Yorke Rowan's article "The Black Desert of Eastern Jordan" takes us to the forbidding landscape of basalt capped mesas on the fringes of the Arabi-an desert. One would reasonably expect that almost no one would have lived in this arid region in the past. However, through innovative use of systemat-ic drone photography on a regional level, the OI's Eastern Badia Research Project has discovered a wide variety of settlements, corrals, and enormous stone wall features ("desert kites") that were used to hunt the great herds of gazelle and onager that once migrated across the area. This new way of seeing revealed a complex landscape inhabited by herders and hunters for thousands of years, from Neolithic times onward.

On a personal note, this is my final *News & Notes* column as Oriental Institute Director. This summer I will be stepping down from the directorship to return to my archaeological work as a professor at the OI. In my fifteen years of service it has been a pleasure to help introduce our members and supporters to the innovative research of the OI through this truly wonderful and informative magazine.

Gil J. Stein, Director

## In This Issue

*On the Cover: Tell Ta'yinat inscrip-tion with the name wa/i-la/i-sà-ti-ni- (Walistin-). D. 00915. OIM A27861d–h*

# ONE MAN'S TRASH IS ANOTHER MAN'S TOOL
## A Seal Cutter's Practice Piece from Mesopotamia

*BY* KIERSTEN NEUMANN

During excavations of the ancient Sumerian city of Adab, the modern site of Bismaya in southern Iraq, the University of Chicago expedition discovered this modest clay fragment that, as it happens, says a good deal about the practices of craftsmen in ancient Mesopotamia. What at first glance may appear to be trivial scratch marks on a pottery sherd are in actuality the intentional engravings — eleven horizontal lines and three rows of cuneiform signs — of a seal cutter who was testing his skills before turning to the surface of a cylinder seal, or perhaps a scribe who was creating a guide for an illiterate seal cutter to follow. Finds that support the former interpretation include a trial piece for a cylinder seal design of a worshiper before a seated god incised on a pottery sherd (Woolley and Mallowan, *Ur Excavations* VII, 1976, no. 252) and a limestone plaque on which a seal cutter practiced several inscriptions in reverse (Collon, *Cylinder Seals* III, 1986, no. 656).

In looking at the Mesopotamian cylinder seals on display at the Oriental Institute Museum, one thing that is immediately apparent is the small size of these portable works of art, a characteristic that often leads to reflections on the difficult task of creating such objects. How did seal cutters turn unworked pieces of stone into such remarkably small cylinder seals? How did they then engrave into the surface detailed figural carvings and cuneiform signs? This engraved pottery sherd provides a hint at how seal cutters dealt with the challenges of their craft. What also stands out in looking at the collection is the diversity of prestigious raw materials used to fashion cylinder seals, including lapis lazuli, carnelian, and serpentine. This material characteristic of seals similarly relates to the engraved clay fragment; when working with such highly valued materials, it would make sense to want to practice with something of lesser value first, something that was easy to come by — for example, a pottery sherd. The curving of this particular sherd was likely also appealing, considering the comparable curved surface of the cylinder seal with which the seal cutter would be working.

The question remains: how do we know that this was not intended to be a stand-alone inscribed object but is, in fact, the working tool of a seal cutter? The lines of cuneiform signs are engraved in the reverse — a process referred to as *intaglio* — and this is how most inscriptions were engraved on cylinder seals, so that when the seal was impressed into wet clay, the inscription was legible. There are instances where the inscription is given the correct orientation on the seal itself, a characteristic that shows that seals were also appreciated in their own right as material objects, as amulets and objects of adornment, and not just as a means to an impression — a story for another artifact highlight perhaps. Turning back to the pottery sherd, it is amusing to see that some things never change — the desire to perfect one's craft and the value of recycling.



Baked clay
Iraq, Bismaya (Adab), Mound IV
H 4.7 x W 2.8 x Th 1.1 cm
Inscription: "Damu-[ ], son of Warad-Shamash, servant of [DN]"
Excavated in 1904
OIM A838
Edgar and Deborah Jannotta Mesopotamian Gallery

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# Hittite Anatolia
## Cornucopia of Cultures in Contact

*BY* Petra Goedegebuure

### LANGUAGES OF 0 ANATOLIA

Anatolia (modern Turkey) is a cornucopia of cultures. It is one of the pivotal areas of the world, the place from where agriculture spread out over Europe, and the point of departure and final home of migrating peoples. Moving in from all directions we find, among others: Assyrians, Hittites (both displacing and merging with the indigenous Hattians), Mycenaeans, Phrygians, Phoenicians, Ionian Greeks, Cimmerians, Scythians, Urarteans, Persians, Armenians, Celtic Galatians, Romans, and Turks. It was the home of the Hittite, Byzantine, and Ottoman empires, and was part of the Persian, Seleucid, Armenian, Roman, and Seljuk empires. The Etruscans might very well have left Lydia in western Anatolia to settle in Italy, while the Lukka people, from Lycia, were part of the Sea Peoples moving east to the Levantine coast, and the Carians functioned as famous mercenaries in Egypt and the Persian empire. Anatolia is where Greek philosophy started, the Lydians minted the first coins, the *Iliad* takes place, and Indo-European languages were written down for the first time in history.

Multiple ethnicities not only followed each other in succession through the millennia: our earliest sources show that even within the borders of a single Anatolian (city-)state, different population groups could be found living together. At the end of the third millennium BC, the Assyrians established trading posts throughout Central Anatolia, with their main hub at Kültepe (Hittite Kaneš/Neša), near Kayseri. Although the tens of thousands of clay tablets from the private archives of the Assyrian merchants and the limited number of official documents from the indigenous Anatolian rulers were all written in Old Assyrian, the actors mentioned in these tablets clearly illustrate that Kaneš/Neša, the homeland of the Hittites, was also the home of people with Luwian, Hurrian, Syrian, Hattian, and, of course, Assyrian names.

The archives of the Hittite kingdom and later empire (ca. 1650–1180 BC) attest to a similarly diverse group of names and also to longer texts in these languages. Around the time of the collapse of the empire, the temple and palace archives of the Hittite capital Ḫattuša (modern Boğazköy or Boğazkale) still contained about 10,000 tablets (broken up into 30,000 fragments). Most of these tablets were written in Indo-European Hittite, with a respectable number written in its sister languages Luwian and Palaic, the (near)-isolates Hattian (the language of the indigenous Hattians), Hurrian and Sumerian, and Semitic Akkadian (fig. 1a). We also have an intriguing fragment with a dialect close to Hittite or Luwian. This fragment is large enough that we can recognize its language as Anatolian, but too small to further determine the relationship with the other Anatolian languages. Fortunately, for the decipherment of Hittite, Hattian, and Hurrian, the archives also contain bilingual texts, such as Akkadian-Hittite historical narratives and treaties, Hattian-Hittite mythology, and Hurrian-Hittite wisdom literature.

First-millennium BC Anatolia continued the tradition of multiple languages and multilingual texts. In Lycia we find the famous Xanthos trilingual with Lycian (related to Luwian), Greek, and Aramaic. Cilicia fortunately brought us the Phoenician-Luwian Karatepe inscriptions, which led to the final decipherment of Luwian, and Carian-Greek and Lydian-Greek bilinguals are found in west Anatolia (fig. 1b).

With so many different languages attested in the same area and often in the same texts, we need to ask ourselves whether the local population was multilingual as well. If they were, how would we know this? A bilingual text in itself does not tell us anything about the language competence of the local population or even the scribe of a tablet. The scribe might simply be learning a foreign language, such as Akkadian or Sumerian. The epigraphic material could reflect the presence of several monolingual groups speaking different languages. But if people indeed controlled

a

b

Figure 1a–b. Map of the languages of Anatolia: (*a*) early second millennium BC and (*b*) first millennium BC

multiple languages, did their languages influence one another? And what does the presence of multilingualism tell us about the local socio-economic situation? If we find multiple languages in the same area, will we be able to establish who are indigenous and who are newcomers if the historical sources are silent on the topic? Regarding newcomers, are we dealing with immigrants or conquerors? The archaeology of Anatolia is notoriously problematic when it comes to recognizing ethnicities in material culture. If it were not for the Old Assyrian tablets, we would not have been able to recognize the presence of the Assyrian merchants of Kültepe/Kaneš.

Fortunately, there is a subfield of linguistics, namely contact linguistics that has the tools to answer at least some of these questions and gain insight into the ethnic and socio-economic stratification of ancient societies. But before we explore the multilingual situation of Anatolia, we need to turn to where all knowledge of ancient cultures starts: the script. In the case of Anatolia, the indigenous writing system is intricately connected with cultures in contact.

## DECIPHERING THE ANATOLIAN HIEROGLYPHS

Cuneiform writing on clay became wildly popular among the governing elites of the ancient Near East. Although some societies, such as Egypt, only used cuneiform for their international correspondence, the Anatolians additionally adopted cuneiform for domestic use to write Hittite, Luwian, and Hattian. But they also developed their own hieroglyphic script for Luwian. The first inscriptions were observed by nineteenth-century travelers in Hama in Syria and in Boğazköy, and were believed to be Hittite, but because the writing had no connection to other scripts and it was the wrong language, the decipherment of the Anatolian hieroglyphs was slow. In the 1930s, a handful of scholars, which included the decipherer of Hittite, Bedřich Hrozný, and the Oriental Institute's Ignace Gelb, slowly battled on, but real progress could not be made until 1946, after the discovery of a

Phoenician–Luwian inscription in Karatepe (in Osmaniye Province, Turkey).

