2018 ASOR Abstract Book

Plenary Address

Hélène Sader (American University of Beirut), "Between Looters, Private Collectors, and Warlords: Does Archaeology Stand a Chance?"

Endangered archaeology is not a modern phenomenon: archaeological sites and monuments have suffered from looting and destruction since earliest antiquity. Looking back at the past we witness recurrent destructions and burning of cities, looting of treasures, violations of tombs, and more. However, the danger seems more acute and the destructions more shocking today. Endangered archaeology has become a major concern of both states and individuals because of the awareness people have developed of the importance of the past and the need to preserve it. The role of the media in informing and raising public awareness cannot be overstated. In spite of this, archaeology continues to be endangered and the causes of the threats have not changed. As an observer who witnessed and accompanied all the vicissitudes of Lebanese archaeology before, during, and after the civil strife, Hélène Sader will address the endemic causes of this phenomenon from the Lebanese perspective. She will discuss what was, what was not, and what should have been done to remedy the situation and preserve archaeological heritage. There may still be a chance to save archaeology.

1A. Ancient Inscriptions I

CHAIRS: Michael Langlois (University of Strasbourg) and Anat Mendel-Geberovich (The Hebrew University of Jerusalem; Israel Antiquities Authority)

Aren Wilson-Wright (University of Zurich), "Semitic Letter Names in Group Writing: A Reevaluation of the *Halaḥam*-Ostracon from TT99"

In 2015, Ben Haring published an Egyptian ostracon from an early New Kingdom tomb (TT99), containing the remains of seven lines of hieratic text on the verso and five on the recto. Each line consists of two parts: a short text in group-writing and additional, left-justified determinative. Haring argued that the verso contains a sequence of Egyptian words arranged according to the *halaḥam* alphabetic sequence and highlighted the importance of the ostracon for the study of the alphabet. It is the earliest known example of the *halaḥam* order. Subsequently, Hans-W. Fischer-Elfert and Manfred Krebernik have argued that the verso records Semitic letter names arranged in the *halaḥam* sequence. They also have identified the entries on the recto as Semitic letter names, but are unable to reconcile their arrangement with the *halaḥam* order. Furthermore, Fischer-Elfert and Krebernik must postulate several previously unknown letter names, such as *gūr* 'dove' for *g* (traditionally *gaml* 'throw-stick') and *zīr* 'pot' for *z* (traditionally *zayn* 'ax') in order to fit the Egyptian text. In this presentation, by contrast, I will argue that the ostracon contains—for the most part—known Semitic letter names along with a few additional grammatical elements, which may form part of a mnemonic verse. I will also argue that the recto features a series of letters from near the end of the *ḥalaham* sequence. The ostracon thus constitutes an important witness to the antiquity of both the traditional Semitic letter names and *halaḥam* alphabetic order.

Jean-Philippe Delorme (University of Toronto), "A Place Among the Baals/Lords? A New Reading of the Sarcophagus Inscription of Aḥirōm, King of Byblos (KAI 1:1)"

In 1923, a landslide on the slope of the tell of Djebeil/Byblos led the French expedition of P. Montet to discover the royal necropolis. In total, nine tombs dated to the second millennium B.C.E. were uncovered. Tomb V contained the remains of three sarcophagi, one of which was engraved with what would prove to be the oldest known Phoenician inscription. The text was quickly published by R. Dussaud and led to extensive discussions that continue to this day.

Among the difficulties presented by this inscription, the reading at the end of the first line (*kšth•b'lm*) remains a *crux interpretum*. Scholars usually propose to emend the verb into a noun (*kšbth*) or to hypothesize an abbreviation for *bt 'lm*. Both options have been shown to be untenable. The present paper proposes a new reading for the ending of line 1 in light of royal mortuary practices. This approach allows two possible scenarios: 1) Aḥirōm was installed in the netherworld among his deceased predecessors, here called *b'lm*. Dead kings (*rp'u* and *rĕpā'îm*) are often linked to the god Baal (KTU 1.22) and the root *b'l* is occasionally used to describe their rule (e.g. Isa 26:13–14); 2) Aḥirōm was placed with the other lords of the city. Textual evidence uncovered in tombs II and IV demonstrate that the kings of Byblos often took the Egyptian title of prince or count. *B'lm* would be the Phoenician translation of one constituent of the local royal titulary.

Andrew Burlingame (University of Chicago), "The Head and Pectoral Inscriptions of Eshmunazor's Sarcophagus (AO 4806 = KAI 14)"

The inscription found on the head of the sarcophagus of Eshmunazor II of Sidon has been known almost since the sarcophagus was discovered in 1855, but the relationship between this inscription and that appearing on the pectoral surface has remained the subject of ongoing discussion. Based on an epigraphic study of these inscriptions, I offer new readings and show that the traditional view, according to which the head inscription was abandoned due to a high incidence of errors and recopied on the pectoral surface, must be rejected in favor of other alternatives. The merit of recent historical proposals regarding the manufacture of these inscriptions is evaluated in epigraphic and palaeographic terms as well.

Shirly Ben Dor Evian (Israel Museum), "Sheshonq at Megiddo: A New Interpretation"

The limestone fragment carved with the royal names of Sheshonq I at Megiddo was found among the excavation dumps on the tell during the season of 1926. Since its discovery, the piece was recognized as part of a large royal stela, erected by the monarch at the site as a sign of Egyptian patrimony. A recent reexamination of the original fragment by the author reveals several anomalies in comparison to the known corpus of Egyptian stelae. Among these is the fragment's unusual thickness, more than 50 cm wide, and the absence of any smoothed edges on either of its sides. A comparison to contemporary (early 22nd Dynasty) material from both Egypt and the Levant suggests that the fragment was part of an architectural element rather than a stela. The significance

of such an interpretation relates directly to Egypt's involvement in the Northern Valleys. Erecting a stela in a faraway land may have had little or no effect on the local population and cannot attest to continual Egyptian claims on the site. However, a royal inscription on local architecture reflects, at the very least, aspirations of hegemony. Establishing core/periphery relations through the implementation of royal Egyptian institutions was a well-known strategy of the previous Egyptian empire in the Levant, an empire that Sheshonq's regime was eager to recreate. The role of Egyptian monuments in the early Iron Age Levant will therefore be examined through similar models of core/periphery and imperial influence.

Fokelien Kootstra (Leiden University), "Analyzing Variation: Statistical Methods and Dadanitic Epigraphy"
Dadanitic is the name of the script used to carve inscriptions in and around the ancient oasis of Dadan (modern-day al-'Ulā), located in the northwest of the Arabian Peninsula. These inscriptions were produced between the sixth and first centuries B.C.E. One of the most persistent questions about this corpus concerns the variation attested in all layers of the inscriptions, both linguistically and in their physical aspects. While previous scholars have described the variation (e.g., Sima 1999), no comprehensive explanation exists for it to date.

This paper uses statistical methods common in corpus linguistics to identify significant correlations between variables, i.e., to see which variables co-occur within the same inscription more often than can plausibly be explained by chance. The analysis considers the execution, language, and function of each inscription, thus giving both the text and the object due consideration. This approach reveals two main driving forces behind the variation: language change and the use of different registers.

More generally, this methodology will open the door to a better understanding of linguistic variation underlying the written record of pre-Islamic Arabia, thus increasing our insight into its diverse linguistic landscape. Additionally, it casts new light on the interplay between written standard and spoken language in the different Arabian epigraphic corpora.

1B. Archaeology and Biblical Studies I

CHAIR: Jonathan Rosenbaum (Gratz College)

PRESENTERS:

Erez Ben-Yosef (Tel Aviv University), "Throwing the Baby Out with the Bathwater: On a Prevailing Methodological Flaw in the Treatment of Nomads in Current Biblical Archaeology"
The aim of this paper is to highlight a methodological flaw in current biblical archaeology, one which became apparent as a result of recent research in the Aravah's Iron Age copper production centers. In essence, this flaw, which cuts across all schools of biblical archaeology, is the prevailing, simplistic approach applied to the identification

and interpretation of nomadic elements in biblical-era societies. These elements have been typically described as representing only one form of social organization, which is simple and almost negligible in historical reconstructions. However, the unique case of the Aravah demonstrates that the role of nomads in shaping the history of the region has been underestimated and downplayed in the research of the region, and that the total reliance on stone-built archaeological features in the identification of social complexity in the vast majority of recent studies has resulted in skewed historical reconstructions. Recognizing this "architectural bias" and understanding its sources have important implications on the study of core topics in biblical archaeology today, as both "minimalists" and "maximalists" have been using stone-built architectural remains as *the* key to solving debated issues related to the genesis of ancient Israel and neighboring polities (e.g., "high" vs. "low" Iron Age chronologies), in which—according to both biblical accounts and external sources—nomadic elements played a major role.

Peter Feinman (Institute of History, Archaeology, and Education), "What Happened on October 30, 1207 B.C.E. in the Valley of Aijalon?"
The suggestion has been made that on October 30, 1207 B.C.E. in the late afternoon in the Valley of Aijalon an annular eclipse occurred. The suggestion further has been made that this astronomical event is connected to the poem in the Book of Jashar recounted in Joshua 10. The astronomy and physics in the calculation of the annular eclipse are not the subject of this paper. Given the validity of those calculations, what historical reconstruction, if any, can be proposed that takes into account the relevant archaeological and biblical information including the Merneptah Stele, the Iron Age I hill-country settlements, Iron Age I geo-politics, the poem, and the narrative biblical texts?
I propose that the emergence of Israel as an anti-Egyptian entity generated a reaction among the Canaanite cities. Some cities shared Israel's antipathy to Egyptian hegemony and welcomed the new entity while others were good vassals of Egypt and opposed the Canaanite cities and Israel that disrupted the Egyptian order. In other words, there is a story to be told of real-world power politics that has been lost amidst the cosmic imagery and the fight to determine whether the Bible is true. Applying the same techniques an American historian would use to understand the American Revolution may provide a more fruitful resolution of these issues.

Yosef Garfinkel (The Hebrew University of Jerusalem), "Lachish and Khirbet al-Ra'i in the Tenth Century B.C.E."
This paper will discuss the new data relating to the tenth century B.C.E. uncovered at the recent excavations at Tel Lachish and Khirbet al-Ra'i. Both sites are located in the Judean Shephelah, 3 km apart. The excavations at Lachish took place between the years 2013 to 2017. The site of Khirbet al-Ra'i has been under excavated since 2015 and so far four excavation seasons have taken place there.

Kaz Hayashi (Baylor University), "Lions and Cattle and Cherubim as Sacred Boundary Markers on the Solomonic Temple and Ancient Near Eastern Monumental Architecture"
Since W. F. Albright's seminal proposal that ancient Israelites conceived YHWH's invisible glory dwelling upon the cherubim and golden calf (Albright 1938), scholars

have postulated that some correlation exists between the cherubim and the bull. In recent years, for instance, Izaak de Hulster has attempted to explain the correlation by postulating that at an early period, storm gods perhaps mounted a cherub in a bull-like form (de Hulster 2015). While some relation between the cherub and bull certainly exists, how and why these creatures relate to each other remains unclear.

The current study, therefore, aims to explain the relationship between lions, cattle, and cherubim, and why they appear together in the Solomonic Temple. In order to ascertain the relationship between the cherubim and cattle, I will evaluate how these two entities appear together within the Hebrew Bible and the ancient Near East. The two creatures appear together only in 1 Kings 7:29, where lions, cattle, and cherubim decorate the ten bronze stands made for the Solomonic Temple. By reading the biblical text in light of the ancient Near Eastern monumental architecture (namely, the Ain Dara Temple, Ishtar Gate, and gates at Carchemish), I contend that lions, cattle, and cherubim constitute a triad acceptable to portray on monumental structures (i.e., temples, palaces, and gates) and function as boundary markers within the ancient Near East.

Rami Arav (University of Nebraska at Omaha), "'He Made the Fortresses Strong, and Put Commanders in Them, and Stores of Food, Oil, and Wine' (2 Chr. 11:11)— The Royal Storage House at Bethsaida"
At the city of Bethsaida, adjacent to the city gate and sharing a common wall with it is the storage house of Stratum V (ninth to eighth centuries B.C.E.). The storage house, 13 m by 10 m, was built with massive walls and contained three halls divided by two partition walls, suggesting a clearstory above the central hall. The entrance to the storage house was at the central hall. Four entrances connected the central hall to the side halls. One hundred and sixty-eight vessels, completely or partly reconstructed, were discovered in the storage house. Among them were 81 storage jars, 43 bowls, and 15 cooking pots. Noteworthy is a single large vat, 70 cm in height and 65 cm in diameter. The storage house was thoroughly destroyed and burned during the Assyrian military conquest in 732 B.C.E. All the vessels were shattered and scattered all over the halls. None was found intact.

Four types of jars were discovered. The most distinctive type is dubbed Wide Mouth Jar, with a rim of 20 cm in diameter. This type is unknown in the archaeology of the southern Levant. The function of these jars is unknown. The four types of the jars were selectively placed in the three different halls.

The presentation will suggest that, since the storage house, the gate, and the palace are all located in one complex, this was a royal storage house. The book of Chronicles provides an example of the content of royal storage houses.

1C. Archaeology of the Near East: Bronze and Iron Ages I

CHAIR: Eric L. Welch (University of Kentucky)

Aren M. Maeir (Bar-Ilan University), "The 2018 Excavations at Tell es-Safi/Gath: Overview of the Results"
In this paper I will present an overview of the results of the 2018 season of excavations at Tell es-Safi/Gath, in which the team concentrated their efforts in the excavations of various areas in the lower city of the site, with finds predominantly from various stages of the Iron Age.