Currently, Hieroglyphic Luwian inscriptions can be found in Anatolia and northern Syria, in circa ninety-five different locations. The inscriptions are attested during a respectable 800 years, from circa 1500 to 700 BC, far longer than its equally extinct sister languages Hittite (1650–1180 BC), Palaic (extinct by the sixteenth century BC?), Lycian (sixth–late fourth century BC), Lydian (eighth–third century BC), and Carian (sixth–third century BC) (for all these languages see Woodard 2008). It was in use by both the Hittite empire and its successors, the Neo-Hittite city-states of Anatolia and northern Syria, for commemorative and building inscriptions on living rock, statues, orthostats, and blocks (see for example the Südburg inscription in Ḫattuša, fig. 2). The archives of Ḫattuša also contain a large number of royal and non-royal stamp seals and sealings, often with the name and title in hieroglyphs in the center of the seal (fig. 3). Remarkably, letters of a commercial nature and economic documents listing the distribution of goods were found written on lead strips.

The Anatolian hieroglyphic writing system uses a combination of logograms (word signs) and syllabograms (syllable signs). Because the script is still very pictographic, we can sometimes deduct the concept behind a logogram by "reading" the picture. This is the case, for example, for EGO "I," REX "king," and DARE "to give" (in transliteration logograms are represented by Latin in caps; see table 1, left column). The sign EGO represents a person pointing at him- or herself, while the sign for REX is similar to the pointed crown worn only by kings (and gods), and the sign for DARE is a giving hand. Such signs were therefore among the first to be deciphered: A. H. Sayce already concluded in 1876 that EGO needed to be regarded "as expressive of the first personal pronoun" (1877, p. 24). But more often than not we do not know how a symbol came to stand for a concept, because we do not know what the symbol originally depicted (table 1, right column). Decoding such symbols was a joint effort over many decades and a major achievement, especially in the absence of bilingual narratives until 1946.

Figure 2. Südburg inscription of king Šuppiluliuma I or II, Ḫattuša/Boğazköy (photo courtesy Thalia Lysen)

Table 1. Anatolian Hieroglyphic logograms*

| | | | |
|---|---|---|---|
| (sign) | EGO "I" | (sign) | DEUS "deity" |
| (sign) | REX "king" | (sign) | BONUS "good" |
| (sign) | DARE "to give" | (sign) | DOMINUS "lord" |

\* I am very grateful to Annick Payne for her permission to use her hieroglyphic signs.

Though almost all syllabograms and quite a few logograms have received a value by now, there still remains work to be done. Theo van den Hout, Ilya Yakubovich (PhD 2008, University of Chicago), and I are continuing the Oriental Institute's tradition of deciphering Anatolian hieroglyphs that was started here by Ignace Gelb and Hans Güterbock. Our work illustrates how even an improved reading of a sign may have major consequences for our understanding of text and history alike.

The logogram 〄 was already known to represent HOR-REUM "granary," believed to be a building, but its appearance as a determinative for the word *mariyaninzi* in *kwi=pa=wa* 〄 *mariyaninzi ahha maki(sa)ha* (§11, KARATEPE bilingual) did not make much sense. The provisional translation "thus I broke up the proud" was based on the equally problematic Phoenician version, completely disconnecting the passage from any agricultural setting. Theo van den Hout (2010) was able to clarify the sentence when he realized that the logogram actually represents the top view of a subterranean granary (fig. 4) and could be connected with storing the crops of *mariyana*-fields, attested in Hittite. When he also saw that the Luwian verb *maki-* was related to English *much*, the sentence could finally be understood as "Indeed (= *kwipa*), I accumulated (= *maki(sa)ha*) the *mariyana*-field crops (= *mariyaninzi*) in great quantities (=*ahha*)" and connected with the preceding and following discourse in an ABA'B' pattern (KARATEPE §§7–12):

A   "I filled the Paharean granaries,
B   and I made horse upon horse, and I made army upon army, and I made shield upon shield, all by Tarhunzas and the gods.
A'   Indeed, I **accumulated the *mariyana*-field crops** in great quantities,
B'   while I removed out of the land the evils that were in the land"

Recently, I established the syllabic value for the bird sign (sign) (AVIS) as *wa* (Goedegebuure forthcoming). The word for "bird" is *wattai-*, so clearly the Anatolians derived the value *wa* acrophonically from **wa**ttai-. Hittitologists had always assumed that the syllabic value for this sign was *zi*, only attested twice, and that it was derived from another type of bird, the *zinzapu*, perhaps a dove. Unfortunately, this did not lead to any acceptable readings for the four words in which syllabic AVIS occurred. With my alternative proposal, however, these words were given new meanings and shown to be related to known words in Hittite and Cuneiform Luwian (table 2).

Table 2. Six New Hieroglyphic Luwian Words

| New Reading and Meaning | Old Meaning | Related Words |
|---|---|---|
| (DEUS)*wati-* "mountain" | unknown | Cuneiform Luwian *watti-* "idem" |
| (DEUS)*wataniya-* "sacred holding" | "day" | Cuneiform Luwian *wattaniya-* "of the land" |
| *wala-* "to remove, erase" | "idem" | Hittite *wallanu-* "idem" |
| *wasa-* "to lead here" | "smash" | Hieroglyphic Luwian *usa-* "to lead here" |
| (DEUS)*hapada(n)ti-* "riverland" | unknown | Hieroglyphic Luwian *hapadi-* "idem" |
| *haparinuwa-* "to deliver" | unknown | Hittite *ḫap(pa)riya-* "idem" |

As a corollary of reading (DEUS)AVIS-*ti-* as *wati-* "mountain" in a list of divine names, I could also show that the word (DEUS)\*30-*da-ti-* in the same text represented *hapada(n)ti-* "divine riverland," suggesting that \*30 ((sign)) should be read as *hapa*. This in turn led to a contextually acceptable reading of "\*30"(-)*ri+i-nu-wa/i-* in yet another text as *haparinuwa-* "to deliver." How fundamentally the sense of a text can change with new readings becomes clear when we compare the old interpretation of the passage with "\*30"(-)*ri+i-nu-wa/i-* with the new one (KARKAMIŠ A12 §11–13):

Old: I went to him (i.e., a deity) (as) a living sacrifice. I went to him for skill and protection ("shield") [and] profit ("selling"). And it before him I caused to…(Hawkins 2000, p. 114)

Improved: I carried blood offerings to him, and I also carried (my) craft and (my) shield as gifts to him. I **delivered** them (lit. it) in front of him.

Sometimes syllabograms receive new values, with major consequences. Ilya Yakubovich and Elisabeth Rieken (2010) suggest

Figure 3a–b. Stamp seals with hieroglyphs,(*a*) OIM A43134 and (*b*) OIM A12728

reading the sign *ta*$_4$ as *la* or *li* (conventionally written as *la/i*). This is not very relevant for a word like *a-ta*$_4$*-ma-za>a-la/i-ma-za* "name," but when the geographical name *pa-ta*$_4$*-sa-ti-na / wa/i-ta*$_4$*-sa-ti-na* = Paddasatina/Waddasatina changes into *pa-la/i-sà-ti-na / wa/i-la/i-sà-ti-na* = Palistin/Walistin, the Luwian world suddenly becomes connected with the Philistines of the Bible and the *plst* of the Sea Peoples, at least in name. Inscriptions mentioning the Neo-Hittite kingdom of Palistin/Walistin have been found in Arsuz, Tell Ta'yinat — on display in the Syro-Anatolian gallery of the Oriental Institute Museum (fig. 5) — Aleppo, and near Hama (fig. 6). The inscriptions date to the eleventh–ninth centuries BC and point to an important kingdom of respectable size. The similarity in names between Palistin and the biblical Philistines is hardly a coincidence, and further research to clarify the relationship is needed.

## ORIGIN OF THE ANATOLIAN HIEROGLYPHS

One of the more lively discussions in Hittitology deals with when the Anatolian hieroglyphs developed into a full-fledged writing system, who created the system and where, what was the purpose, and on what material. For decades the prevailing view was that the hieroglyphs were developed by Luwians, for Luwian, and in Luwian lands. This, as we will see, needs to be replaced with a very different view: "the Anatolian hieroglyphic script was developed in Ḫattusa, in the mixed Hittite and Luvian environment" (Yakubovich 2008, p. 28).

Yakubovich has convincingly shown how the Anatolian hieroglyphs received their values not only from Luwian but also from Hittite. This was quite an unexpected finding and has consequences for when the Hittites started to use the hieroglyphs not simply as a symbolic system on seals and ceramics, but as a true writing system. Yakubovich, like others before him, followed a

relatively simple procedure by reversing the acrophonic principle. Turning around the principle of assigning values to symbols based on the word behind a symbol, Yakubovich assigned words to the value behind a symbol. In a few cases this had already been done successfully, and as expected, the word that provided the value for the syllabogram was Luwian. For example, the logogram for the word "seal" (table 3), SIGILLUM, also has the syllabic value /*sa*/. The word meaning "seal" that provided that syllable was Luwian ***sa***sanza, not Hittite *šiyatar*. There are also a few symbols with identifiable concepts for which the syllabic value is known, but where the Luwian word could not have been the source for the syllabic value. This is the case, for example, for CAPERE "to take." When not used as a logogram, we read it as /*da*/, but the Luwian word that should have provided the value is *la*(*la*)- "to take." Because we cannot be certain that the word familiar to the modern reader was also the one that provided the value for a sign, there could still exist a synonym that has not yet been discovered or preserved. However, Yakubovich's brilliant and elegant move was to realize that the value *da* was derived from Hittite *da*- "to take"! (table 4).

Table 3. Symbols with Values Based on Luwian

| Symbol | Meaning | Value | Luwian | Hittite |
|---|---|---|---|---|
|  | SIGILLUM "seal" | /sa/ | sasanza | siyatar |
|  | BONUS "good" | /wa/ | wasu | assu |

Table 4. Symbols with Values Based on Hittite

| Symbol | Meaning | Value | Luwian | Hittite |
|---|---|---|---|---|
|  | INFRA "down" | /ka/ | zanta | katta |
|  | CAPERE "take" | /da/ | la(la) | da- |

The consequences of Yakubovich's insights are far reaching. The origin of the Anatolian hieroglyphs should no longer be sought in the periphery of the Hittite kingdom, in the Arzawa lands in the west or Kizzuwatna in the southeast, but in a Luwian–Hittite bilingual environment. Yakubovich convincingly argues that this environment can only have been the Hittite core land around the capital.

## BILINGUALISM AMONG THE HITTITES AND LUWIANS

In order to investigate the socio-linguistic situation of an area where speakers of different languages are in close contact, one does not, in fact, need bilingual texts. Bilingual texts only show that the languages were spoken at the same time: it does not prove that people themselves were bilingual. Perhaps counterintuitively, we need monolingual texts, ideally of all languages spoken in an area, to investigate whether the monolingual texts show interference from another language.

When one thinks of language contact, the first thing that comes to mind is the borrowing of foreign content words in one's

Figure 4. Subterranean granaries in Büyükkaya (Ḫattuša/Boğazköy). After Seeher 1997, fig. 3

native language. But that is only one type of interference. The other type, called substratum influence, occurs when speakers acquire another language and impose sound patterns, syntax, and sometimes morphology on the acquired language. One can for example think of the pronunciation of American English by Italian or Jewish immigrants. Foreign content words hardly appear in the case of substratum influence, but mainly occur in the borrowing situation. Phonological (sounds), syntactic (word order), and morphological influence (forms) mainly occur in the substratum situation and only appear in the borrowing situation after heavy lexical borrowing. Hittite and the few Luwian monolingual texts can therefore tell us about the type of interference and ultimately about the socio-political situation that caused the interference.

The presence of a Luwian-speaking population in the core land was known already in the early days of Hittitology, after the Plague Prayers and the Ten-Year and Extensive Annals of Muršili II (1321–1295 BC) were edited in the mid-1930s. Muršili recalls how the — in his eyes unlawful — acts of his father Šuppiluliuma I led to the start of an epidemic that raged through the core of the empire for decades. No one was spared. Both Šuppiluliuma and his heir Arnuwanda II died from the plague, Šuppiluliuma in 1322 BC, and Arnuwanda in 1321 BC, leaving only the teenager Muršili available for the throne. In the early years of his reign, Muršili had to prove his worth as a young king, and part of the battle ground was west Anatolia, in the rebellious lands of Arzawa. After his successful campaigns there, Muršili deported a large part of the Luwian-speaking population and repopulated the severely hit center. We do not only know this from the historical sources, but we also see this reflected in the language. Theo van den Hout (2007) analyzed the occurrence of Luwian loanwords in thirteenth-century Hittite texts and concluded that the population in the heart of the empire was mainly Luwian speaking, not Hittite, while the court and nobility were bilingual in Hittite and Luwian, with Hittite as the official language of the state.

But Hittite–Luwian bilingualism must also have existed in the population in the Old Hittite period (1650–1400 BC), long before the mass deportations during the reign of Mursili II that saw the replacement of the Hittite vernacular with Luwian. Luwian grammar started to influence Hittite in the Old Hittite period, gaining momentum in Middle Hittite. Table 5 shows how the Old Hittite plural pronouns were originally different from the Luwian pronouns, but how by late Middle Hittite the old forms had been replaced with new forms from Luwian (with some minor changes):

Table 5. Pronouns in Old, late Middle Hittite, and Luwian

|  | Old Hittite | Late Middle Hittite | Luwian |
|---|---|---|---|
| nom.pl.common | -e | -at | -ata |
| acc.pl.common | -us | -as | -as |
| nom.-acc.pl.neuter | -e | -at | -ata |

It ended with the total structural convergence of Hittite and Luwian toward the end of the empire. By that time, every Hittite clause could be turned into a Luwian clause by simply replacing the Hittite words with Luwian words. For this type of grammatical interference to happen, there must have been a substantial number of native speakers of Luwian in the Old Hittite period that must also have been able to speak Hittite in order to influence Hittite to the extent that it did.

It is crucial to emphasize that this contact between Hittite and Luwian started in the Old Hittite period but not earlier. That is, early in or shortly before the Old Hittite period, Luwian speakers and Hittite speakers were not sharing the same geographic area in large numbers, but at a certain point they suddenly were. Even though people with Luwian names were present in Kültepe/Kaneš in the Old Assyrian period, and Luwian loanwords are attested in the Assyrian documents, there were not enough speakers of Luwian at the time to influence Hittite. If there had been, the changes in Hittite would have happened much earlier. So where did the Luwians suddenly come from?

We have no evidence for large-scale migrations of Luwians into Central Anatolia, home of the Hattians, in the early second millennium, but we do have evidence for the Hittitization of the area. Discounting the short-lived conquest of Central Anatolia by King Anitta in the Old Assyrian period, lasting unification of Central Anatolia took place under the first known Old Hittite kings Labarna and Ḫattušili I. Ḫattušili made Ḫattuša, once the cursed foe of Anitta, his capital, moving the center of his kingdom from south of the Kızıl Irmak River to the north. Although Hittites may have entered the area with Anitta, we only expect

Figure 5. Tell Ta'yinat inscription with the name *wa/i-la/i-sà-ti-ni-* (Walistin-). D. 00915 OIM A27861d–h



Figure 6. The Neo-Hittite state of Palistin, with the findspots of inscriptions mentioning Palistin/Walistin

larger numbers to have settled there with the consolidation of the kingdom by Labarna and Ḫattušili I.

Hittitologists always assumed that the Hittites encountered only the Hattians. While taking over control, they fully assimilated to Hattian culture to such an extent that much of their Indo-European heritage was lost. The Hittites even minimized the role of the pantheon of their homeland Kaneš/Neša in favor of the pantheon of the Hattians, and the language of the cult was Hattian, not Hittite. But what is most interesting is that we also find *Luwian* cult recitations for Hattian deities. Furthermore, indigenous myths written in Hittite show a mixture of Hattian and Luwian motifs, not only Hattian, and, last but not least, the royal names of the Old Hittite kingdom are Hattian and Luwian, while Hittite names are absent: Tudḫaliya, Pafaḫtelmaḫ, Ḫattušili, Muršili, Taḫurwaili, Ḫuzziya, and Telipinu are Hattian, Ḫantili is either Hattian or Luwian, and Zidanta and Muwatalli are Luwian.

Cultural evidence shows that the Hittites therefore indeed also encountered Luwians in the core land. That the Luwian population was large enough to account for the observed grammatical influence of Luwian on Hittite can, rather surprisingly, be supported by language contact phenomena in Hattian. I argue that the Luwians must have been bilingual in Hattian and Luwian (Goedegebuure 2008). Using purely linguistic arguments, I could show that Hattian grammar, not the lexicon, was heavily influenced by either Luwian or Hittite to the point of typological disruption. As mentioned above, grammatical influence occurs when a language is a substratum to another language. The substratum language is usually either spoken by a very large group of immigrants, or when the substratum group is conquered by outsiders. Of the logical options, (1) Luwians migrating *en masse* and merging with indigenous Hattian society, (2) indigenous Luwians conquered by arriving Hattians, (3) Hittites migrating *en masse* and merging with indigenous Hattian society, and (4) indigenous Hittites conquered by arriving Hattians, only option

(1) explains the changes in Hattian, the later changes in Hittite caused by Luwian, and the merger of Hattian–Luwian culture visible in the Old Hittite documents.

Languages and cultures in contact can have a profound impact on any society. The Hittitologists of the Oriental Institute have shown how contact between Luwians and Hattians in prehistory led to changes in Hattian and to the heterogeneous culture of the Hittites, how historical contact between Luwian and Hittite led to change in Hittite and eventually the death of Hittite, and how Luwian and Hittite provided the Anatolian hieroglyphs with their sound values no earlier than the Old Hittite period.

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# SEEN NOT HEARD

## COMPOSITION, ICONICITY, AND THE CLASSIFIER SYSTEMS OF LOGOSYLLABIC SCRIPTS

*BY* Ilona Zsolnay

Communication is dynamic. It is the production and exchange of meanings through the transmission of messages. Thus, it is also a social experience during which these conveyances are encoded and decoded, and it is through these interplays that sender and receiver have an effect on one another. To study communication, then, is to interrogate the societies that create and employ these exchanges, the codes used (language employed), and the results of these conversations. Traditionally, writing — a graphic form of communication — has been approached as a vehicle for representing, and therefore conveying, the spoken word, that is, oral and aural exchange. Even studies of pictographic, hieroglyphic, and logographic scripts — scripts that, at least initially, used image-based systems — have concentrated on the means and extent to which they signify units of sound (are glottographic), be these phonological units, entire objects, or grammatical infixes, and vocally denote grammatical structures. In fact, writing, for some, may only qualify as true writing when full phonetization occurs, as in the case of alphabetic scripts. It is only recently that scholars have truly begun to approach writing as a graphic system of communication that, though it has an intrinsic connection to spoken language, is also independent of it, demonstrating its own visual code for conveying and receiving knowledge.