Deborah Cassuto (Bar-Ilan University), "Tying Up Loose Ends: Weaving and Cult in the Southern Levant"
Loom weights, representing weaving on the warp-weighted loom, have been found in diverse contexts throughout the southern Levant of the Iron Age. Frequently they have been found in contexts associated with cultic artifacts or within cultic structures, raising basic questions as to the determinative factors of this concurrence. Although ancient Near Eastern texts describe an association between cult and textiles intertwined with festivals, this need not be the singular motive for an on-site production of textiles. Moreover, it has long been accepted that the discovery of cultic artifacts *in situ* need not definitively denote a prime cultic purlieu. Recent studies have demonstrated that the functional parameters of textile tools influence the final product and as such can be used to estimate the types of cloth they produced (Andersson Strand and Nosch 2015). As part of an investigation of Iron Age ritual in the region, an in-depth analysis of the loom weights from various cultic settings in the southern Levant will be presented to evaluate the organization of textile production in these contexts and the meanings embedded in the mutual association of cult and textiles.

Harel Shochat (University of Haifa) and Ayelet Gilboa (University of Haifa), "A Tale of Two Walls—High Resolution Analysis of the Phoenician/Israelite Transition at Tel Dor"
In the ninth century B.C.E. layers at Tel Dor, a significant change in the material culture is observable. Abandoning the coastal affiliation that characterized its Early Iron Age strata, Dor's material culture turns inland. In Area D2, two monumental ashlar walls have been unearthed, suggesting a massive construction project overriding the city's citadel that towered above the southern lagoon for centuries. In order to date this change and the cultural transition with which it coincides with the best accuracy possible, a high-resolution analysis of the stratigraphic sequence and ceramic assemblages was employed, followed by a methodological comparative study. This included the contextual study of constructional fills, which is not frequently performed for similar constructions elsewhere. Methodologically our research highlights the benefits of employing "low tech" archaeological methods in high resolution and of analysis that is (almost) free of biblical narrative-derived interpretations. The careful excavation and detailed documentation of the excavation progress enables us to do so and gives us better understanding of the changes in the material culture.

The current research's comparative advantage derives from the "sudden" change in material culture during the Iron Age II and opens a unique window of opportunity to correlate a long-debated chronological scheme to a fixed point in time. The results shed new light on the main chronological anchors of the Iron Age II in the kingdom of Israel,

on the date of Israel's expansion to the Mediterranean coast, and on Israelite concepts of ashlar construction.

Sonia Pinsky (University of Haifa), Shay Bar (University of Haifa), and Yiftah Shalev (Israel Antiquities Authority), "An Eighth-Century B.C.E. Israelite Administrative Center in the Northern Sharon Plain, Israel"
In this paper we will present the results from the Tel Esur excavations conducted between 2010 and 2018. Surrounded by fields, the site of Tel Esur is situated in the northern Sharon Plain, strategically located in the western entrance to the Via Maris branch that passed through Wadi 'Ara. Albeit small, the site bears evidence for state involvement, as similar architecture is known from large centers like Hazor and Megiddo. Some very well preserved remains of a massive public building, including a fortified tower and three long paved rooms abutting it were exposed. These remains seem to be part of a regional administrative center, dated to the first half of the eighth century B.C.E., probably to the reign of King Jeroboam II (786–746 B.C.E.).

The tripartite building is of primary importance since it has been argued that structures such as this one had been used for storage or as stables. Based on the data from Tel Esur, we believe the notion that the structure was used for stables to be quite plausible, and in consequence, that Tel Esur could be connected with a large horse trade between Egypt and Mesopotamia with trading posts throughout Israel. The involvement in this commerce was beneficial for the kingdom of Israel, which had a heavy tribute to pay to Assyria. We will discuss here the similarities between the Tel Esur structures and those found at other sites, and define the possible role of Tel Esur in this Egyptian-Mesopotamian commerce.

Eli Itkin (Tel Aviv University), "Ḥorvat Tov: A View on Judah's Southern Frontier in the Seventh Century B.C.E."
The eighth century B.C.E. in Judah is characterized by a settlement peak that, by the end of the century, suffered a violent end due to Sennacherib's campaign in 701 B.C.E. Despite this heavy destruction, settlement growth occurred in some fringe areas of Judah during the seventh century B.C.E. A notable example can be seen in the Arad-Beersheba Valley, along Judah's southern border, which reached a settlement peak exceeding that of any previous period. One of the newly established sites in the region is the fortress of Ḥorvat Tov, located ca. 5.5 km northeast of Tel Arad. Although the site was excavated for four seasons during the 1980s and is mentioned in various publications as a key component in the chain of fortresses along the southern border of Judah in the seventh century B.C.E., the site has never been published. My aim is to present the finds of the excavations at Ḥorvat Tov, including the stratigraphy, architectural remains, and material culture. Another objective is to examine the site in light of the historical framework of Judah's southern border, with an emphasis on the Arad Valley during the seventh century B.C.E.

Nathan Lovejoy (Institute for the Study of the Ancient World, New York University), "The Cilician and Cappadocian Bilinguals: The Selection and Display of Script and Image as Statements of Political Identity"

Over the last 75 years, three Phoenician-Luwian bilingual inscriptions have been discovered in Turkey: KARATEPE, ÇİNEKÖY, and İVRİZ 2. The first two were discovered in the region of Cilicia, and the last in southern Cappadocia, thus providing a very limited geographic range for their production. Similarly limited is the chronological extent of their creation; they are all dated within the last half of the eighth century B.C.E. Also consistent across this small corpus is their royal, monumental, and public nature: the inscriptions are carved upon statues, and, in the case of KARATEPE, also on orthostats within the monumental gates of an Iron Age settlement.

The question, then, is why were these bilingual monuments constructed in three different places, within two different kingdoms, by three different people? Why with inscriptions of Phoenician and Luwian, particularly during a time when Aramaic was spreading through the vehicle of Assyrian expansion, and when early Greek-speakers were colonizing southern Anatolia? What might this combination of scripts and languages say about the inhabitants of this region or kingdom? What might it tell us about the relationship between the Assyrian empire and vassal kingdoms at this time? In my paper, I will challenge previously determined linguistically-based ethnic identities in this region and period, and my examination of the Cilician and Cappadocian bilinguals will show that Iron Age kings of southern Anatolia selectively displayed script and image on monumental art in public spaces to present a chosen political identity.

1D. Twenty Years of Excavation at Omrit in Northern Israel

CHAIRS: Jennifer Gates-Foster (University of North Carolina at Chapel Hill) and Daniel Schowalter (Carthage College)

Michael Nelson (Queens College), "Architecture of the Final Phases of Roman Omrit"
After 20 years of exploration at Omrit, two large portions of the site have been excavated. The first is the sanctuary, where three phases of temple building occurred over a relatively short period of time, from the late first century B.C.E. to the mid- to late first century C.E. The last temple stood for quite a long time but underwent several alterations. The second area, to the north of the sanctuary, also experienced multiple phases of construction including monumental street management alterations in the late second to early third centuries that transformed the entire character of the settlement at Omrit. These constructions, too, stood for a long period of time and, similar to the sanctuary, were significantly altered in their later phases. This paper examines monumental architecture and open spaces within the built environment at Omrit and the changes that occurred to both over an approximately 600-year period. The analysis will extend to settlements in the region to assess whether such changes were unique to Omrit or part of a broader cycle of building events.

Adi Erlich (University of Haifa), "The Cult at Omrit in Light of the Terracotta Figurines"
About 100 figurine fragments were found throughout the temple and its temenos, dating to the buildings of the first century B.C.E. The terracottas were found scattered in and

around the temple, and were moved from their original context during construction of the later temple. The Omrit figurines can be divided into two groups. The first group, of small-scale figurines (ca. 10–20 cm high) in the Hellenistic tradition, is a typical assortment of deities, mortals, and animals. The figurines are well established in the Late Hellenistic–Early Roman periods in the Levant. Part of the iconography finds exclusive parallels in Hellenistic Phoenicia, in figurines from Kharayeb and stone reliefs from the Hellenistic shrine at Umm el-'Amed, both in the Tyre region.

The second group is of large-scale figurines (ca. 30–50 cm high) of children with upraised arms with open palm, endemic to Omrit. I suggest that they belong to specific cult performed at the temple, related to rites of passage and perhaps mystery rituals, or thanksgiving ceremonies for children's welfare and health. Children's cult is known elsewhere in Phoenicia. The Upper Galilee was under the control of Tyre and Hellenistic-Phoenician influence is evident in nearby sites of the Hellenistic period. The terracottas from the temple at Omrit point to a local-Phoenician cult of a personal character.

Katherine Larson (Corning Museum of Glass), "Glass Vessels from the Omrit Temple Complex and the Glass Industry of Upper Galilee"
The glass finds from the Omrit Temple Complex span the occupational history of the site from the first century B.C.E. through the Mamluk period. The assemblage consists of well-documented local and regional fabrics and forms typical of the Galilee and southern Lebanon. Absent are luxury and imported glasses, including polychrome, mosaic, facet-cut, engraved, and other decorative wares. The glass from the temple demonstrates the ebb and flow of connectivity of the temple devotees. Early Roman (first–early second centuries) and Early Byzantine (sixth–seventh centuries) assemblages conform to broader regional styles and include imports from the coast, while the glass from the third–fifth centuries is more locally situated within the Upper Galilee.

The most significant glass consists of the mid-first century C.E. deposits within the podium of the temple. More than 80 blown glass unguentaria were identified around the remains of the Early Shrine, along with ash and bone. Similar vessels have been found throughout the region in funerary contexts, suggesting that the temple builders undertook rituals consistent with funerary practices when they reburied the Early Shrine in the third quarter of the first century C.E. This presentation concludes with some thoughts on the longevity and vitality of the glass workshops of Upper Galilee.

Jennifer Gates-Foster (University of North Carolina at Chapel Hill) and Caitlin Clerkin (University of Michigan), "Local Ceramic Industries and the Pottery Assemblage from Omrit in the First and Second Centuries C.E."
Since 2013, a major goal of the Omrit Settlement Excavation Project (OSEP) has been refinement of the Golan regional ceramic chronology, particularly for the first three centuries C.E. OSEP contributes new knowledge about regional ceramics of the Early and High Imperial periods, filling the gap between the ceramic chronologies developed at nearby Tel Anafa and Banias, as the defined sequences end at the former by the mid-first century C.E. and begin at the latter in the third century C.E. We will present our phased ceramic assemblages for the first through third centuries C.E., highlighting key deposits

and features. We will also discuss evidence for regional production as well as the relationship between these earlier Roman wares and later Roman wares, particularly the Golan product known as Hawarit ware.

The pottery documented by OSEP also provides important evidence for Omrit's economic orientation toward Syria—rather than south toward the Galilee or southern Judea—and especially toward the immediate Golan region in the Roman periods. While economic connections with the Galilee exist in the first century C.E., evidenced in the presence of Kefar Hananya Ware through the third quarter of the first century C.E., this trade decreases in the Flavian and Hadrianic periods. From the early second century, the pottery suggests a settlement with economic connections to the north and east: this has important implications for the interpretation of the broader patterns of material culture at the site, particularly the relationship between the settlement at Omrit and the Decapolis cities to the north.

Tziona Grossmark (Tel-Hai College), "The Small Finds from the Site of Omrit"
The assemblage of jewelry and other small finds from the Galilean site of Omrit is similar to finds from other sites of the same periods in the area. It is of a simple peripheral nature. However, a few items, certainly products of faraway countries, may hint at the special location of the site of Omrit at the crossroads between ancient international routes. This assemblage will be briefly discussed in the first part of my presentation. However, two items, a Neo-Assyrian cylinder seal dated to the end of the eighth century B.C.E. and a hololithic carnelian ring, probably from the 14th century C.E., will be the particular focus of my presentation.

Andy Overman (Macalester College), "Horvat Omrit: A Retrospective View with Thoughts Moving Forward"
This paper provides an overview of the history of excavations of the archaeological site of Omrit from the founding director, from 1998 forward. What were the goals of the excavations at the outset and how did they evolve and change? What appears at this point to be some of the larger contributions of work at Omrit for fieldwork in the region, and for historical scholarship focused on this part of the Levant and the chronological horizons Omrit covers? I conclude with thoughts on Omrit in the future, its role in the region, and its relation to other sites, its environment, and context.

1E. Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration I

CHAIRS: Sarah J. Scott (Wagner College) and Oya Topçuoğlu (Northwestern University)

Annalisa Azzoni (Vanderbilt University), <u>Christina Chandler</u> (Bryn Mawr College), and Mark B. Garrison (Trinity University), "Seals, Texts, Images, and Officials: The Treasurer at Persepolis"
The Persepolis Fortification Archive (PFA), a large archive of administrative tablets from Persepolis dating to the early years of Darius I (509–493 B.C.), offers a rich corpus of

glyptic imagery. Inscribed seals present a particularly important and intriguing subset of imagery/text within this glyptic corpus.