The aspects of visual code — features that writing can impart beyond the spoken word — were the subject of the Thirteenth Annual Oriental Institute Symposium, Seen Not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts, March 1–2, 2017, organized by Ilona Zsolnay, 2016–18 Oriental Institute Postdoctoral Fellow. Thanks to the generous funding of Arthur and Lee Herbst, this symposium brought together scholars from the fields of Egyptology, Sinology, Hittitology, and Mesoamerican, Cuneiform, and Sign Language studies in order to examine the visual and even tangible qualities of writing. This line of interrogation incorporated methods more commonly used in linguistics and semiotics, communication studies, art-historical analysis, as well as more traditional philology, and utilized them to form new trajectories of inquiry. On a more local note, the presenters, who hailed from such diverse locations as the Pacific Northwest, the Northeast, Tennessee, France, Germany, and Israel, were well rested and nourished in large part because of their accommodation at our local Hyde Park Hyatt and familiarized with the Institute's collections thanks to a gallery tour by Jean Evans, Chief Curator and Deputy Director for Collections and Exhibitions at the Oriental Institute. Seen Not Heard was organized with four broad topics in mind: text as experiential; the iconicity,

indexicality, and semantics of logographic signs and their assignments; classifiers; and the use of organization in indicating intent. The symposium took place in Breasted Hall over two days in March, with the bulk of the presentations given on the first day.

After brief introductory remarks by Gil Stein, Director of the Oriental Institute, and Zsolnay, Seen Not Heard was launched by its first chair, Syro-Levantine archaeologist David Schloen. In this inaugural session, scholars investigated the experiential and performative qualities of writing. As a visual medium, writing, like art, has the ability to optically capture, reflect, and create significance. This facet of writing was illustrated by the two Maya presentations — the first by the University of Chicago's own Claudia Brittenham, and the second by David Stuart of the University of Texas, Austin. In her presentation, Brittenham considered hierarchies of size and depth of relief on monumental works. She noted that not only could importance of character be evident



1. Carved limestone lintel, showing a bloodlett Shield Jaguar II and his wife, Lady K'ab'al Xoo (726 CE), British Museum

in the dimensions of a glyph, but also in its accessibility (see fig. 1). Perhaps contrary to immediate thought, recessed writing can indicate exclusivity and prestige; the harder it is to see the text, the closer one must be situated, thus indicating a higher status for the reader and the text itself. Stuart's lecture concentrated on the more magical qualities of writing. Glyphs, according to Stuart, can be self-referential. In certain instances, they situate qualities which, as is illustrated in figure 2, can even be manipulated by individuals. From this perspective, Maya glyphs are not simply the media by which a message is imparted, they are in point of fact the very essence of the message; they realize it iconically and bodily. In the third paper of this session, Joshua Roberson of the University of Memphis investigated the para-textual nature of Egyptian art, instances where text and image combine to create "hyper-logograms." Focusing on the *akhet*, the moment of solar transition from the hidden nocturnal to the visible diurnal, Roberson demonstrated that certain iconic imagery, imagery which relies heavily on connotative associations, can be "read" as elaborate *akhet* hieroglyphs. They artistically render that which is semantically encoded in the sign. The final paper of this session by Elisabeth Rieken and Ilya Yakubovich, both of the University of Marburg and presented by Rieken, proposed that Anatolian hieroglyphic writing likely developed in a linguistically mixed environment, Hittite and Luwian, and that



ing ritual performed by the king of Yaxchilan, k. Lintel 24, Structure 23, Yaxchilan, Maya

facets of this writing system demonstrate that it both influenced Hittite cuneiform and was influenced by cuneiform conventions. In their lecture, Rieken and Yakubovich focused on the sign order for the representation of divine names and their epithets. They observed that, although in spoken Luwian the epithet precedes a divine name, when expressed using the hieroglyphic system, this is reversed — as is customary in cuneiform, thereby demonstrating a script-to-script influence. This is one of the syntactic features that would only have been seen, never spoken.

Following a short break for lunch, the second session, Form and Meaning, presided over by Assyriologist Susanne Paulus, was brought to order. During this session, presenters considered the iconicity, indexicality, and semantics of signs. Sumerologist Christopher Woods considered whether proto-cuneiform was originally language- or idea-based, that is, was it first developed as a system designed to reflect speech or to represent meanings? Woods concentrated on the signs themselves, those that were ideographic (symbolic of an idea), those that represent a semantic field (meaning), and those that were logo- or glotto-graphic (bound to a language). He offered several compelling pieces of evidence for the semantic basis of proto-cuneiform, including that graphs could be written in an order independent of speech; the use of extensive semantic compounding; the inclusion of silent indexical marks to express sub-meanings; the reliance on complex tabular formats; the existence of commodity-specific counting systems; and, most importantly, the numerical origins of writing itself. Andréas Stauder of the École Pratique des Hautes Études, Paris, then interrogated how, in Egyptian texts, writing can be substantially more than a surrogate for speech. In a particularly compelling example, Stauder demonstrated that through a choice of classifier, an unspoken graph which might precede or follow its referent (noun or verb, in the case of Egyptian) in order to provide additional semantic information, one could see an only visually accessible example of a scribal play (and demonstration of a scribe's own acuity) (fig. 3). Here, in similar sentences, the classifier accompanying the sign for vizier is represented first with a baton (bracketed in blue) and then without (bracketed in red). The lack of the baton visually suggests that a conspiracy in the palace had taken place and that officials had been demoted, possibly even the vizier. The final presentation of this second session was given by Diane Brentari, Professor of Linguistics and Co-director of the Center for Gesture Sign Language at the University of Chicago. Although in writing systems, iconicity becomes reduced, in sign language, an inherently visual form of communication, it continues to be widely used and highly productive. In her lecture, Brentari focused on the highly iconic and grammatically integral nature of classifiers in sign languages. Three of the key features of these languages is that handshapes are not interchangeable between languages, it is not simply handshape, but also the motion and rhythm of presentation which provide meaning, and that to change the choice of classifier is to change the meaning of the word. Furthermore, classifiers require antecedents (previous
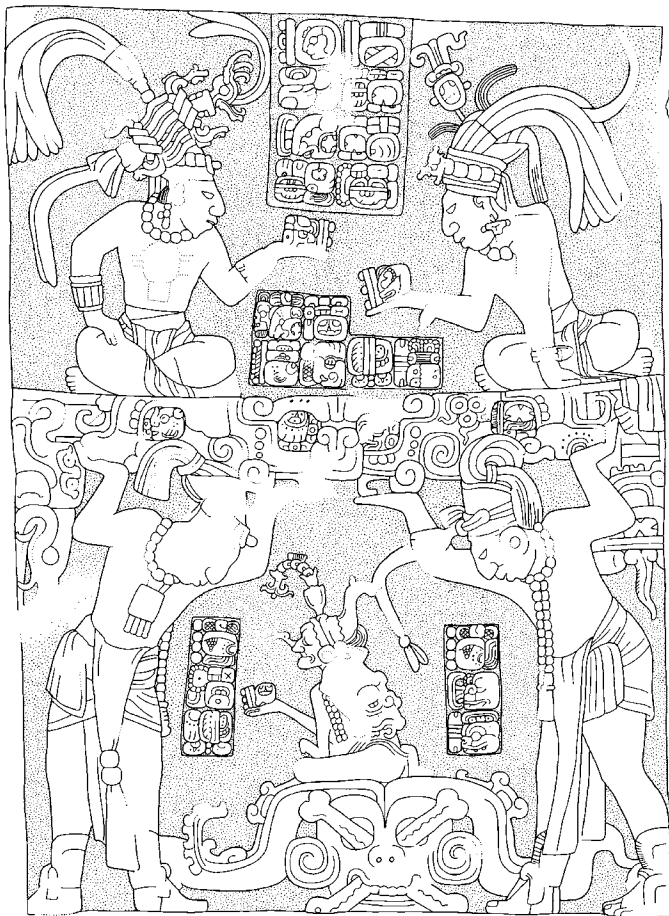
2. Carved door lintel from the region of Yaxchilan, Mexico. Preliminary drawing by David Stuart

mentions) in any discourse, may only be culled from an established group of classifiers, and, finally, are highly productive in that they can be applied to new situations.

The final session of the day, Classifiers and Classification, presided over by Egyptologist Brian Muhs, was devoted to investigating classifiers in Egyptian, Sumerian, and Chinese writing systems. The session began with a joint presentation by Orly Goldwasser of Hebrew University and Gebhard J. Selz of Vienna University. The lecture, given by Goldwasser, first concentrated on the work of Selz who has established a systematic and elaborate "noun classifier" system for the cuneiform writing system. The talk was then devoted to interrogating some of the differences between the Egyptian and Mesopotamian classifier systems. Goldwasser's focus here was on the transition in use from an assortment of classifiers in Egyptian to indicate individual animals to a single graph, thus visually illustrating the development of a new taxonomic system. In this session, audience members were also privy to highly preliminary work being performed by Sinologist Zev Handel of the University of Washington on the salience of certain classifiers in modern Chinese writing. From analysis of a set of "neograms" in use over the last four hundred years, Handel determined that eight classifiers demonstrated a high level of employment and recognized that classifiers for metal, vapor (gas), or stone continued to be employed for chemical elements. Their continued use reflects and, therefore, demonstrates a sustained cognitive classification of the world. Handel also noted that, as different peoples — non-Chinese ethnicities — became part of the new Chinese polity, the neograms for these groups were given a DOG/ANIMAL radical. It was only
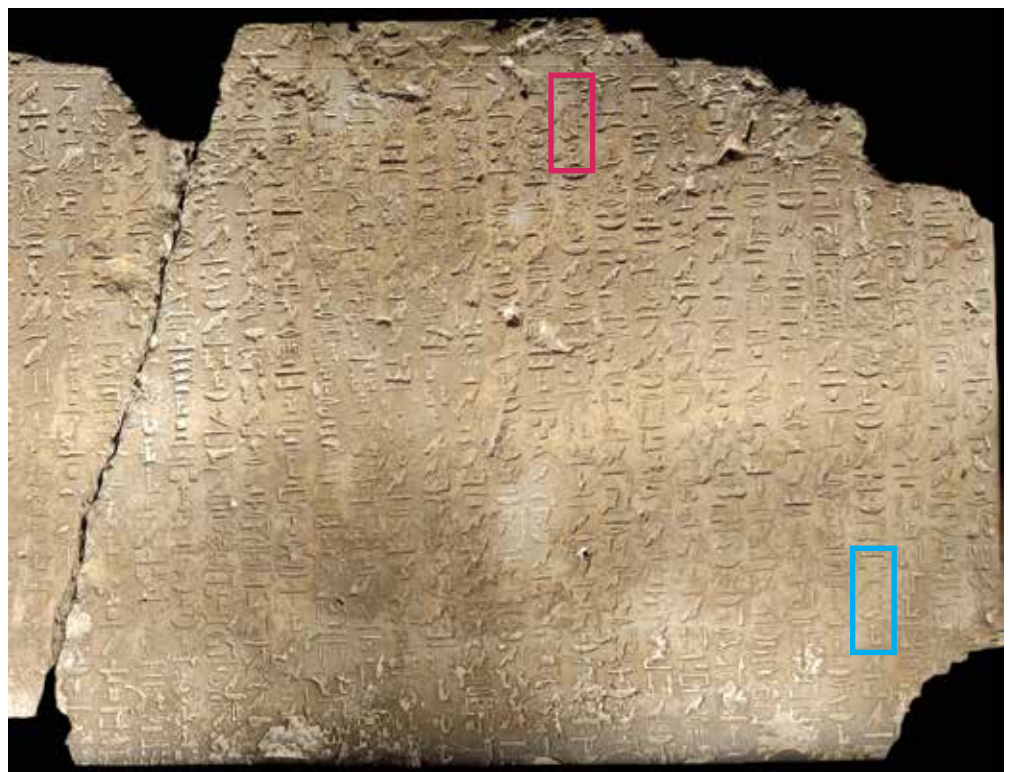


3. After Weni's autobiography, Abydos, temp. Merenre (6th Dynasty), ca. 2275 BCE, Cairo Museum, CGC 1435. Photo Credit: Arnaud du Boistesselin in Philippe Collombert, "Le mystérieux vizir Nefer-oun-méryrê et la nécropole des hauts dignitaires de Pépy I er à Saqqâra." *Égypte Afrique Orient* 77 (2015), pp. 35–44, fig. 4

4. Festival of evening/morning Inana. Cylinder seal S001379 from the Erlenmeyer collection. CDLI no P274834_d, http://cdli.ucla.edu/dl/photo/P274834_d.jpg

more recently that this categorization was changed to PERSON. Finally, in his lecture, Guolong Lai of the University of Florida laid out the history of the treatment and approach of scholars towards the development and semantic usage of Chinese graphs, arguing that a focus on classifiers over "primary components" has allowed for an incomplete and inaccurate understanding of certain graphs attested in oracle bone inscriptions. He used as an example the occurrence of the "mouth" classifier with a shield or a bow in these early texts, ultimately arguing that the semantic range of this classifier would likely not cover weapons.

After being treated to what has now become the customary Thursday night Chinatown banquet, presenters reassembled in Breasted Hall Friday morning for the concluding session: Organization, and the responses of Sumerologist Jerry Cooper (The Johns Hopkins University), and Sinologist Haicheng Wang (Washington University), followed by a brief group discussion. Although all the lectures given during this meeting, to varying extents, considered the organization and distribution of text on a surface, in the final session presenters considered the arrangement of imagery and graphs on tablets and seals discovered at the southern Sumerian city of Uruk that date to the fourth millennium BCE. The first paper of the session, given by Zsolnay, discussed the early lexical lists from this period and interrogated the existence of classifiers primarily in the archaic lexical lists Fish, Vessels, Bird, Geography, and Wood. This investigation was then followed by University of Pennsylvania Art Historian Holly Pittman's analysis of early seal pictorial imagery. Here, she argued that this imagery was employed for the same purpose as that of the signs inscribed on tablets. Although accepting that the former falls under the category semiographic and the latter under writing, she illustrated that their semantic purpose was, in fact, identical: they each imparted a message of allocation (fig. 4). And, while the arrangement of images on a seal might differ from the presentation of signs on a tablet, in her examples, both glyptic and written, the message was "this object is meant to be distributed/reserved for x." In the concluding lecture of this closing session, Sumerologist Piotr Michalowski of the University of Michigan then discussed not only how tablet shape and size might denote usage (genre) — which might enable a scribe to expect the contents appearing on



5. From the top (right to left): Jerry Cooper, Andréas Stauder, Guolong Lai; Zev Handel, Claudia Brittenham, David Schloen; Holly Pittman, Orly Goldwasser, Piotr Michalowski, Christopher Woods; Ilona Zsolnay, Elisabeth Rieken, Haicheng Wang, and Josh Roberson. Photo credit: Bryce Lowry

a specifically shaped tablet — but also considered the aesthetics behind the choice of sign arrangement on proto-cuneiform tablets in serving the same purpose. In his lecture, Michalowski contemplated the visual brain, those visual pathways which allow for pattern recognition and ease of comprehension. He then concluded that the organization of signs in this earliest corpus contains as much syntactical information as the signs themselves.

Reviewed here were but a few of the highlights from this productive assemblage of internationally renowned scholars who braved Chicago in early March of this year. The results of Seen Not Heard were riveting and enlightening and decidedly demonstrated that accounting for the materiality of writing is as important for comprehending the messages and the societies that created and received them, as are the linguistic texts borne through them. As a concluding consideration, it must be affirmed that a gathering such as this does not happen overnight and is truly a team effort; therefore, it is here that an acknowledgment is made to the substantial number of people who provided logistical, editorial, and moral support in the process of organizing and administering this symposium and it is because of these efforts that the symposium was not only exceedingly well attended, but also drew faculty and students from manifold departments within the University, in addition to museum members and community residents.

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The proceedings of the Thirteenth Annual Oriental Institute Postdoctoral Symposium, Seen Not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts, is set to be published by early 2019 (fig. 5).

# The Black Desert of Eastern Jordan

*by* Yorke Rowan

**"I once landed in this country for the night on a grey winter evening, and on the western horizon a tattered sunset still struggled with the gathering darkness. That place was the epitome of loneliness. All around the hills rose like odious flat-topped slag-heaps, and filled me with a sinister foreboding."**

**R. Hill, *The Baghdad Air Mail* (1929, page 9)**

The Harrat al-Sham, or the Black Desert, is the largest volcanic field in the Arabian Plate, covering approximately 50,000 square miles, extending from southern Syria to northern Saudi Arabia. The black basalt-covered landscape, known as the *harra*, contrasts to the *hammad*, the low plateau of open graveled plains. Flying between Baghdad and Cairo during the early twentieth century, Air Chief Marshall Sir Roderic Hill, a Royal Air Force (RAF) pilot, described the basalt-strewn *harra* as a forbidding landscape. Hill, and other early pilots such as Percy Maitland and Llewellyn Rees, were the first Westerners to recognize, and photograph, the enigmatic desert structures that the locals referred to as the "Works of the Old Men" (Maitland 1927). Another pilot, Father Antoine Poidebard, dipped into the English territory of Transjordan, taking the first aerial photographs of Jawa, the "lost city of the black desert."

Early explorers such as Charles Doughty and T. E. Lawrence passed through the area during their travels, but the first archaeological exploration was led by Henry Field, the great-nephew of Marshall Field. Difficulty of access coupled with the harsh living conditions meant that few other archaeology projects worked in the northern *badia* during the twentieth century, with the important exception of the pioneering investigations of Alison Betts in the 1980s and 1990s. To modern, Western eyes, this rough terrain, populated by seasonal Bedouin pastoralists, a few small villages, and military bases, represents a marginalized landscape of severity.

When initiating the Eastern Badia Archaeological Project (EBAP) in 2008, we started by identifying previously unrecognized collapsed structures, in addition to the better-known "desert kites" (hunting traps) scattered across the region (see the cover of *News & Notes* 228 that accompanies Emily Hammer's article on CAMEL). The photographs from earlier pilots and the many aerial images of Jordan by the Aerial Photographic Archive for Archaeology in the Middle East (APAAME) project reinforced our realization that a significant number of structures existed in the desert, many easily missed on the ground. The EBAP study area comprises a west–east transect across the southern part of the eastern *harra*, selected to incorporate a variety of ecological zones and to link with the Levantine corridor, the Hauran, and north-ern Arabia. Our broader objective is to record and analyze the artifacts, architecture, petroglyphs, and landscape, integrating that information with biological and paleoclimatic data in order to understand the occupation and use of the region, particularly during later prehistory (seven–fourth millennia BC). Our survey and excavations have concentrated on two areas thus far, Wisad Pools and Wadi al-Qattafi, located on the eastern and western margins of the *harra*, respectively.