This paper will explore the socio-administrative network of one particular inscribed seal, PFS 981*. PFS 981* carries an Aramaic inscription: "Akšena, [son of] Karkiš, *ganzabara* ('treasurer')." This is the only seal inscription that carries the title *ganzabara*. This title and both Karkiš and Akšena occur, however, in the administrative texts from the archive. The former is in fact a prominent official carrying the titles *kurdabattiš* ("chief of workers") and *ganzabara*; he also acts as regional director under the office seal PFS 1*. Karkiš and Akšena remarkably appear together in three Elamite documents. The inscription, visual imagery, and usage of PFS 981* invite multiple levels of exploration. Visually, PFS 981* has much in common with PFS 1*, the seal used by Karkiš as regional director, signifying potentially a specific glyptic profile associated with certain types of administrators. Akšena and Karkiš may be related by blood (the inscription is opaque in this regard, omitting the usual patronymic designator *br*); the inscription on PFS 981* may thus indicate the possibility of inherited offices at Persepolis. The linkage of PFS 981* (and by extension Akšena) with the bureau of another regional director, Iršena, potentially reflects the apprenticing of members of select families within particular administrative spheres at Persepolis.

Christine Palmer (Gordon-Conwell Theological Seminary), "Israelite Memorial Seals: Fashioning Identity through Glyptic Art" (20 min.)
Israel's high priest officiates at the sanctuary in sacral apparel, the most prominent piece of which is a fabric pouch mounted with four rows of three gemstones in gold filigree settings. The stones, engraved as signet seals, are inscribed with the names of the 12 tribes of Israel. The gem-studded pouch is attached at the shoulders to two semi-precious stones that are likewise engraved as signets with the names of six tribes on either stone. Scholarship to date has interpreted these seals as markers of status and authority reflective of the priestly office. The significance of the seals, however, transcends external insignia of status to fashion a ritual identity for Israel's mediator and the nation whom he represents.

The tribal tokens are contextualized in the performance of religious rites within the sanctuary. As the high priest carries them upon his garments, the signets represent the tribes with a legal-ritual immediacy that serves as a "regular memorial before YHWH." They evoke divine remembrance that reaffirms the binding relationship of YHWH to his people. Before the divine presence, all Israel may be said to participate in worship by virtue of their identifying seals. Glyptic objects effect a ritual remembrance and evoke a divine response that perpetuates the covenant identity of the worshippers. In turn, the high priest's identity as mediator is enacted through glyptic objects, where his role is seen to go beyond representing the tribes in the cultic sphere, to embodying and actualizing upon his person Israel's communion with the divine.

Emily S. K. Anderson (Johns Hopkins University), "Animate and Unstable: Animals and Glyptic in Minoan Crete"

In Minoan Crete, seals would have been extremely useful objects, but that utility depended on a highly unstable relationship. When a seal owner stamped a clay impression, he or she brought into being a charged, material thing that could carry the social weight of embodied will and authority. There was a charged tension between the intimacy of a seal stone, worn on the seal owner's body, and the independence of the clay impression, that could "act" at a distance from the seal owner, in another time and place. The image engraved on the seal mediated this tense divide and was itself invigorated by it. This image had an animate existence, moving from the human's skin to somewhere apart from that fleshy body, its own form inverting in the process. Many types of image appear on Minoan seals, prominently including animals. But lions are unique for having a Minoan existence that is primarily restricted to this medium, with few extant representations occurring in other media. Lions did not roam as living beasts on Crete, so seals were the context in which they were known visually to Minoan culture, where they literally took form as a Cretan creature. With a focus on lions, this paper examines how the highly distinctive spatial dynamics implied in seal use would have contributed to the shaping of an animal's identity on the island and how, in turn, the beastly became embedded in the formation of persons' identities through seal use and ownership.

Benedetta Bellucci (University of Pavia), "May Your Name Be Safe"
A group of mid-second millennium ring seals belonging to functionaries of the Hittite kingdom show very interesting features. They are engraved with names of the owners written in hieroglyphic Luwian or cuneiform, accompanied by images specifically designed to protect them. In this presentation, I will show a selection of ring seals on which fantastic animals, such as two-headed eagles, griffins, sphinxes, and other creatures, appear beside names of the owners (dos-à-dos). I intend to explore the reasons for such a layout, as well as elucidate the apotropaic functions of these beasts.

1F. Maritime Archaeology

CHAIR: Caroline Sauvage (Loyola Marymount University)

Nicole Constantine (University of Haifa), "An Expansive Coastscape: The Inland Distribution of Tablewares from Akko's Hellenistic Harbor"
In 2012, the Israel Antiquities Authority completed the fifth and final season of excavations of the Hellenistic Harbor at Akko. This excavation revealed several architectural elements including a large harbor storage building and a shipshed. From amidst these structures came an assemblage of more than 2000 pieces of diagnostic Hellenistic pottery—roughly half of which are imported tablewares. The tableware assemblage is a mixture of fine wares from northern Syria and Cyprus and plainware service vessels produced along the Phoenician coast. Previous maritime archaeological research has focused on understanding Mediterranean connectivity by following the long distance trade of storage vessels between harbors. In contrast, this study examines maritime connectivity on a smaller, local scale—specifically, the distribution of imported tablewares from the Akko harbor through Akko's coastal plain and into the Galilee. I argue for an intimate and lively connection between the Akko harbor and its hinterland;

this connection was based not only on economic interdependence but also on shared Phoenician traditions that persisted throughout the politically tumultuous Hellenistic period. Tradesmen moving goods from Akko inland effectively extended Akko's maritime sphere across northern Palestine and into the rural Galilee.

Alexandra Ratzlaff (Brandeis University), "The Akko Hellenistic Harbor Ceramic Assemblage: Harbor Context and Content"
Ceramic assemblages recovered from harbor contexts not only represent the vessels used by local consumers but also reflect the dynamics of maritime exchange to which the harbor was intimately tied. Recent excavations (2009–2012) conducted by the Israel Antiquities Authority along Akko's seawall, approximately between the modern area of Fisher's Port and Hof Ha-Susim, exposed the remains of a Hellenistic harbor complex. Spanning the third century B.C.E. through the early first century C.E., the vessels included in this project show a diverse range of forms and functionality, from storage vessels and transport amphorae to table wares and perfume bottles. The significance of this assemblage is intimately tied to its harbor context. In this paper I will present my analysis of the assemblage, including a typological overview and distribution within the complex. The other noteworthy aspect to this study is the opportunity to examine the context of these vessels as a unique "harbor assemblage," revealing ties to maritime exchange networks as well as how details of their deposition, typology, and ware may reflect their status as imported goods or those in harbor awaiting further export. The assemblage will also be compared to regional Hellenistic harbor assemblages and farther-flung harbors across the Mediterranean, to gauge how the material at Akko compares to its counterparts.

Michelle Creisher (University of Haifa), Michal Artzy (University of Haifa), Maayan Cohen (University of Haifa), and Deborah Cvikel (University of Haifa), "The Amphorae of the Ma'agan Mikhael B Shipwreck, Israel"
The Ma'agan Mikhael B shipwreck, buried beneath 1.5 m of sand, 70 m off the Israeli coast, yielded a cargo of complete maritime transport containers from various sources, dated to the seventh-eighth centuries C.E. The 20 m long shipwreck is one of the largest from this period in the Levant, with a cargo that is unparalleled in the region. Amphorae of the Late Roman types 1, 4, 5, and 13 have been identified and documented in situ, as well as fragments of cooking vessels and Cypriote Red Slip bowls. Several jars are lined with pitch; others held foodstuff and indicate obvious reuse. Some of the jars also bear markings in Greek, Arabic, or Christian symbols.
This study deals with the continuity of trade during the period of transition from the Byzantine period to the Early Islamic period in the region, and the information that can be gained concerning active maritime trade routes, production centers, and commodities. The quantity and variety of the cargo indicate a more diverse network of maritime trade than has previously been seen from this period. The Ma'agan Mikhael B shipwreck is significant in terms of shedding light on the nature of maritime trade networks in this part of the eastern Mediterranean at this time.

1G. Houses and Households in the Near East: Archaeology and History I

CHAIR: Laura Battini (French National Center for Scientific Research [CNRS]; Collège de France)

Clemens Reichel (University of Toronto; Royal Ontario Museum), "Incipient Bureaucracies: Local Dynamics at the Threshold of Urbanism in Late Chalcolithic Syria and Anatolia (4500–3500 B.C.)"
Archaeological work in Syria and southern Turkey over the past decades has shown the existence of urban formation processes that in many ways parallel the development of cities in southern Mesopotamia. The emergence of complex bureaucratic systems in both areas has been explained as the evidence of cultural diffusionism from south to north as well as the outcome of independent developments that were guided by geo-specific determinants. Based on the unusually rich glyptic data from the site of Hamoukar (northeastern Syria) and from other contemporary sites, this paper will show that early bureaucratic systems in northern Mesopotamia and Syria follow technological and institutional trajectories that are not only independent in their form and manifestation but highly distinct from those of southern Mesopotamia, by focusing on household-based production and storage patterns in a proto-urban fabric over specialized institutional administration.

Shira Albaz (Bar-Ilan University), Elizabeth Arnold (Grand Valley State University), Jeremy Beller (University of Victoria), Annie Brown (University of Manitoba), Adi Eliyahu (Ariel University), <u>Haskel J. Greenfield</u> (University of Manitoba), Tina L. Greenfield (University of Saskatchewan), Aren Maeir (Bar-Ilan University), and Jon Ross (University of Manitoba), "Houses and Households in the Early Bronze Age of the Southern Levant: Recent Research at Tell es-Safi/Gath"
In this paper, we will present the results of recent field work in Area E at Tell es-Safi/Gath, Israel. The goal of the excavations was to bring to bear a micro-stratigraphic approach to the study of Early Bronze Age households in a domestic quarter. At least four buildings and an alleyway were uncovered over a dozen seasons of excavation. Taking advantage of close control over stratigraphy across the entire excavation area, we will show in this paper how the buildings change in form and function over time and discuss implications for our understanding of Early Bronze Age household behavior. Buildings are defined by both their architectural features and the range of activities found therein. Buildings shift from having large open spaces when first constructed to increasingly more closed and smaller spaces within their defined areas. Spaces continued to be primarily utilized for domestic activities throughout their life history, with a similar range of activities throughout. Ritual activities occur most visibly when buildings are first established, and become invisible thereafter. Application of traditional definitions of households in buildings is difficult unless the full extent of the building is exposed, since a household may transcend a single structure.

Jennifer Swerida (Johns Hopkins University), "House, Household, and the Umm an-Nar: Structure SS1 at Bat, Oman"
The Early Bronze Age settlements and domestic remains of the Umm an-Nar Period (ca. 2700-2000 B.C.E.), the earliest phase of widespread settled society on the Oman

Peninsula of southeastern Arabian, are increasingly popular subjects of study. Yet, due to imperfect preservation and the allure of nearby monumental contexts, the structure, composition, and dynamics of the Umm an-Nar household remain poorly understood by archaeologists of the region. This paper reconstructs the use-life history of a particularly well-preserved Umm an-Nar house and the multi-generational household who resided within in at the UNESCO World Heritage Site of Bat. This building, Structure SS1, was continuously occupied and gradually modified over the span of 500 years during the Umm an-Nar Period. Structure SS1's prolonged occupation provides a diachronic perspective into the development of its resident household. Additionally, artifacts and activity areas from key occupational phases within and around the building offer insight into household economy, use of space, and daily activities. The result of this study is a diachronic profile of a single house and household within the large Umm an-Nar community that once existed at Bat. This profile will be presented as a unique glimpse into Bat's Umm an-Nar society that achieves a degree of detail previously unavailable in Arabian archaeology.

Cynthia Shafer-Elliott (William Jessup University), "Putting One's House in Order: Household Archaeology at Tel Halif, Israel"
The recent excavations at Tel Halif utilized household archaeology in order to focus on its Iron Age IIB dwellings; as a result, Halif is uniquely placed to help archaeologists and biblical scholars alike better understand the cultural context of ancient Israel/Judah. In order to better understand daily life in ancient Israel and Judah, our focus must shift from the monumental places (like palaces and temples) to the common stage where daily life occurred—the home. In this paper, a detailed analysis of Halif's most recently excavated house (the A8 house) will be presented, followed by a preliminary investigation into its position in the "neighborhood." The focus of household archaeology and its methodology of spatial analysis will be employed to better understand the daily activities of this Iron Age IIB Judahite household.

1H. Archaeology of the Black Sea and Caucasus

CHAIR: Elizabeth Fagan (University of Chicago)

Stephen Batiuk (University of Toronto) and Andrew Graham (University of Toronto), "Report on 2016–2018 Seasons of the Gadachrili Gora Regional Archaeological Project Expedition (GRAPE) Excavations"
The Gadachrili Gora Regional Archaeological Project Expedition (GRAPE) is a joint venture between the University of Toronto, the Georgian National Museum, and the National Wine Agency of the Ministry of Agriculture of the Republic of Georgia to investigate the emergence and evolution of Neolithic cultures in southern Caucasia and the development of Georgian viticulture and viniculture. GRAPE's role is to illuminate the development and adaptation of agricultural and horticultural practices across a series of sixth-millennium Neolithic rural settlements of the Shulaveris-Shomu Culture, focusing on the two sites: Gadachrili Gora, and the culture's eponymous site of Shulaveris Gora. This paper presents the results of the first three seasons of the project,

the resulting changes in our understanding of the chronology of the Shulaveris-Shomu culture, and the development of viticulture in the ancient world.