## THE MESAS OF WADI AL-QATTAFI

Wadi al-Qattafi is a major drainage basin approximately 60 km east of Azraq, Jordan. Broad and shallow, the wadi contains approximately thirty basalt-capped mesas that rise between 40 m and 60 m above the surrounding desert floor. Our excavations have focused on Maitland's Mesa (M-4) and Mesa 7, where we find the densest accumulation of structures (c. 400+ at each). Three seasons of excavation suggest that many of these structures are Late Neolithic (ca. 6600–5000 BC) domestic buildings, rather than mortuary structures as we had guessed originally. This surprising discovery is discussed in "These Old Houses: Living in the 'Land of Conjecture'" (*Notes & News*, Autumn 2016). But how can we record accurately the thousands of structures along the Wadi al-Qattafi, and more generally vast swaths of the desert? For that, we use Unpiloted Aerial Vehicles (UAVs), or more commonly, drones. (For additional examples of aerial photographs and video, visit the Oriental Institute special exhibit Drones over the Desert: Archaeology and the Aerial Photography).

Archaeology is undergoing a revolution in surveying methods. Drones allow archaeologists to map structures and landscapes at a scale and resolution that would have been prohibitively expensive for most projects only a few years ago. Lower than full-scale aircraft and satellites, flying drone-mounted cameras can be used to produce orthophotographs (undistorted, spatially accurate, geo-referenced images) and Digital Elevation Models (DEMs) that dramatically improve the resolution and cost effectiveness of surveys. Data collected via drones can achieve resolutions of 1 × 2 cm per pixel compared to the 40 cm per pixel that is commonly available for high-quality satellite data. We use both rotary-wing (quadcopters) and fixed-wing aircraft, the

Aerial photograph from quadcopter, looking north with Maitland's Mesa (M-4) in the foreground (Photo: A. C. Hill)

latter more useful for larger landscape survey. Fixed-wing aircraft, built and piloted by Austin (Chad) Hill, fly more efficiently than rotary wing drones on the same amount of battery power, flying upward of one hour and thus capable of surveying much larger areas per flight.

With funding and support from the Oriental Institute, the Brennan Foundation, DJI, and experiment.com, in 2016 we collected data in the Wadi al-Qattafi during the course of two field seasons. We recorded over twenty-thousand images of the landscape. This included both *nadir* images from the fixed-wing drone, as well as *nadir* and oblique images from the DJI Phantom. Processing and analysis of this large amount of data are ongoing, but the imagery allows the construction of high-resolution ortho-photographs of all the mesas in the survey area — this includes an orthophotograph of Mesa 7, where we excavated SS-11, a Late Neolithic structure, with many other structures outlined in red.

We also made new discoveries using the collected images. Kites, extensive low walls, and enclosures created as hunting traps that are nearly invisible on the ground exist throughout the region. Within the Qattafi survey area, we recorded eleven kites. Kites frequently use the natural landscape to enhance their effectiveness at guiding herd animals into the enclosures, making

them easier targets for the hunters lying in wait. At the largest mesa in the area, M2, we knew of a sizable kite enclosure atop the mesa, with the long guiding walls open to the east like most kites. Previously, however, we had not recognized that there are two other kites, one on the southern side, and one on the north of this mesa, each utilizing the steep slope of the mesa.

Carefully recording the many substantial, well-constructed buildings and extensive systems of kites along Wadi al-Qattafi is beginning to paint a very different picture from the foreboding, desolate desert we see today. Small hamlets or extended families apparently spent enough time in the area to warrant building substantial structures and hunting, herding, and exploiting local plants, at least during the Late Neolithic. Rather than a sinister, virtually empty territory of minimal utility, this landscape was once rich in animals, plants, and people.

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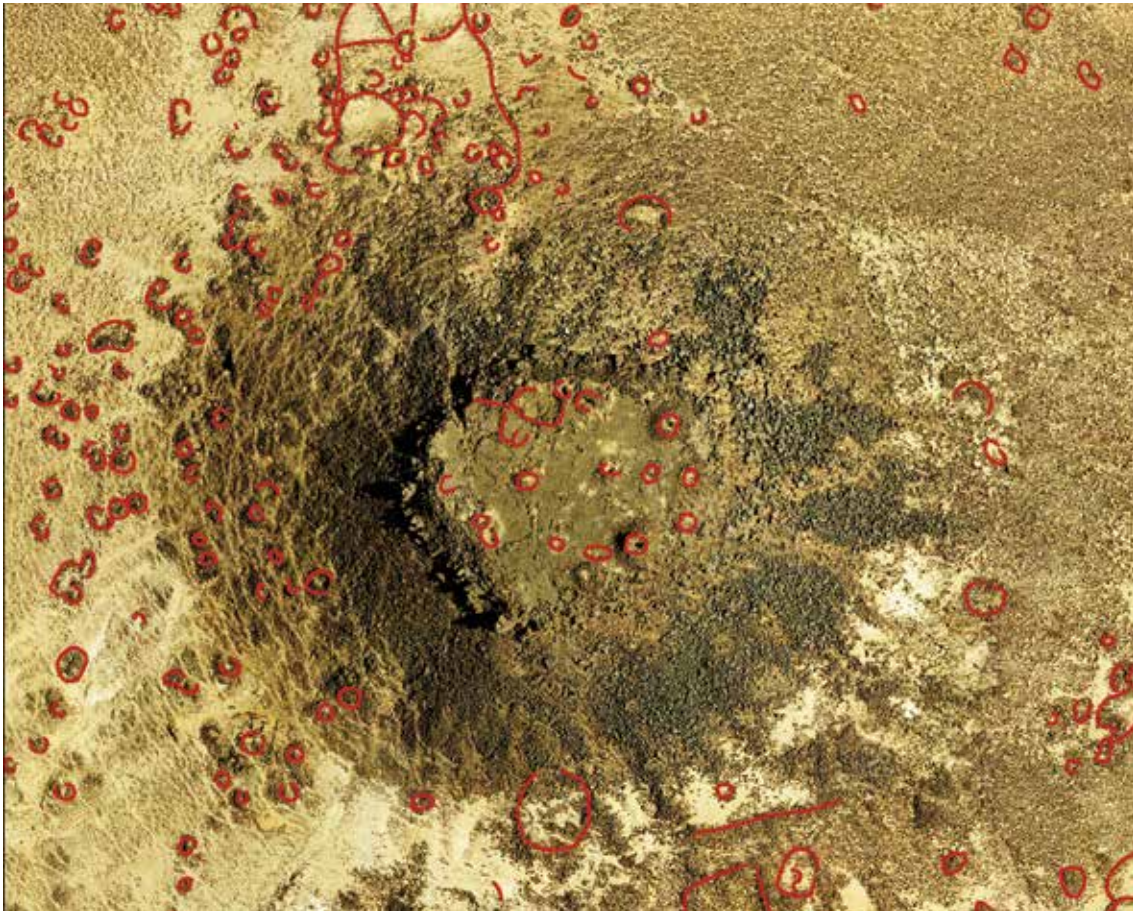
Above: Orthophotograph of Mesa 7 with structures outlined in red (Orthophoto: A. C. Hill)
Below: Orthophotograph of Mesa 2, with three kites outlined in red (Orthophoto: A. C. Hill)

# PROGRAMS
# & EVENTS
## SUMMER 2017

# ADULT PROGRAMS

## EXHIBITIONS

### Persepolis: Images of an Empire

**In the Special Exhibit Gallery, through September 3, 2017**

See the magnitude and grandeur of the ruins of this center of the Achaemenid Persian empire (ca. 550–330 BC) through prints of iconic photographs taken during the Oriental Institute's Persian Expedition (1931–1939), quotations from travelers to the site, and a multimedia display featuring the architecture of Persepolis and surrounding topography.

### DRONES IN THE DESERT: ARCHAEOLOGY FROM ABOVE

**In the lower level of the Oriental Institute, ongoing**

This photo show explores how aerial perspectives allow archaeologists to detect patterns that may be invisible or unrecognizable from the ground. Kites, fishing poles, ladders, balloons, unpiloted aerial vehicles (UAVs), full-size helicopters and planes, and satellites are all used to produce images that aid in assessing and planning archaeological monuments, sites, and landscapes. The exhibit addresses how recent technological developments, coupled with sophisticated software, are creating new and vibrant opportunities for archaeologists to do more with images from the air. The photos illustrate the use of drones at sites in Jordan and Israel for broad-scale archaeological survey of sites, monitoring of landscape change (including looting), and mapping of excavations.

## GALLERY TALKS

### Barley, Beer, and Bread: Food & Drink in Ancient Mesopotamia

**Thu, Sep 7, 12:15–1pm**
Free
*Registration not required*

Sam Harris, PhD candidate in Mesopotamian archaeology, will guide visitors as they look at some of the ways people in Mesopotamia grew, prepared, and consumed food and drink — from praying to keep the mouse god away from the grain to enjoying unfiltered beer through a straw.

## COURSE

## 5-DAY WORKSHOP

### Project Archaeology Leadership Legacy Institute

**Mon–Fri, Jul 31–Aug 4, time varies each day**
Free
*Application required*
*Application Deadline: May 1*
*30 PD Hours available*
*Meals and instructional materials included*
*Lodging is available for traveling registrants*

Teach your students to think like archaeologists as they apply the tools of scientific inquiry to the investigation of nutrition. Get ideas for hands-on classroom activities that guide students to trace the shift from hunting and gathering to the development of agriculture in the ancient world. Explore the connection of food diversity and human health.

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

**REGISTER** To register, visit **oi.uchicago.edu/register**. For assistance or more information, email **oi-education@uchicago.edu**.