Khaled Abu Jayyab (University of Toronto) and Andrew Graham (University of Toronto), "Preliminary Results of the Gadachrili Gora Regional Archaeological Survey (Kvemo Kartli, Georgia) 2017–2018"

The Gadachrili Gora Regional Archaeological Survey (GGRAS) is an extension of the Gadachrili Regional Archaeological Project Expedition (GRAPE). This project aims to shed light on the settlement history of this part of Kvemo Kartli in southern Georgia. But more significantly, the project aims to contextualize the Neolithic site of Gadachrili Gora within its region, and examine the changing relations between highlands and lowlands throughout the history of the region. The survey area is 240 km^2 in size focused on the region around the site of Gadachrili Gora. It encompasses the flat agricultural plains to the south of the Khrami River, and the hilly mountainous foothills of the southern Caucasus to the south and southwest. Interspersed along the mountain range are a series of passages in which a number of valleys run through to the plains. These valley systems provide passages from the lowlands into the highlands and are natural communication routes. This paper will provide a preliminary summary of our first two seasons of survey in the region. In it we will address the methodological procedures used for site detection, recording, and processing, in addition to a presentation of our preliminary results on the history of the region, with a focus on the Neolithic, Chalcolithic, and Early Bronze Age periods.

Nicola Laneri (Center for Ancient Mediterranean and Near Eastern Studies), Bakhtiyar Jalilov (Azerbaijan National Academy of Sciences), Andrea Ricci (Kiel University), Stefano Valentini (Center for Ancient Mediterranean and Near Eastern Studies), and Guido Guarducci (Center for Ancient Mediterranean and Near Eastern Studies), "The Kurgans of the Southern Caucasus: The First Season of the Azero-Italian Archaeological Project in Western Azerbaijan"

The GaRKAP (Ganja Region Kurgan Archaeological Project) is a joint Azero-Italian project that aims at investigating the spread of the tradition of burying the dead in large funerary chambers covered with circular tumuli (i.e., kurgans) in the southern Caucasus during a period ranging from the fourth to the first millennia B.C.E. In fact, it is in this region that high numbers of kurgans, dating to the Early Bronze Age (i.e., the Kura-Araxes period) and to the Iron Age, have been identified. In particular, the funerary tumuli dated to the Kura-Araxes period demonstrate a common mortuary custom of multiple human depositions inside a large chamber that is burnt at the end of the ritual practices. The Iron Age burials, meanwhile, are smaller in size and present usually single or double human depositions furnished with bronze objects and, in some circumstances, with the skeletal remains of horses. This paper will present the results of the first season of archaeological work performed in the region west of the modern city of Ganja in western Azerbaijan (i.e., in the Goranboy district), in the steppe of Uzun Rama along the valley of a creek affluent of the Kura river.

Karen Rubinson (Institute for the Study of the Ancient World, New York University), "'A Herd of Horses': Images and Animal Bones in the Middle Bronze Age of Armenia"
Among the burials excavated at the cemetery site of Nerkin Naver, in west-central Armenia, were four Middle Bronze Age (ca. 2350–1550 B.C.E.) burials that contained horse bones. One of these burials also contained a painted jar typical for the period, except for the one detail of its decoration: a "herd of horses" in the words of the excavator Hakob Simonyan. This unique vessel raises the question of the significance of imagery on Middle Bronze Age pottery in the South Caucasus and adjacent areas with shared traditions. The horse bones in the elite burials of Nerkin Naver appear to be food remains. They also seem to be the earliest horse bones reported from mortuary contexts in the region. Horse bones are also found in settlement sites in the same phase and this may be the period when the domestic horse first appears in the region, although that is uncertain. I propose that the appearance of the horses in the painted decoration of this jar is an expression of the new importance of the horse in the lives of the inhabitants, a marker perhaps of one component of the increased mobility at this time. This interpretation raises two further questions: Why is the horse represented only this once (at least based on current evidence)? And does this mean that the "decorative" water birds and other imagery on this group of ceramics have cultural significance?

2A. Ancient Inscriptions II

CHAIRS: Michael Langlois (University of Strasbourg) and Anat Mendel-Geberovich (The Hebrew University of Jerusalem; Israel Antiquities Authority)

Quinn Daniels (New York University), "A Fresh Look at the Meṣad Ḥashavyahu Ostracon within Its Economic Context"
Researchers have read the Meṣad Ḥashavyahu inscription for its epigraphic, linguistic, and legal value ever since its discovery. The current paper addresses a question that has not been answered satisfactorily—namely, why was this Hebrew letter found at a coastal site and what might that entail?

A re-reading of the inscription will show that the letter sender was a grain harvester participating in a highly organized economic system that is now corroborated by archaeological evidence. This economy saw the flow of surplus of crops in an east-west direction – from the hill country down to the ports on the coast. As a result, the paper suggests that the sender was located in inland Judah at an estate designed for stockpiling grain (*ḥṣr 'sm*). The sender was far from the coastal address, and such a context explains why the complaint needed to be written down: the sender could not travel the distance. As a corollary, the coastal destination of the letter represents the power of the port in the late seventh-century political landscape, where the *śar* mentioned in the text held jurisdiction over his inland supply site. This appeal to the *śar* breaks with expected lines of authority (i.e., Jerusalem), and becomes particularly interesting if the coast had already come under Egyptian control (cf. 2 Kgs 23:29, 33–35). A Hebrew-reading *śar* who operated under foreign auspices would represent Judah's entanglements on the international stage at such a crucial moment in its history.

M. Isaac (Independent Scholar), "Negotiating Refugee Identity in Judah: Israelite Tribal Names in Judean Inscriptions in the Wake of Assyrian Invasions"
Following the Assyrian invasion in 733–722 B.C.E., the northern kingdom of Israel underwent a period of political-economic turmoil and a demographic decline that led to the displacement of thousands from the tribes of Israel and their resettlement in southern Judah. Within this fluid context of statelessness and forced migration, there emerged a discourse among Israelite refugees concerning the maintenance of symbolic ties to their pre-displaced past through the replication of tribal names. This paper outlines the criteria for finding Israelite names in Judean inscriptions and examines select names that align with Israelite identity in the Hebrew Bible and inscriptions from the northern kingdom of Israel. The methods of linguistic anthropology are used to analyze the ideological and social significance of the replication of these names.

Tawny Holm (The Pennsylvania State University), "The Sheikh Fadl Tomb Inscription Revisited"
This paper offers a new reading of the faded Aramaic inscription written on the walls of a tomb at Sheikh Fadl, Egypt, which used to be dated to the fifth century B.C.E. Discovered by Petrie in 1921–1922, the inscription was first published by A. Lemaire in 1995 and reedited by B. Porten and A. Yardeni in 1999. As first suggested independently by G. Vittmann and K. Ryholt, the text comprises the earliest narratives about the historical seventh-century hero Inaros of Athribis, who took part in a rebellion against the Assyrians. Building on previous work (Holm 2007) and on a new investigation into the tomb and its inscription under the auspices of the University of Vienna Middle Egypt Project, the author reassesses key points in the fragmentary narrative and addresses some unique features of its Aramaic.

Bezalel Porten (The Hebrew University of Jerusalem), "A Presentation of *Textbook of Aramaic Ostraca from Idumea, Volume 3*"
In the last decades, over 2000 ostraca from Idumea have come to light, scattered in collections around the world. Only some have been published, piece-meal, in dozens of books and articles. They come from a time and place with little other written historical record and thus provide a better understanding of scribal practice, onomastics, daily life, economy, and politics of the fourth-third century land of Israel.

The majority of these ostraca have been categorized as commodity chits and placed into nearly 300 dossiers based on clans and individual payers. Two volumes have appeared so far (*TAO*, vols. 1 and 2), and these were presented in recent years. The third will be published during the autumn of 2018 and includes 488 commodity chits in over 200 dossiers, as well as six dossiers of wooden and liquid commodities that will be presented in tables. The Introduction sets forth the rationale behind the intricate ordering of the chits, including a large dossier of the fragmentary ones (e.g., fully dated, partially dated, undated; payer only; payee only; commodity only; miscellaneous). There are hundreds of names and tens of commodities, as well.

I will present *TAO*, vol. 3 through illustrative photos and handcopies, as well as charts and graphs to introduce this part of the corpus of Idumean ostraca for the very first time. The lecture will focus on exemplary pieces that both allow new conclusions and raise new questions about life in ancient Idumea during the transition years between Persian and Greek rule.

Fred Naiden (University of North Carolina at Chapel Hill), "Greek and Near Eastern Religion in the Marmarini Inscription"
From an odd corner of the Hellenistic world—what is now the village of Marmarini in the mountains of Thessaly—has come a koine Greek inscription containing religious regulations of interest to students of Near Eastern religions. The unnamed goddess central to the inscription cannot possibly be Greek. An 11-line section of the inscription nonetheless explains how to worship her "according to the Greek custom," and thus reveals that a different, unidentified custom is the concern of the remaining 125 lines (see Decourt and Tziaphalias 2015).

The challenges that the Marmarini inscription offers to scholars of the Near East begin with identifying the gods who are named, including Adara, Lillaia, Mogga, and the "Pan whom the Syrians call Neisple." Beyond these and other philological challenges lies the larger task of reconceiving the interpenetration of Greek and Near Eastern religion in the first millennium B.C.E. The familiar term "syncretism" implies amalgamation, but the division of the inscription into a "Greek custom" and some other, foreign custom implies choice on the part of the worshippers. Nor is this the only choice offered them. Again and again, the Marmarini inscription lets worshippers perform what rituals they like, rather than prescribe rituals in the usual manner of religious regulations. This paper hopes to stimulate further research into one of the most important epigraphical finds of recent years.

2B. Archaeology and Biblical Studies II

CHAIR: Jonathan Rosenbaum (Gratz College)

Wolfgang Zwickel (Johannes Gutenberg University Mainz), "The Earthquake in Amos 1:1 and Archaeology"
Only a few links exist to connect biblical texts with archaeology. One important link is the earthquake mentioned in Amos 1:1. Cores taken in the Dea Sea demonstrate that there were two earthquakes in the eighth century B.C. Seismologists propose that the stronger one had its epicenter in Lebanon. Accepting this theory, the earthquake perhaps mostly destroyed sites in northern Israel and Transjordan (as attested by archaeology, e.g., at Hazor or Tell Deir Alla), while sites in southern Israel and Judah were not heavily affected by this earthquake.

This paper will connect destruction levels in northern Israel with this earthquake activity. Even more interesting than destroyed sites are sites evidently built up directly after the earthquake(s). Evidently Jeroboam II used the troubles in the destroyed area to establish

new trade connections to the north and to strengthen the infrastructure for trade connections in Israel.

Meir Lubetski (Baruch College), "Fathoming the Identity of an Official from the Southern Fortress of Judea"
Wilderness and boundary areas scarcely constitute favorable conditions for comfortable living. Ancient ruins of border forts, however, are outposts of civilizations and provide ideal sites for archaeological research. The southern citadel Arad, with its temple, provides a remarkable trove of remains, especially a surprising yield of inscriptions, dating from the late seventh or early sixth century B.C.E.

As often with excavated material, it is not easy to decode inscriptions. Yohanan Aharoni, the lead excavator and interpreter of the Hebrew archives at Arad, deciphered the inscriptions on ostraca found in the temple area, near the cella. One of them, ostracon #52, contained the letters *psyd*, which he proposed was a proper name. He concluded that the name is unknown and did not offer a suggestion as to its sense.

Using Egyptian collateral sources, this paper analyzes the name and suggests its significance, particularly its priestly and Egyptian connections. It sheds light on the link between Judah and its southern neighbor in the period before the conquest of the Babylonians.

John Gee (Brigham Young University), "Persian Period Ostraca and the Bible"
In the last five years over 1000 ostraca from Persian period Judea have been published. Although the ostraca are imperfectly understood, they are understood well enough to draw a number of implications from them, particularly about linguistic usage in the Persian period. The ostraca serve to undermine a number of theories put forth by biblical scholars about the text of the Bible. Specifically, I will show that the linguistic usage in the ostraca undercuts some of the arguments made that would date certain biblical books to the Persian Period.

Torleif Elgvin (NLA University College), "The Archaeology of Post-Exilic Jerusalem and Editing of the Scriptures"
Recent archaeological research suggests a tiny Jerusalem in the Persian and Ptolemaic periods and a massive growth in Hasmonean times, from less than 1500 to 8000 inhabitants. 2 Macc 2:13–15 suggests a royal library in Jerusalem in the early days of Hyrcanus. Larger scribal resources and a Judean restoration went hand in hand.

The Pentateuch and Prophets had received their basic shape by the time of Ben Sira, although books deemed authoritative could still undergo substantial editing. By the time of Ben Sira's translation into Greek, more books had entered the scene. The "library of Qumran" testifies to intense literary activity throughout Judea in the late second and first centuries. From the time of Hyrcanus we should expect intensive scribal interaction with books later deemed "biblical."

In a recent monograph I have argued that the Song of Songs has its origin in Hasmonean and early Herodian Jerusalem, is heavily colored by the Hasmonean restoration of Judea, and reflects knowledge of Greek literature that could be explained by library milieus in Jerusalem. Other scholars have dated Judith to the time of Salome Alexandra. Finkelstein has argued that the list of returnees in Ezra 2:1–67/Neh 7:6–69 and that of the builders of the Jerusalem wall and their districts in Nehemiah 3 reflect the geography of early Hasmonaean Judea. Also geographical lists in Joshua 21 and 1 Chronicles 6 should be explained on a similar background (Lee-Sak 2017). This paper will look for more biblical texts that may have received coloring in Hasmonean times.

Sidnie Crawford (University of Nebraska at Lincoln), "The Caves of Qumran: Differences in Function"
This paper will explore the manuscript caves in the vicinity of Khirbet Qumran in order to determine their uses by the inhabitants of Qumran. There are two types of caves in which manuscripts were found: the natural caves in the limestone cliffs above the plateau of the Dead Sea, and the manmade marl terrace caves that are part of the built environment of Qumran. The limestone cliff caves contained the greatest concentration of hole-mouthed cylindrical jars with bowl-shaped lids, often referred to as "scroll jars," and in three of the caves (1Q, 11Q, and 53) scrolls have been found in situ inside the jars. The marl terrace caves contained far fewer examples of these scroll jars, and no scrolls have been found inside jars.

The paper will argue that the limestone cliff caves were used for the long-term storage of manuscripts that came from the various settlements of Essenes throughout Judea. The scrolls were brought to Qumran, where they were processed for storage by being wrapped in linen and placed in jars, which were usually sealed. They were placed in the limestone cliff caves, after which the entrance was sealed or at least concealed. This type of storage was meant to be long-term, probably permanent. The marl terrace caves, on the other hand, had a variety of functions, including as workshops and temporary sleeping quarters. Caves 4Q, 5Q, and 10Q were part of a cave complex that was used for "overflow" storage from the library complex located at Qumran.

2C. Archaeology of the Near East: Bronze and Iron Ages II

CHAIR: Eric L. Welch (University of Kentucky)

Lyndelle Webster (Austrian Academy of Sciences), Felix Höflmayer (Austrian Academy of Sciences), Katharina Streit (The Hebrew University of Jerusalem), Steven Ortiz (Southwestern Baptist Theological Seminary), Samuel Wolff (Israel Antiquities Authority), Yuval Gadot (Tel Aviv University), Marcella Barbosa (Southwestern Baptist Theological Seminary), and Michael Dee (University of Groningen), "New Radiocarbon-Based Chronologies for City-States of the Late Bronze Age Shephelah"
The Shephelah of southwestern Israel is undeniably an important region for synchronizing the history of the Levant with Egypt in the Late Bronze Age. Textual sources and archaeological finds testify to strong ties with Egypt through much of the

period. Dense Late Bronze Age occupation sequences at key Shephelah sites provide an excellent opportunity for the development of local radiocarbon-based chronologies that can be compared on an independent basis with the Egyptian historical and radiocarbon chronologies.

A concerted effort is currently being made to develop and/or expand radiocarbon sequences for Late Bronze Age strata at several sites in the Shephelah, including Azekah, Gezer, and Lachish. Suitable short-lived samples have been obtained from active excavations, and by sampling from balks left exposed by previous excavations. This paper will present fresh data and Bayesian chronological models from Tel Lachish and Tel Gezer—two dominant city-states of the Shephelah, whose rulers feature prominently in the Amarna archive. The new data will be evaluated together with existing radiocarbon sequences, and the implications for key events and developments of the period will be highlighted.

Stefan Münger (University of Bern) "Early Iron Age Tel Kinrot—Recent and Current Research"
Ancient Kinneret (Tel Kinrot/Tell el-'Orēme) is located on the northwestern shores of the Sea of Galilee. The site is one of the key-sites for the study of urban life in the southern Levant during the Early Iron Age (ca. 1130–950 B.C.E.). Its size, accessibility by major trade routes, and strategic location between different spheres of cultural and political influence make Tel Kinrot an ideal place for studying the interaction of various cultures at urban sites, as well as to approach questions of identity and regionalism at the dawn of the first millennium B.C.E.

The paper will outline the history of the site from the time when—after a long hiatus—it was again settled sometime during the 11th century B.C.E. until the city's annihilation in the first decades of the 10th century B.C.E. and portray the vivid and colorful material culture of the Early Iron Age city, illustrated, e.g., by distinctive architectural styles borrowing concepts from various cultural spheres, or a large and impressively well-preserved pottery assemblage that shows economic and/or cultural exchange with different neighboring regions. Though many facets of the finds and findings characterize the material culture of ancient Kinneret as a typical "Late Canaanite Blend," some culturally sensitive indicators, such as burial patterns or other ritual behavior, point to strong influence from the Syrian realm.

Kyle Keimer (Macquarie University), "New Light from Iron Age I Tell en-Nasbeh"
The site of Tell en-Nasbeh is a major Iron Age tell just north of Jerusalem. Excavated from 1926 to 1935 by William Badè, the site was largely published by his colleagues in two reports in 1947. Subsequent studies, including Zorn's 1993 dissertation, have dealt with various aspects of Nasbeh's remains; however, the site's Iron Age I material culture has never been published. This paper will present for the first time a comprehensive view of Nasbeh's Iron Age I ceramics and will address the site's socioeconomic and geo-political place within the central hill country in the Iron Age I, a time in which nascent polities were developing.

Annlee Dolan (San Joaquin Delta College), "The Role of Cultic Sites on Exchange and Boundary Formation in the Iron Age"
This paper examines the influence of cult places and religious institutions on market exchange and boundary formation in the southern Levant during the Iron Age. Emphasis is placed on both urban—including intra- and extra-mural examples—and non-urban cult places from Moab, Edom, and the Negev. Using a combination of historical, archaeological, and geospatial data, my research assesses the centrality of such shrines in the broader network of trade routes traversing Jordan and the southern Levant, and also their role with regard to territoriality and boundary formation processes. The religious landscape, in theory, can then be reconstructed, identifying the relationship between the shrines and the surrounding urban and rural settlements, transportation and trade routes, as well as access to raw materials and resources.

Ann-Kathrin Jeske (University of Vienna), "Where Did Members of Egyptian Institutions Go to Supply Their King with Things He Desired? A Look at the Southern Levant during the 18th Dynasty"
With rise of the Egyptian 18th Dynasty, there is growing evidence for Egyptians residing in the southern Levant. The textual evidence reports them in the region either during a military campaign, or to govern or secure Egypt's interest, or to acquire goods for the Egyptian state. This paper sheds light on the last motivation, in particular on officials that were involved in the exchange of commodities and tribute between Egypt and the southern Levant.

This study applies a critical reading of the textual record and Egyptian depictions of such activities, on the one hand; On the other hand, it also subjects the archaeological evidence to a reassessment, in order to determine which Egyptian items were brought to the southern Levant by members of the Egyptian administration. This reassessment was conducted with a newly established method merging three specific theoretical concepts originating in anthropological studies, namely cultural appropriation, affordance and object itinerary. The results of both the critical reading and the reassessment of the archaeological evidence are set in relation to answer the following questions: With which settlements did the Egyptian officials interact to acquire goods? What kinds of good were exported to Egypt and what kinds were imported to the southern Levant? Furthermore, the possible transportation/trade routes used are considered.

2D. Archaeology of Israel I

CHAIR: J. P. Dessel (University of Tennessee, Knoxville)

Brigid Clark (University of Haifa), Mario A. S. Martin (Tel Aviv University), and Assaf Yasur-Landau (University of Haifa), "The Middle and Late Bronze Age Cypriot Pottery at Megiddo: Changes in the Interaction Patterns between Cyprus and the Levant"
The Middle to Late Bronze Age transition in Cyprus and the Levant is characterized by political and economic changes, occurring in conjunction with increased international

trade in the eastern Mediterranean. Following this period, the exportation of Cypriot wares significantly increases, with thousands of vessels reaching more than 40 Levantine sites. Tel Aviv University's excavations at Megiddo, from 2010–2014, unearthed a large assemblage of imported Cypriot pottery, including more than 300 diagnostic sherds and vessels. The assemblage demonstrates the important transition from regionalized Middle Cypriot traditions to the standardized assemblages of the Late Cypriot I and II periods, produced explicitly for export purposes. In the context of Megiddo's secure stratigraphic model, this transition from Middle Cypriot III to Late Cypriot I and II wares can be used to analyze chronological synchronisms and the development of trade between Cyprus and Canaan, and can help to better understand the interrelation between political fluctuations of the Late Bronze Age Near East. Furthermore, the changes in trade patterns can be compared to political changes in Late Bronze Age Canaan, as well as processes of state formation in Cyprus.

Takuzo Onozuka (Tokyo National Museum) and Hisao Kuwabara (Tenri University), "Tel Rekhesh in the Iron Age I: An Aspect of Iron Age Demography in the Eastern Galilee"
Tel Rekhesh, generally identified with the Canaanite city of Anaharath, seems to have been a dominant city in the eastern Lower Galilee during the late second millennium B.C.E. Previous excavations revealed the occupational history from the Early Bronze Age to the Early Roman period, with its Iron Age I prosperity of particular interest, as briefly shown in preliminary reports (Paz et al. 2010).

This paper provides a comprehensive survey of the Iron Age I remains at Tel Rekhesh, summing up architectural remains and pottery from each area together with some results of radiocarbon dating. It seems that Tel Rekhesh remained an urban settlement in the transitional phase from the Late Bronze Age to the Iron Age, and continued to flourish into the Iron Age IB. However, these Iron Age I strata were followed by a drastic decline in the subsequent Iron Age IIA. This phenomenon should be worth noting when considered in historical and wider regional contexts.

Robert Mullins (Azusa Pacific University), Naama Yahalom-Mack (The Hebrew University of Jerusalem), and Nava Panitz-Cohen (The Hebrew University of Jerusalem), "The Iron Age I Cult at Tel Abel Beth Maacah"
Over the past six seasons at Tel Abel Beth Maacah, archaeological activity in Area A at the northern end of the lower city has exposed a deep deposit of four Iron Age I strata (A-2 through A-5). Two of these strata contain significant cultic remains. In Stratum A-4 (12th to early 11th centuries B.C.E.), a destroyed building was found filled with restorable vessels and containing standing stones, benches, and an altar. This structure abutted a courtyard enclosed by a rounded wall and containing additional altars and standing stones, as well as an area for food preparation or industrial activity. In Stratum A-2 (late 11th to early 10th centuries B.C.E.), portions of an extensive administrative-industrial complex have been exposed, consisting of at least two well-built structures and evidence for cultic and metallurgical activity. Of particular interest at the northern end of this building is a burnt space containing a very large fallen standing stone, an altar/offering table, benches, stone mortars, broken wavy-band pithoi, a unique petalled

cult stand, and a plastered installation with two basins. This paper will present these finds and discuss them within the chrono-cultural context of the Hula Valley during the Iron Age I.

Andrew Creekmore (University of Northern Colorado), Laura Sweatt (University of Northern Colorado), Thomas Letchworth (University of Northern Colorado), and Aren M. Maeir (Bar-Ilan University), "A Magnetometry Study of the Philistine City of Gath"
This paper reviews the results of the 2017 season of magnetometer survey at Tell es-Safi, the Philistine city of Gath. Our study revealed numerous buildings and features. The data from the northern lower city show a planned city with symmetrical buildings bordering at least two straight streets. The structures and streets are oriented close to the cardinal directions. Without excavating these new discoveries it is difficult to discern the boundary of adjacent buildings, or the function or date of buried structures. That said, due to the proximity of these remains to the surface, future planned excavations have a good chance to uncover substantial parts of the surveyed remains. The magnetic values of the walls of buried structures indicate limestone (or other low-magnetism stone) or mud brick building materials. Many structures have elevated magnetism that suggests burning in interior spaces. This is consistent with the Iron Age IIA (late ninth century B.C.E.) destruction layer of burned buildings discovered in excavations in the lower city in areas D and K, and in various areas in the upper city. This research is significant because it provides evidence for Philistine urban planning that may be compared with other Philistine cities to evaluate, among other issues, the extent to which Philistine urban form was distinct from Canaanite cities, and how it may have changed over time.

Oded Lipschits (Tel Aviv University), "What is New in Tel Azekah? Results from the Sixth Season (Summer 2018)"
The renewed excavations at the site by the Lautenschläger Azekah Expedition are the outcome of an "archaeological legend," according to which the site was totally excavated and destroyed during the 1898 and 1899 seasons directed by Bliss and Macalister. A careful study of the excavation diaries showed us that only very small and limited areas in the site were excavated, while more than 80% of its area was not touched at all—not to mention the lower city that was not known as such before we started to expose it. However, thanks to this "archaeological legend" Azekah was left as one of the last "archaeological black holes" in the Shephelah during all of the 20th century, keeping the site untouched for 113 years and allowing us to excavate it as part of 21st-century archaeology, with more sophisticated and scientific methods. During the long seasons of excavations at the site we have discovered that the preservation of fauna and flora, as well as human remains and residue, is exceptionally good, and the amount of material that we can retrieve, in some cases from remains that were buried under just a few centimeters of topsoil, allows us to gather priceless, surprising, and unique information. In this paper I will present the main finds from our sixth season and will summarize its implication on the history of the site and the area around it.

2E. Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration II

CHAIRS: Sarah J. Scott (Wagner College) and Oya Topçuoğlu (Northwestern University)

Yelena Rakic (Metropolitan Museum of Art), "Texts and Image on Curved Surfaces: The Cylinder Seal as Methodology for Looking at Objects in Mid-Third Millennium B.C. Mesopotamia"
A number of monuments from mid-third millennium B.C. Mesopotamia carry text and image on multiple or cylindrical surfaces. This paper will explore how methodologies employed for understanding text and image on cylinder seals might be useful in looking at such works as stone stelae and mace heads. Questions to be addressed include: How might the challenges inherent to producing communication on a curved cylindrical surface also apply conceptually to larger scale monuments with differing functions? Can a specificity of the image and text relationship on seals be established for this time period that might inform interpretations of how different objects acted? Because the text on seals is closely related to identity in this time period, is the idea of identity encoded on seals applicable in other instances of text and image production?