Register for these lectures at **oimembersevents. eventbrite.com**

# FAMILY & YOUTH PROGRAMS

## DROP-IN
## (FOR AGES 5–ADULT)

### Drawing Hour

**Wed, Jul 5, 10–11am &**
**Sat, Jul 29, 1–2pm**
Free
*Registration recommended*

Practice looking closely at art and develop drawing skills. Choose ancient sculptures and pottery to sketch, or grab a drawing worksheet to loosen up and get inspired. All materials are provided, and you are welcome to bring your own sketchbook (only pencil is allowed in the gallery). No drawing experience is necessary. Drop in at any time.

### One. Big. Egyptian. Mural.

**Wed, Jul 12, 10am–12pm**
Free
*Registration recommended*

Find out how those amazing Egyptian murals were made by helping us create one from paper using the techniques and "rules" that make ancient Egyptian art so recognizable.

### Secret of the Mummies

**Sat, Jul 15, 1–3pm &**
**Wed, Aug 9, 10am–12pm**
Free
*Registration recommended*

Help us prepare our simulated mummy for the afterlife, meet our real mummies, and discover tomb treasures.

### Little Scribe

**Wed, Jul 19, 10am–12pm**
Free
*Registration recommended*

Can you imagine a world without writing? Learn how writing began, how it changed over time, and how it changed the world forever through this hands-on program. Kids ages 9–12 help us "evolve" a script, while kids ages 5–8 take part in an interactive tale that describes how the alphabet was created and evolved.

### What's Up, King Tut?

**Wed, Jul 26, 10am–12pm**
Free
*Registration recommended*

King Tut wasn't the only boy king? Find out the real story of what makes King Tutankhamun famous, find his artifacts in our gallery, and decipher the hieroglyphs on his 17-foot-tall statue.

**FAMILY PROGRAMS** meet at the Oriental Institute unless otherwise noted. Children under 13 must be accompanied by an adult.

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# THE ORIENTAL INSTITUTE WELCOMES

## Brendan Bulger

has been a grant and program administrator for major, education-focused nonprofit organizations for over thirteen years. Brendan joined the Oriental Institute in February 2017 as program administrator for the Afghan cultural heritage grants received from the US Department of State via the US Embassy Kabul. In March, he traveled to Kabul as part of the OI team to participate in strategy, planning, and working sessions with key project partners at the National Museum of Afghanistan, the Afghan Ministry of Information and Culture, Kabul-based NGO's, and the US Embassy Kabul. He looks forward to supporting the OI's ongoing work in Afghanistan to build local capacity that strengthens and expands partners' conservation, data management, and educational outreach efforts around the country's rich cultural heritage.

## James M. Gurchek

joined the Oriental Institute in February 2017 as the associate director of administration and finance. Jimmy is responsible for the successful management of all Institute operations including budgeting, finance and accounting, human resources, procurement, grants and contracts, and facilities management. He oversees the annual operating budget of $8M consisting of grant, gift, endowment, and university allocation revenues.

Before joining the OI, Jimmy was the administrator for the Section of Cardiology in the Department of Medicine at the University of Chicago Biological Sciences Division, where he was lead administrative officer responsible for implementation, direction, and policy development in the areas of finance (revenue/expense management), professional fee billing, clinical affairs, grants and contracts, academic affairs, human resources, facility operations, and fellowship training programs. Prior to that, Jimmy was the executive department administrator for Northwestern University Feinberg School of Medicine Basic Science Departments. Jimmy also spent twelve years at Purdue University Calumet (now Purdue University Northwest), where he utilized his engineering background to design and build new television and radio studios for the communications department before transferring to an administrative position. While at Purdue University Calumet, he earned a B.S. in finance and a Master of Business Administration degree.

Discover how the Ancient Egyptians Controlled their Immortal Destiny

# BOOK OF THE DEAD
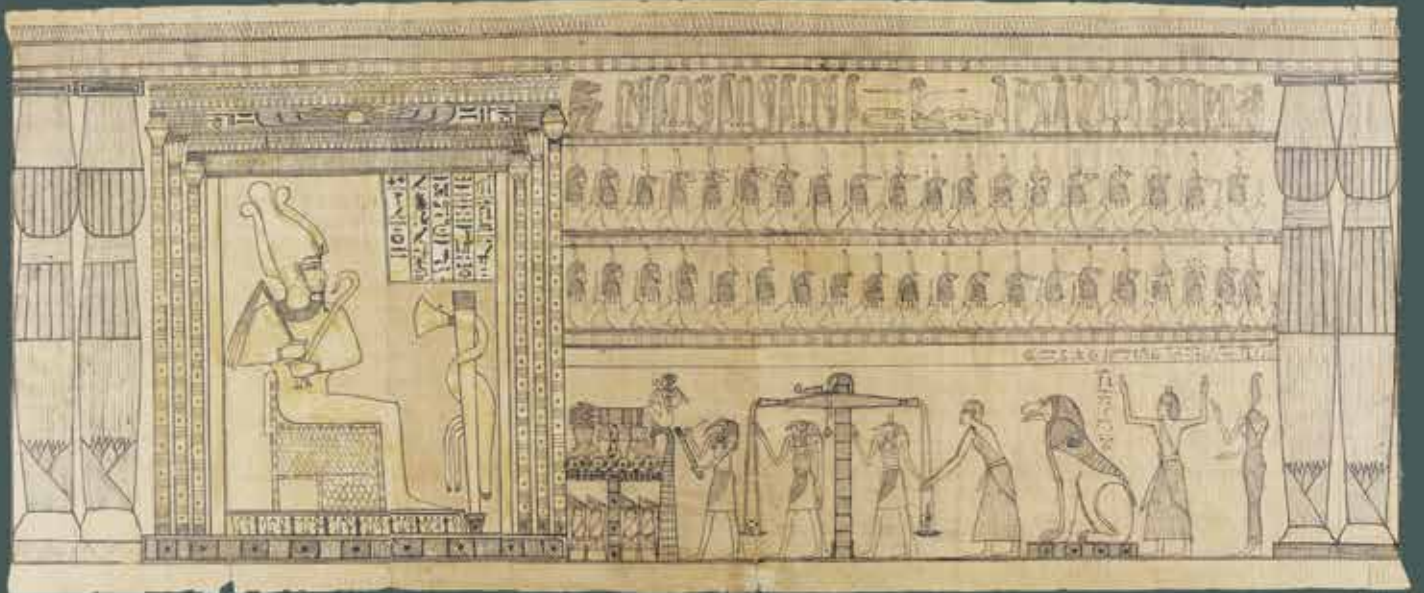


## BECOMING GOD IN ANCIENT EGYPT

Opening October 2017

Members' Preview Party
Sunday, October 1
1:00–4:00pm
Registration required

Join us for an exclusive members' preview of the new Special Exhibit, Book of the Dead: Becoming God in Ancient Egypt, with cocktails and hors d'oeurves, a lecture by the curator, and more. This exhibit, curated by Dr. Foy Scalf, explores what the Book of the Dead was believed to do, how it worked, how was it was made, and what happened to it. Presenting the newest research on the Book of the Dead, the exhibit illustrates what it meant to the ancient Egyptians, and how through text and elaborate imagery, they sought to live forever as gods. Members, look for your invitation in the mail. You will be the first to see this exciting exhibit.

# VOLUNTEER SPOTLIGHT
## MARGARET SCHMID

*BY* Shirlee Hoffman

Shirlee, Oriental Institute volunteer, sits down to interview volunteer Margaret Schmid.

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

I've been interested in Egypt for some years, and when I moved to Hyde Park in the autumn 2012, having visited the OI previously, I already knew I wanted to become a docent. I signed up as soon as I could.

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

I had dabbled in learning about ancient Egypt, and had been on one very fascinating trip to Egypt a few years before moving to Hyde Park, a trip that only increased my interest. I also had been very attracted to Chinese history, given the long history and current significance of that country, and had visited there twice. In general, I think that understanding history is both compelling and essential: I'm a believer in that aphorism that goes something like "those who don't know history are condemned to repeat it." Becoming an OI docent and being able to expand my knowledge of the history of the ancient world was a perfect match.

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

In general, I give tours to visitors, something I always enjoy. I also serve as Thursday co-captain, although, candidly, I prefer giving the tours! Related to my experience giving tours, I served as one of the coaches for the most recent group of docent trainees. Additionally, I've assisted several faculty with their projects. For Brian Muhs, associate professor of Egyptology, I corrected the diacritical marks in some texts written in Demotic, which is both an ancient Egyptian script and a later stage of the Egyptian language; for Foy Scalf, head of the Research Archives, I input data into the Integrated Database; and now, for Emily Teeter, research associate and special exhibits coordinator, I am working on creating labels for use in the Egyptian gallery as the exhibits are renewed.

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

I like the combination of being a tour guide and the easy opportunities to keep learning more. Our tours vary widely, and that's part of the fun. Even sixth grade groups can be like night and day — they can be so different! I have been fascinated to learn about the social/economic/political/military history of Egypt. Before I came to the OI, I knew relatively little about either the Egyptian empire or Mesopotamia. Sadly, some of that early history eerily presages what is happening there now. It has also been intriguing to begin to understand how much geography shaped the early development of Egypt as opposed to Mesopotamia, and to consider how that basic insight applies elsewhere, as for example to our own country with its vast and fertile interior.

### 5. What has surprised you?

Since I knew so little, it has been fascinating to see the myriad ways in which James Henry Breasted's insight that the "Fertile Crescent" was the birthplace of Western civilization is correct. For example, it's really striking to see the way in which the Mesopotamian base-six number system is reflected in our system of telling time and measuring.