Joanna S. Smith (University of Pennsylvania), "Speech Bubbles, Text Panels, and Inscriptions in between on Late Bronze Age Cypriot Seals"
On Late Bronze Age Cyprus, each island polity differs in its profile of scripts and seals. Especially revealing about these regional differences is how written characters were incorporated within seal designs. A few of these texts are in readable scripts, particularly those written with cuneiform characters. Most are in Cypro-Minoan, which remains undeciphered. Further examples can be thought of as pseudo-script, which blur the relationship between image and text and suggest that sometimes it was the idea of text rather than a precisely readable inscription that was important. As in ancient Mesopotamia, some inscriptions were placed within outlined vertical panels, making a divide between text and image. Some, however, have texts that seem to form part of the image, being text in image or perhaps even text as image; these are scattered throughout the rest of the carved decoration or squeezed in to fill the amount of space needed for a body, whether of an animal, human, or deity. Some inscriptions appear on images, a few of which almost appear to be like speech bubbles written over or near the mouth of a human or deity. Other texts on images occur when text replaces part of an earlier carving. The context of writing in connection with seals—both how it was part of an original design for seals and how it was part of an object's continuing biography as parts of the design were altered over time—helps to define the relationship among person, polity, seal, and script.

Jennifer Ross (Hood College), "Early Accounting at Susa: The Route to Uruk"
Over the last 200 years, the site of Susa has yielded precious information to archaeologists and epigraphers working on a vast array of questions. Central to the Protoliterate phases of Susa's history was the concurrent development of glyptic art and writing, the interdependence of which has been the subject of many recent studies. And,

despite the greater care taken in excavating and publishing the vital and apparently revolutionary glyptic material from Uruk, Susa's deeper stratigraphic sequence, and more diverse assemblage of seals, sealings, and early written documents, may hold the key to understanding the interaction of seal design and use with the emergence of writing. With special attention to the interdependence of text and seal, this paper attempts to untangle the introduction of accounting techniques, and the relationship between the stages of development in these technologies at Susa and Uruk.

Morgan Moroney (Johns Hopkins University), "Heaven Was a Drink of Wine: The Protective and Rejuvenative Functions of Tomb U-J's Wine Sealings"
The earliest examples of writing and wine in Egypt were revealed in 1988 with the discovery of Abydos Tomb U-J. This tomb also contained some of Egypt's earliest sealings with an archaeological context. U-J's Egyptian clay sealings were originally attached to 700 imported wine vessels from Syro-Palestine, and they served more than administrative and functional purposes. This paper explores their apotropaic and ritualistic purposes through their imagery and archaeological context. The sealings feature dynamic wild animals enclosed within rectangle spaces. Each of the animals has associations with rebirth and wine in later religious contexts. The areas surrounding these animals are decorated with geometric shapes most likely representing architectural forms, and the animals' iconographic confinement symbolized control over and from them. The design of these seals, the act of sealing, and the final deposit of the wine vessels all held ritual significance. These sealings protected the wine on its journey to the tomb, but also helped secure against the wine's mind-altering properties and foreignness, both physically and ritualistically, until its appropriate time of use. The wine's placement in the northern and eastern chambers, independent from the burial chamber and towards the east, is also significant. Its location, separate from the ruler, created a physical barrier until the appointed time of its ritual consumption by the deceased. These sealings' iconography and archaeology demonstrate how wine in its earliest Egyptian context was, like in later periods, already believed to have rejuvenative powers for the deceased within this particular funerary setting.

2F. Yerushalayim, Al Quds, Jerusalem I

CHAIR: Yuval Gadot (Tel Aviv University)

Shua Kisilevitz (Israel Antiquities Authority; Tel Aviv University), "Considerations on the Study of Cult near Jerusalem: A View from Tel Moẓa"
Tel Moẓa is located 7 km northwest of the Old City of Jerusalem. The recent discovery of an Iron Age IIA temple at the site provides the unique opportunity to study the cult of ancient Judah from the archaeological perspective. Moẓa's significance within the Judahite kingdom, serving as part of Jerusalem's administrative and economic system, is attested by extensive excavations that identified the site as a central granary of the region. The study of the temple at Moẓa and its associated finds allows us to apply current methodologies on the study of cult places, paraphernalia, and behavior to new materials

for the first time since the excavation of the Judahite temple at Arad over half a century ago.

The current research is focused on a number of specific and broad subjects: identification of the cult practices carried out at Moẓa; cultural influences and transmission of religious motifs exhibited at the site; and its raison d'être. Especially intriguing is the relationship between the construction of the temple and the worship conducted therein to the broader regional economy, in which the site and its temple played a key role. Taken together, the evidence from Moẓa provides important insights into socio-economic and religious aspects associated with state formation in the region of Judah during the Iron Age IIA.

David Ben-Shlomo (Ariel University), "Ceramic and Archaeometric Evidence for Jerusalem's Exterior Contacts during the Iron Age"
As a capital city of the kingdom of Judah (and possibly of the earlier "United Monarchy" of Israel), the material culture of Jerusalem is likely to reflect a higher degree of external contacts and evidence for trade and imports than a standard regional site of this period. However, the ceramic evidence published from Iron Age Jerusalem thus far shows a rather low degree of external contacts according to regular typological attributes. New compositional analysis of Iron Age II pottery from Jerusalem attempts to redefine the character and scale of Jerusalem's external trade contacts during this period. This large-scale study has achieved a better identification of the petrographic and chemical profiles of the ceramic production in Jerusalem and its environment. While the analysis of containers may indicate trade in commodities during this period, as several found in Jerusalem were made in other region, certain evidence also indicates cooking vessels made in Jerusalem were found in other regional sites. Otherwise, the only significant links with neighboring regions as evidenced by pottery composition and production is with the Shephelah or the southern coastal plain, i.e., Philistia. The reasons for this rather detached character of the material culture of Jerusalem during the Iron Age and its implications for the nature of the administration of the kingdom of Judah will be discussed as well.

Chris McKinny (Texas A&M University-Corpus Christi) and Aharon Tavger (Ariel University), "The House of Millo = the Spring Tower? Suggesting the Setting of Joash of Judah's Assassination (2 Kgs 12:10) in Light of Recent Archaeological Data from the City of David"
Recent excavations in the City of David with accompanying radiocarbon analyses have revealed a complex sequence for the construction of the Spring Tower, which is situated above and around the Gihon spring and its accompanying artificial waterworks. Specifically, the radiocarbon dates indicate that the Spring Tower was either constructed in the late ninth century B.C.E. (late Iron Age IIA), as opposed to the traditional interpretation of an initial construction during the Middle Bronze Age, or was substantially retrofitted during the late ninth century after an initial Middle Bronze Age construction. In light of these new archaeological data, this paper will re-examine the biblical data associated with the eastern slopes of the City of David, and suggest that the Spring Tower should be identified with the "House (*bêt*) of Millo" of 2 Kgs 12:20 where, according to this passage, King Joash of Judah was assassinated ca. 796 B.C.E.

Ayala Zilberstein (Israel Antiquities Authorities; Tel Aviv University), "The Character of the Hellenistic Military Architecture from the Tyropoeon Valley: Stratigraphy, Technological Methods, and Interpretation"

During the excavations of the Givati Parking Lot, conducted by Ben-Ami and Tchekhanovets (2007–2015), the remains of massive military architecture were exposed. These remains include a monumental tower, a fortification wall, and a glacis built of layers of construction fill that supported the wall and tower. The date of the system's construction was attributed to the first half of the second century B.C.E., and accordingly led the excavators to its interpretation as a part of the famous Seleucid Akra.

The following presentation will focus on a review of the evidence and characteristics of the compound, currently under study as part of my PhD dissertation. Based on spatial distribution analysis of the material culture remains and the identification of two different types of fill assemblages, it will be claimed that the glacis can be seen as two separate features in the fortification system, dating to separate stages within the second century B.C.E. This conclusion enables us to reopen unsolved historical and archaeological issues regarding the urban development of Hellenistic Jerusalem as well as regarding the discussion about the historical events that occurred during the Hellenistic period.

Yael Hochma (Tel Aviv University), Oded Lipschits (Tel Aviv University), Lisa Tauxe (University of California, San Diego), and Erez Ben-Yosef (Tel Aviv University), "Archaeomagnetism of Rhodian Stamped Jar Handles from the City of David"

Jerusalem in the second century B.C.E. has provided an abundance of archaeological materials, among them the stamped jar handles of Rhodian amphorae, which are well dated via their eponyms. Working under the assumption that the dates given to these handles by scholars are reliable, this research tested the ancient geomagnetic intensity recorded by handles found in the City of David and Jewish Quarter excavations (n=17, success rate 12–18%) in order to enhance the reference database for archaeomagnetic dating in the region ("the Levantine Archaeomagnetic Curve" [LAC]). In turn, locally produced storage jars (n=7, success rate 57–86%) from the base of the glacis of a massive structure, recently identified as the Akra, were also subject to archeaomagnetic analysis, helping to provide time constraints on the ramp's construction.

Shimon Gibson (University of North Carolina at Charlotte), "In the Shadow of Herod's Palace: A Decade of Digging on Mount Zion in Jerusalem"

More than a decade of digging has been undertaken on Mount Zion at a site situated along the outside of the southern Old City wall of Jerusalem, about 100 m east of the present-day Zion Gate. This work is a continuation of a dig originally carried out at this location by Magen Broshi between 1974 and 1978. In topographical terms, the site is situated within the heart of the "Upper City" of the first century C.E., due southeast of the large compound of Herod's palace, and at the southern end of the Byzantine *Cardo Maximus* colonnaded street. The goal of the excavation has been to clarify the ancient occupational history of a key topographical location on the upper southeastern slope of the western hill of Jerusalem. What has been revealed are the superimposed architectural remains of domestic buildings dating from Early Roman, Late Roman/Early Byzantine,

Late Byzantine, Umayyad, and Abbasid/Fatimid periods. Additional data was obtained on the chronology of the construction and use of the current line of the southern Old City fortifications from Fatimid to Ottoman times.

Tehillah Lieberman (Israel Antiquities Authority) and Joe Uziel (Israel Antiquities Authority), "The Best Show in Town: The Theatre-Like Structure beneath Wilson's Arch and Its Place in Aelia Capitolina"
The archaeological excavations beneath Wilson's Arch have yielded a stratigraphic sequence ranging from the first century B.C.E. to the modern era at the foot of the Western Wall. The arch is the last of a series of arches that held up the entrance into the Temple Mount, overlooking the Tyropoeon Valley below. To date, the most significant finds date to the Roman era, from the Second Temple period (first century B.C.E.) and the days of Aelia Capitolina (fourth century C.E.). The finds have illuminated aspects of both the city's organization and the cultural changes that occurred in Jerusalem in its transition from the resettling of the city by the Tenth Legion and the conversion of Jewish Jerusalem into a Roman colony. However, the most outstanding find of the excavation is a small, theatre-like structure constructed during the second century C.E. The structure was built following the Temple's destruction, as part of the Roman re-planning of the settlement. The following presentation will present the main findings uncovered beneath Wilson's Arch, focusing on the theatre-like structure. Aspects of the structure's construction, abandonment, and sealing will be considered. Particular importance will be placed on the implications of this public building for the understanding of the urban and cultural organization of Aelia Capitolina. By tying the new findings to previous ones, we hope to improve the understanding of the Roman colonization of Jerusalem.

2G. Houses and Households in the Near East: Archaeology and History II

CHAIRS: Aaron Brody (Pacific School of Religion) and Sharon Steadman (SUNY Cortland)

Nicholas Picardo (Harvard University), "Ancient Egyptian Soul Houses: Reified Households and Objectified Links between Settlement and Cemetery"
Ceramic offering trays from ancient Egypt often included modeled or applied offerings (especially food) and sometimes channels for the pouring of liquids. So-called "soul houses" have additional, distinguishing elements of architectural structures and features that can occupy a sizeable portion of a tray. These closely-related object types have been understood as burial markers that acted also as modest offering places where the living could help to sustain the interred deceased. Although a majority of examples have been found in cemeteries, a smaller but nonetheless substantial number have come from settlements. Despite many decades of scholarly attention, a trend of past studies has been to regard the cemetery as the only originally intended use context for trays and soul houses. Explanations for examples from settlements generally have been omitted or have resorted to secondary use scenarios. This paper adopts concepts of household archaeology, especially notions of household identity, to consider the social and cultic significance of offering trays and soul houses, while proposing a functional lifespan for these objects that includes primary use in residential contexts.

Rona Avissar Lewis (David Yellin Academic College), "The Archaeology of Children in the Land of Israel from the Second to the First Millennia B.C.E."
The archaeology of children is a new area of research that incorporates an interdisciplinary approach, drawing on insights from diverse areas such as anthropology and ethnography, sociology, psychology and education, history, and art in addition to extensive archaeological study of the material culture. The incorporation of these insights and their integration into the archaeological methodology has enabled a broader understanding of child-rearing practices in the Land of Israel from the second to the first millennia B.C.E.