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

Think about what you like might to do at the OI, but definitely become a volunteer! While not everyone wants to be a docent, there are many other ways to make a contribution, all welcomed. The OI is a great place to spend your time.

**Explore becoming a volunteer** at uchicago.edu/volunteer.

# TRAVEL PROGRAM



**Iran** A group of twenty-six participants joined the Oriental Institute on the Ancient Land of Persia tour, led by OI Director Gil Stein, and accompanied by Curator and Research Associate Kiersten Neumann, in October 2016. This exciting two-week journey included exclusive, behind-the-scenes access to the famous "Gold Room" in the National Archaeological Museum in Tehran; visits to the ruins of the Palace of Darius in Ahwaz, one of the oldest settlements in the world; the UNESCO-listed site of Persepolis, a wonder of the ancient world, the famous Zoroastrian Fire Temple in Yazd; and the magical city of Isfahan.



**Egypt** In March 2017, fourteen participants joined Oriental Institute tour leader Lanny Bell, associate professor emeritus of Egyptology, and Brittany Mullins, tour host, on an exclusive two-week adventure through the history, archaeology, and culture of Egypt, including a private "after-hours" tour of the Egyptian Museum; an evening at the Oriental Institute's Chicago House; a visit to the Valley of Kings; a leisurely cruise along the Nile while touring Luxor, Edfu, and Aswan; and access to the tombs of Ramesses II and his wife Nefertari at the temples of Abu Simbel.

# JAMES HENRY BREASTED SOCIETY EVENT:
# A NIGHT OF ASTRONOMY, ASTROLOGY, AND MAGIC

On the beautiful spring evening of April 13, 2017, the Adler Planetarium's Webster Institute members joined the Oriental Institute's James Henry Breasted Society members under a full moon to learn more about astronomy, astrology, and magic in the ancient world within the galleries of the Oriental Institute. The attendees viewed artifacts presented by Research Associate Tasha Vorderstrasse, Assistant Professor John Wee, and Professor Robert Ritner. James Henry Breasted Society and Webster Institute members received a detailed and in-depth look at specific artifacts, including the Aramaic incantation bowls, Babylonian cuneiform tablets, Egyptian water clock, and astronomical sighting stick in the Oriental Institute's collections and the stories behind them.

This event was sponsored by the members of the James Henry Breasted Society who provide an annual, renewable source of unrestricted support for the most pressing research projects of the Oriental Institute.

Photos from A Night of Astronomy, Astrology, and Magic, a James Henry Breasted Society event on April 13, 2017 (all photos: David Turner Photography)

# FROM THE FIELD

The Oriental Institute has sponsored archaeological and survey expeditions in nearly every country of the Near East. There are projects currently active in Egypt, Turkey, Israel, and the West Bank. These completed and ongoing excavations have defined the basic chronologies for many ancient Near Eastern civilizations and made fundamental contributions to our understanding of basic questions in ancient human societies, ranging from the study of ancient urbanism to the origins of food production and sedentary village life in the Neolithic period. Follow the upcoming projects through their websites. If you're interested in supporting one of the Oriental Institute's archaeology field projects, please contact Brittany Mullins, Associate Director of Development, at 773.834.9775, or email her at bfmullins@uchicago.edu.

**KABUL, AFGHANISTAN**
**Oriental Institute–National Museum of Afghanistan Partnership and Cultural Heritage Protection Work**
**Dates: Ongoing**
**Director: Gil Stein**
**Onsite Director: Alejandro Gellego**
oi/research/projects/afghanistan.html

**ZINCIRLI, TURKEY**
**Neubauer Expedition to Zincirli**
**August 1–September 30**
**Director: David Schloen**
zincirli.uchicago.edu
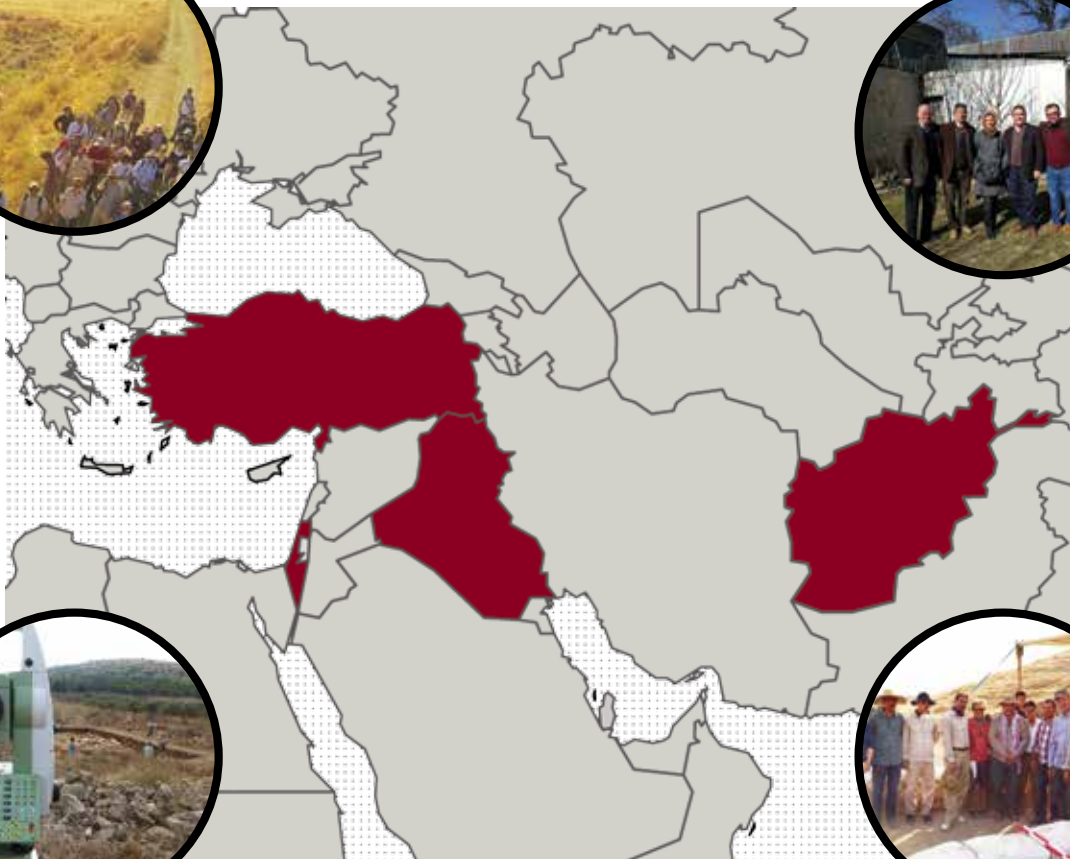








**GALILEE PREHISTORY PROJECT**
**Tel Nes/Tell Sanjuk, Israel**
**July 2–August 7**
**Directors: Yorke Rowan and Morag Kersel**
galileeprehistoryproject.org/

**SUREZHA ARCHAEOLOGICAL PROJECT**
**Erbil Governate, Kurdistan Region, Iraq**
**July 13–August 20**
**Directors: Gil Stein and Abbas Alizadeh**
uchicagoarchaeology.com/surezha

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# EXHIBITION HIGHLIGHTS



### DRONES IN THE DESERT:
### ARCHAEOLOGY FROM ABOVE

**Lower Level of the Oriental Institute,
through August 13, 2017**

This photo show explores how aerial perspectives allow archaeologists to detect patterns that may be invisible or unrecognizable from the ground. Kites, fishing poles, ladders, balloons, unpiloted aerial vehicles [UAVs], full-size helicopters and planes, and satellites are all used to produce images that aid in assessing and planning archaeological monuments, sites, and landscapes. The exhibit addresses how recent technological developments, coupled with sophisticated software, are creating new and vibrant opportunities for archaeologists to do more with images from the air. The photos illustrate the use of drones at sites in Jordan and Israel for broad-scale archaeological survey of sites, monitoring of landscape change (including looting), and mapping of excavations.

### PERSEPOLIS:
### IMAGES OF AN EMPIRE

**In the Special Exhibit Gallery,
through September 3, 2017**

See the magnitude and grandeur of the ruins at this center of the Achaemenid Persian empire (ca. 550–330 BC) through prints of iconic photographs taken during the Oriental Institute's Persian Expedition (1931–1939). Quotations from travelers to the site and a multimedia display featuring the architecture of Persepolis and its surrounding topography add dimension and context to this powerful show.

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THE
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The University of Chicago
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Chicago, Illinois 60637
**oi.uchicago.edu**

# INFORMATION

## MEMBERSHIP

### YOUR PARTNERSHIP MATTERS!

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

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

**$50 ANNUAL / $40 SENIOR (65+) INDIVIDUAL**
**$75 ANNUAL / $65 SENIOR (65+) FAMILY**

### HOW TO JOIN OR RENEW

**ONLINE:** oi.uchicago.edu/getinvolved
**BY PHONE:** 773.702.9513
**ON SITE:** at the Suq Gift Shop

## GENERAL ADMISSION

FREE

ADULTS
*$10 suggested donation*

CHILDREN 12 OR UNDER
*$5 suggested donation*

## MUSEUM & GIFT SHOP HOURS

*Closed Monday*

*Sun–Tue, Thu–Sat: 10am–5pm*

*Wed: 10am–8pm*

### THE MUSEUM IS CLOSED

January 1
July 4
Thanksgiving Day
December 25

### ACCESSIBILITY

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

### PARKING

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

### GROUP VISITS

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

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