Marie Hopwood (Vancouver Island University), "Feeding the Household and the Spirit: The Use of Ground Stone Tools by the Living and the Dead at Kenan Tepe, Turkey"
The site we now call Kenan Tepe, Turkey, was a thriving village in the fifth millennium B.C. Overlooking the Tigris River the people of Kenan Tepe were perched on top of the hill with a view of the surrounding landscape and tended fields. The Ubaid settlement has been stunningly revealed through a continuing analysis of the Burnt House (Structure 4), bringing to light issues of food storage and processing on roof tops, as well as inside the structure. This paper focuses on the ground stone and food preparation assemblages with the goal of recreating the taste of place at Kenan Tepe. We cannot view seemingly ubiquitous food preparation tools of the past as serving solely practical functions. Serving as ancient multi-tasking tools, the grinding slabs have multiple use-lives. These valuable tools allowed grain to be transformed from an inedible and slightly toxic raw form into a myriad of foodstuffs. When the grinding surfaces became dull, they were chipped to re-roughen. Then the stone would be flipped and used on its obverse to continue its usefulness. When this no longer was viable, the stone was repurposed again, reshaped into what might have been fishnet weights. Other grinding slabs were removed from the world of the living and instead given to the dead, as seen in an example of a grinding slab being used to cap the burial of an infant. This paper explores the imperative link between ground stone and feeding the household during the Ubaid period at Kenan Tepe.

Tina L. Greenfield (University of Saskatchewan), <u>Britt Hartenberger</u> (Western Michigan University), John MacGinnis (University of Cambridge), Tim Matney (University of Akron), "Lions, Tigers, and Microdebris . . . Oh My! Investigating Elite Households at Late Assyrian Tušhan (Turkey)"
The Late Assyrian site of Tušhan (Ziyaret Tepe) on the Tigris River was a major regional administrative center of the Assyrian Empire. The site contains a palace on its mound as well as substantial, 10–12 room high-status buildings in the lower town (Operation G/R). Although the high-status buildings have been tentatively identified as public buildings that possibly also served as residences of officials dealing with taxes and temple administration, based on finds of tablets and administrative devices such as tokens, other small finds do not help greatly in ascertaining intra-building room functions. The three mosaic-paved courtyards are mostly likely for entertaining and public activities, and the paved bathrooms have obvious functions. Uses of the side and back rooms around the courtyards, however, are less clear. The site was excavated from 1997–2014 by an

international team led by Tim Matney of the University of Akron, and specialist analyses are ongoing in preparation for final publications. Studies of faunal remains, microdebris, and pottery forms will help identify private versus public areas and potentially food preparation and other activity areas.

Laurie Pearce (University of California, Berkeley), "Multi-Cultural Neighborhoods in Hellenistic Uruk"
This paper explores the multicultural demographic of defined city districts in Hellenistic Uruk through the textual evidence of the cuneiform record. The richness of the cuneiform record for the study of houses, households, and the use of space in the urban environment in first-millennium Babylonia is well-demonstrated in recent studies (notably Baker 2010, 2011, 2013, 2014, 2015). Uruk's real-estate sale records facilitate reconstruction of neighborhoods (or clusters of properties) through their detailed descriptions of houses and associated components (courtyards, access-ways, second-story rooms) sold, which include references to adjacent topographic features, as well as to adjacent properties and their owners. The corpus's extensive onomastic and prosopographic evidence supports reconstruction of the history of specific families' real-estate holdings and transactions, although no property described in the cuneiform sale transactions can be securely associated with excavated domestic architecture at Uruk. That same evidence also makes possible investigation of the interactions of members of the traditional Babylonian families with individuals whose names suggest a Hellenistic background, affiliation, or identity. A study of the social networks that include interactions between culturally-identified Babylonians (defined on the basis of wholly Babylonian names) with individuals whose names include at least one Greek element reveals the impact of a changing demographic on Uruk's neighborhoods.

2H. Archaeology of the Black Sea and Caucasus II

CHAIR: Elizabeth Fagan (University of Chicago)

Maureen Marshall (University of Illinois at Urbana-Champaign), "The Kasakh Valley Archaeological Survey in Armenia: Preliminary Results from Aparani Berd Burial Cluster 03"
Beginning in 2014, members of Project ArAGATS (the Project for the Archaeology and Geography of Ancient Transcaucasian Societies) have been investigating long-term shifts in fortress settlement systems, ancient warfare, and political transformation in the South Caucasus spanning ca.1500–200 B.C., from the initial construction of hilltop forts during the Late Bronze Age, to their elaboration under Urartian imperial dominion, to their abandonment in the Achaemenid Iron Age III. Key aspects in this investigation include test excavations in ancient cemeteries located adjacent to fortresses and the subsequent analysis of human remains that can shed light on lived experience and practices of violence. Previous excavations of burials in the Tsaghkahovit Plain revealed tombs dating to the LB I and II (1500–1300 B.C.), and a sample of primarily single interments of adult males with 30% showing evidence of skeletal trauma, providing a focused but narrow view of lived experience in these periods. In contrast, test excavations of burials in the Kasakh Valley have revealed tombs dating to the Early Bronze, Late Bronze, and Iron

Ages, expanding our view of Bronze and Iron Age society in the region. Examining these tombs has thus enhanced our understanding of long-term occupation history and cemetery use; however, the ways that the deceased were interred in these burials has also added new information to our knowledge of the social aspects and ritual of mortuary practices during each of these periods. Moreover, bioarchaeological analysis of the excavated human remains has yielded important information about an underrepresented portion of the population, namely women and children.

Walter Crist (American Museum of Natural History), "A Near Eastern Game in the Caucasus? New Evidence from Eastern Azerbaijan"
The Apsheron Peninsula, on the coast of the Caspian Sea where Baku is located, is somewhat an archaeological terra incognita for Western archaeologists. Despite this, there is some evidence for contact between this part of Azerbaijan and the Near Eastern world. Small depressions found pecked into bedrock as well as on stone slabs found during excavation are arranged in a recurring and unique pattern that is strikingly similar to the well-known game of 58 Holes, colloquially known as "Hounds and Jackals," that was popular in Mesopotamia, Egypt, and the broader Near East during the second and first millennia B.C.E. This paper explores the findings of a pilot examination of these objects in collections and on-site in Azerbaijan. Virtually no data have been collected on these objects to date. Building from previous research on similar artifacts in Cyprus, morphological and contextual data, when available, will be collected to determine the likelihood that these artifacts represent local iterations of this Near Eastern game, or whether another explanation is likely. Contextual data will help determine the chronological placement of these objects, which will be crucial for determining the kinds of interactions that might have brought this particular kind of artifact and cultural practice to this location.

Tiffany Earley-Spadoni (University of Central Florida), "The *Belle Époque* of Rusa the Great of Urartu"
In this paper, I argue that the reign of Rusa the Great, son of Argishti, constitutes a *Belle Époque* in Urartian history. In the wake of the military conflicts and internal strife that characterized the reigns of Rusa's immediate predecessors, the fortunes of Urartu seem to have improved dramatically during the first half of the seventh century B.C.E. The Rusite renaissance was characterized by unprecedented imperial building, a bold program of architectural re-definition. Yet, the archaeological evidence suggests that Rusa's efforts focused upon the traditional Urartian homeland rather than the pursuit of ambitious expansionist policies. Scholars have only begun to appreciate the outsized evidence that characterizes the reign of Rusa the Great. Most excavated Urartian sites pertain to the Rusite period, a final chapter in the empire's history. The constructions of Rusa are exceptionally large buildings that employed a highly-standardized architectural style, which included features such as ashlar masonry and highly-regularized niching and buttressing. In contrast to constructions of the ninth and eighth centuries, the spectacular fortresses of Rusa were either new foundations or single-period sites. These fortresses, namely Ayanis, Bastam, Karmir Blur and Kef Kalesi, are the largest and most elaborate examples of Urartian architecture. I conclude that the evidence from Rusa's reign

dominates the scholarly perceptions of what Urartu was, and that archaeological investigation of ninth- and eighth-century sites is needed to expand our limited view.

Lara Fabian (Albert-Ludwigs-Universität Freiburg), Hannah Lau (Koç University), Jeyhun Eminli (Azerbaijan National Academy of Sciences), Emil Iskenderov (Azerbaijan National Academy of Sciences), Selin Nugent (University of Oxford), Susannah Fishman (University of Pennsylvania), and Lucas Proctor (University of Connecticut), "Highland Imperial Encounters in the Late Iron Age: Preliminary Results from the Lerik in Antiquity Archaeological Project"
The Lerik in Antiquity Archaeological Project (LAAP) is a collaborative Azerbaijani-American investigation in Azerbaijan's Talish mountains. The research examines an often-ignored archaeological landscape: a low-density highland region situated at the interstices of Iranian and Mediterranean empires. Over the course of three seasons of survey and excavation, the LAAP has investigated the choices of these local residents, seeing them as part of a dynamic system of interaction that stretched through, between, and beyond imperial territories. This work builds off from ongoing excavations at the Piboz Təpə necropolis, directed by Jeyhun Eminli (Azerbaijan National Academy of Sciences) since 2011, whose work has uncovered over 140 burials, largely dating between the fifth century B.C.E and the second century C.E. During the 2016–2018 seasons LAAP continued excavation at Piboz Tepe, and began work at the nearby settlement site of Yoladoy Bin, which revealed the remains of a Late Iron Age domestic structure and associated burial. Our research at both sites employs a multi-pronged approach, incorporating stylistic and petrographic analyses of ceramics, zooarchaeological and biogeochemical analyses to assess ancient peoples' animal management practices and mobility, as well as paleoethnobotanical and bioarchaeological analyses. Additionally, our team surveyed a ca. 40 sq. km. region in the surrounding Əliabad-Gürdəsər-Buruq valley system. The survey included mapping of previously-registered archaeological sites, but relied mainly on extensive and intensive investigation and remote sensing. The survey helped develop a better understanding of land-use patterns and settlement strategies across the steep, rugged territory.

3A. Archaeology of Jordan I

CHAIRS: Marta D'Andrea (Sapienza University of Rome) and M. Barbara Reeves (Queen's University)

PRESENTERS:

Amer Alsouliman (University of Ferrara; The Hashemite University), "Pre-Oasis Culture in the Northwestern Arabian Peninsula: Mid-Holocene Qulban Beni Mura, Jordan and Rajajil, Saudi Arabia"
The paleoenvironmental and paleoclimatic changes of the mid-Holocene affected the water resources of northwestern Arabia. This forced people to establish water management systems and strategies to adapt and deal with the extreme environmental conditions and less water. These water management systems and strategies were developed over time, and proved technically to be compatible with the topography and

geology of northwestern Arabia. This contribution sheds light on water management systems and strategies of the Chalcolithic pre-oasis culture of northwestern Arabia, and the paleoenvironment and paleoclimate of Arabia. Furthermore, it will discuss the land use and hydrological experiences of pre-oasis people and Badu, which gave them the ability to choose and build water management systems appropriate for the topography and the geology of the area.

Jesse Michael Millek (German Research Foundation [DFG]; University of Michigan), "Crisis, Destruction, and the End of the Late Bronze Age in Jordan"
Destruction plays a major role in almost any theory for the transition from the Late Bronze Age to the Iron Age. In many parts of the eastern Mediterranean, the Sea Peoples have often been to blame; however, this is not the case with Jordan. Yet, destruction did occur at the end of the Late Bronze Age, and this leaves the question of what or who caused it. This paper will present the results of a study examining nine sites with destruction events from this transitional period, including Tell Deir Alla, Tell el-'Umeiri, Tell es-Sa'idiyeh, and the Amman Airport Structure among others to see what might have caused these events. I will also demonstrate that, for some sites that have been listed as destroyed, there is little archaeological evidence of these supposed destruction events. Beyond these destruction events, I will present evidence for crisis throughout Jordan that afflicted many of these sites before they were even destroyed. I will argue that it was this crisis and not the destructions themselves which had a greater impact on the transition from the Late Bronze Age to the Iron Age I.

Chang-Ho Ji (La Sierra University) and Aaron Schade (Brigham Young University), "The Khirbat Ataruz Project, 2016–2017: Excavations of the Acropolis and Southeastern Slope"
The Khirbat Ataruz 2016–2017 project was carried out to examine the acropolis area (Field A) and its southeastern slope (Field G). The goal of the Field A fieldwork was to continue excavations of the architectural remains in the southern part of the acropolis. A major question the research team explored in Field G was the identity and purpose of the stepped-stone sequence ascending in a northwest direction up the hill toward the temple complex. The results from Field A led to the conclusion that the remains in the area are cultic in nature and appear to have been used for animal sacrifice and cooking during the ninth century B.C.E. The excavations of Field G revealed a total of more than 20 possible stairs. A proliferation of Iron Age II pottery was discovered on and under the structures, and objects like a murex shell, figurines, and fine grinding stones were also unearthed. At the present, our best assessment is that the remains in Field G were stairs leading to the southeastern entrance of the temple complex. Part of the staircase-like structure was destroyed during the eighth century B.C.E. to build walls and installations with large pillar stones. Field G was reused in the Islamic period, as demonstrated by various installations and houses with multiple successive beaten earth floors. Future excavation efforts may reveal the full extent of the staircase-like structures in Field G and enable us to understand their exact relationship to the temple in Fields A and E.

Robert Chadwick (Bishop's University), "Is There Evidence for Omride Architecture at Khirbat al-Mudayna on the Wadi ath-Thamad, Jordan?"

In 2010 Israel Finkelstein and Oded Lipschits published an article in which they suggested that a number of important architectural features at Khirbat al-Mudayna on the Wadi ath-Thamad replicated "the typical features of Omride architecture, mainly at Samaria and Jezreel." According to the authors, the most obvious of these characteristics were "an elevated, rectangular podium created by a casemate wall, supported by a glacis, surrounded by an elaborate moat, and equipped with a six-chambered gate." Drawing on the observations of earlier researchers they cite Brünnow and von Domaszewski (1904), Musil (1907), and Glueck (1934) noting that "the most surprising and striking feature of the site is a rock-cut moat which is clearly seen on two or three of the four sides of the rectangle." This presentation will examine a number of these claims and show that, after a dozen seasons of excavations, few if any, Omride characteristics have been found at Khirbat al-Mudayna.

Paul Gregor (Andrews University), "Khirbet Safra: Military Installation or Regular Settlement"
Khirbet Safra is located 17 km south from Madaba. It has a commanding view of the entire region, situated on a road connecting Madaba with the hot springs at Zerqa Main. Preliminary readings of pottery collected from the surface indicate that the site was occupied during Iron Age IIA and IIB. The site covered an area of more than 1 ha and it is encompassed by a casemate wall system. Since it is located at a strategically important location, it is possible that it served as a military outpost. Due to its size, however, it may be that it was only an ordinary village-type settlement. The first season of excavation will begin in the summer of 2018, and, hopefully, will produce material culture that will resolve this dilemma.

Owen Chesnut (North Central Michigan College), "The Late Iron Age Acropolis at Tall Safut"
Excavations at Tall Safut, a Bronze and Iron Age site north of Amman, Jordan, were carried out over ten seasons between 1982 and 2001. Among the most important discoveries at the site are two series of interconnected rooms separated by a road. Seventeen total rooms were excavated with five phases dating to the eighth-fifth centuries B.C.E. Construction began in the eighth century B.C.E., with large walls being built on destruction dating to LB IIB and Iron Age I. There is evidence of widespread destruction of this first Iron Age II settlement and then subsequent rebuilding in the seventh-sixth centuries B.C.E. of many of the walls along the same lines as those constructed at the end of the Iron Age IIB. This level of occupation also shows evidence of destruction and then limited subsequent reuse late in the Iron Age IIC/Persian period. These buildings served multiple purposes, often related to domestic activity such as food preparation and storage, weaving, and possibly metallurgy. Several items related to interactions with the Assyrian and Babylonian empires were discovered as well.

3B. Archaeology of Lebanon I

CHAIR: Hanan Charaf (Lebanese University)

Hanan Charaf (Lebanese University), "Bronze Age Pottery beneath the Medieval Castle of Byblos"
Recent excavations by the Lebanese University at the Crusader castle of Byblos yielded, as expected, archaeological remains dated to the Early Bronze Age. A glacis built with large limestone and conglomerate boulders was uncovered running in an east-west direction under the castle. The glacis is part of the series of Bronze and Iron Age fortifications uncovered by Maurice Dunand west of the Crusader castle. Preliminary examination of the pottery associated with the layers of the glacis points to two distinct periods: the Chalcolithic/EB I and the EB II–III. The majority of the recovered ceramics are locally made, and their types fall stylistically within the cultural horizon of the northern Levant known from other Lebanese sites such as Tell Arqa, Tell Fadous, and Anfeh, all located north of Byblos.

Gianluca Miniaci (University of Pisa), "Votive Deposits in the Obelisk Temple at Byblos: Artefacts Mobility in the Middle Bronze Age II (1800–1650 B.C.) between Egypt and the Levant"
The deposit nos. 15121–15567 found in the sanctuary of the Obelisk Temple at Byblos remains—unexpectedly—rather undervalued in Egyptological and Near East studies, lying in a "no-man's-land" straddling Egypt and the Levant. Notwithstanding, it includes a high number of key objects for understanding the Middle Bronze Age II (1800–1650 B.C.) Egyptian material culture, including an unparalleled large assemblage of figurines in faience. Three main questions remain open: the dating of this deposit; the type of deposit (votive, treasure, foundation deposit); and the material production of the objects, whether they were manufactured in Egypt and imported or locally produced. This paper aims at showing the Egyptian nature of most of the objects found in this deposit and at providing a more comprehensive picture of its archaeological context.

Vanessa Boschloos (**Metropolitan Museum of Art; Ghent University**), "**Egypt, the Levant, and Some Exceptional Scarabs from the Excavations in Sidon**"
For the past 20 years, a British Museum team led by Claude Doumet-Serhal has been uncovering the different phases of ancient Sidon, dating from the Early Bronze Age up to the medieval period. The various and rich finds illustrate Sidon's contacts with the Mediterranean world and especially with Egypt and the rest of the Levant. This contribution focuses on a selection of scarab-shaped seal-amulets from recent excavations at College Site and Sandikli Site. More specifically, the importance of Bronze Age Sidon and its connections with the Nile Delta are underscored by the presence of some of the earliest examples of particular types attested thus far outside Egypt.

Marlies Heinz (Albert Ludwigs-Universität, Freiburg), "Did the Late Bronze Age City of *Kumidi*/Kamid el-Loz (Lebanon) Fall Victim to the *Apiru* Phenomenon?"
The history of urban life in Kamid el-Loz, Lebanon is a most volatile one. During the Middle Bronze Age, the urban mode of life was interrupted twice. The iconic buildings such as the palace were destroyed by fire, leading each time to the abandonment of the settlement. Anomie took over twice and squatter occupation spread out. However, each time soon afterwards, urban life was re-established and the urban mode of life continued until the end of the Late Bronze Age. The story of the third and last city of Kamid el-Loz

differs however from its forerunners. Neither fire nor other signs of violence caused the end of *Kumidi.* Creeping erosion, neglect of the building structures in all areas, and finally the abandonment of the city and the end of urbanization of Kamid el-Loz denoted the fate of this urban community. What happened? Why did such a prosperous urban settlement "dissolve" and never recover from this decline?

3C. Archaeology of the Near East: Bronze and Iron Ages III

CHAIR: Eric L. Welch (University of Kentucky)

Deirdre Fulton (Baylor University) and Lidar Sapir-Hen (Tel Aviv University), "The Cult and the City: The Early Bronze Age Faunal Assemblages from Tel Megiddo and Tel Megiddo East"
The EB IB at Tel Megiddo gave rise to monumental architecture in the context of a cult center. Specifically, this period brought about the construction of the Great Temple. Located 450 m to the east of the tell, recent excavations at Tel Megiddo East have uncovered a city directly linked to the cultic center. This connection is supported by the analysis of faunal remains from both Tel Megiddo and Tel Megiddo East that reveal intriguing overlaps and divergences. These collections also offer insight into the animal economy, specifically the movement of animals to feed the cultic site of Tel Megiddo and the urban center of Tel Megiddo East. This rare glimpse into a city economy versus temple economy reveals how these two spaces, while linked by their proximity, had very different needs. Our analysis reveals the complex animal economy that thrived in the EB IB period at Tel Megiddo and Tel Megiddo East.

Lynn Welton (Durham University), "Destruction and Renewal in the Late Third Millennium B.C.E.: Results of Recent Excavations at Tell Tayinat"
The Amuq Plain, located in the Hatay region of southern Turkey, has long been the location of one of the key sequences for understanding the chronology of the Early Bronze Age in both Anatolia and the Levantine world. This sequence was originally developed based on excavations conducted by the University of Chicago in the 1930s. Since then, there have been numerous significant excavations in surrounding regions that have fundamentally changed our understanding of socio-cultural developments during the third millennium B.C.E. However, with the exception of small soundings conducted as part of the Amuq Valley Regional Project in the late 1990s, no further substantial fieldwork was undertaken at third-millennium sites in the Amuq until excavations by the University of Toronto began at Tell Tayinat in 2004. The site of Tayinat can be securely identified as the primary site in the Amuq Plain during the late third millennium B.C.E. (EB IVA-B). This paper will discuss the results of excavations of late third-millennium levels at the site since 2009 (focusing on 2015–2018). These excavations have recently uncovered new details of the construction and layout of a major building phase dated to the EB IVB (ca. 2300–2000 B.C.E.), revealing the use of distinctive construction techniques with parallels in the Euphrates. In addition, excavations have begun to uncover evidence for significant structural remains that appear to date to the EB IVA (ca. 2600–2300 B.C.E.). This paper will review the current state of knowledge of both of

these phases through evidence from the architectural remains and associated material culture.

Jeffrey R. Chadwick (Brigham Young University) and Amanda M. Buessecker (Brigham Young University), "Early Bronze Age and Middle Bronze Age Fortifications Exposed at Tell er-Rumeide by the American Expedition to Hebron (1964–1966)"
The American Expedition to Hebron (AEH) excavated at Tell er-Rumeide from 1964–1966, under the direction of Philip C. Hammond, while the region was under Jordanian control. Hammond's was the first modern, scientific archaeological project to explore the site. Several areas were opened on the tell, including two along the southern city wall line (Areas I.3 and I.7), one near the tell's summit (Area I.6), and three on the eastern slopes (Areas I.1, I.2, and I.4). Several tombs were also cleared on the lower terraces of the mound. Hammond recorded finds demonstrating occupation during Early Bronze Age, Middle Bronze Age II, Late Bronze Age, Iron Age I, Iron Age II, and the Hellenistic and Roman periods, as well as fortifications in the two areas along the south side of the tell. Hammond's expedition came to an end due to the 1967 war in the region. AEH finds are currently under review and being prepared for publication by the AEH Publication Project, headed by Jeffrey R. Chadwick of Brigham Young University. Subsequent Israeli excavations in the 1980s, 1999, and 2014 revealed features in other areas. In light the results of those efforts, AEH finds in Areas I.3 and I.7 will be featured and examined anew in this presentation at the 2018 ASOR Annual Meeting in Denver. AEH data will be discussed concerning the presence of Early Bronze Age and Middle Bronze Age II fortifications on the proposed southern city wall line, running along the same course, and a summary reevaluation of Roman period finds will also be presented.

Matthew Susnow (University of Haifa), "Enclosing Canaanite Cultic Landscapes"
This paper addresses the process by which the earliest loci of cult in Middle Bronze Age Canaan were subsequently transformed into urban landscapes in a complex process that integrated, yet altered, early Middle Bronze Age practices. Already evident in the preceding Intermediate Bronze Age, the earliest traditions of Canaanite cult emphasized communal activities in open-air, rural, or isolated sites. But open-air cultic spaces seem to be replaced, or overshadowed, by spaces enclosed by constructed temples in the latter part of the Middle Bronze Age. This shift, however, was not sudden. There is significant traditionalism demonstrated in Canaanite cult: while intensive urbanization was experienced across the southern Levant early in the Middle Bronze Age, this did not include any immediate visible changes to the nature of cultic activities or spaces. This paper will distinguish the earlier Middle Bronze Age open-air cultic sites from the later well-built urban cultic spaces (e.g., temples, in palaces) in terms of site location and activities performed therein. Through an approach based primarily on an inductive spatial and contextual analysis of finds, this research significantly contributes to our understanding of the heterogeneity of Canaanite religion. While urban foci of cultic activity aimed to embody and encapsulate folk and popular traditions, practices were also altered and manipulated due to the active hand of human agents, the nature of urban settings, as well as other factors. This research was initially explored in my doctorate and

the results presented here are part of my continued study in new directions, understandings, and insights of Canaanite cult.

Kathryn Morgan (University of Pennsylvania), "'The Employee from Sam'al': Pots, People, and Trade Networks at Middle Bronze Age Zincirli"
The 2015 and 2017 excavation seasons at Zincirli (Iron Age Sam'al) have brought to light a substantial Middle Bronze Age settlement complex destroyed in a violent conflagration. Among the detritus of daily life buried *in situ* in the compound, a number of finds related to trade and administration were recovered: these include, on the one hand, cylinder seals and seal impressions of a style referred to by S. Mazzoni as "Syro-Anatolian Linear," and on the other, multiple "pilgrim flasks" of distinctive globular shape and painted bichrome decoration whose function, it has been suggested, was the transportation of wine. The seals and the vessels alike share a wide distribution across central Anatolia, the northern Levant, and as far as Mesopotamia, co-occurring at several sites in southeastern Turkey and the Middle Euphrates. This paper investigates whether this co-occurrence is in fact significant, and how it relates to current reconstructions of the Old Assyrian trade network. I present the finds from Zincirli and their contexts in detail alongside relevant comparanda, emphasizing their geographic concentration and distribution. My goal is to parse the relationship between traders, producers, and consumers revealed by these discoveries, considering in conclusion their implications both for the shape of the Assyrian trade network, and for economy and identity at Middle Bronze Age Sam'al.

Celia Bergoffen (Fashion Institute of Technology), "Late Cypriot Bichrome Ware as an Expression of Commercial Mobility"
Bichrome Ware represented a radical departure from earlier Cypriot pottery in its wheelmade technique, figurative decoration, and new shapes, most importantly the krater. This distinctive style incorporated elements of both Canaanite and Cypriot ceramic traditions without logically evolving from or being directly dependent on either one. Based on analyses of the ware's style and distribution in Cyprus, the Levant, and Egypt, this paper suggests that the appearance of Bichrome ware not only signals changes in consumption practices on Cyprus inspired by contact with the Levant, but that its construction was adjunct to the new commercial relationships, established through personal connections, which activated the trade between Cyprus and southern Canaan during the transitional Middle to Late Bronze Ages in the 16th century B.C.E.

3D. Archaeology of Israel II

CHAIR: Rachel Hallote (Purchase College, State University of New York)

Ido Koch (Tel Aviv University), "Tel Ḥadid in the Assyrian Period"
Salvage excavations at Tel Ḥadid, located on a high hill overlooking the central coastal plain of modern Israel, unearthed the remains of settlements dating from as early as the Intermediate Bronze Age and as late as the modern era. Most of the finds were retrieved during a long season of excavation in 1996–1997, including the remains of several Iron

Age II structures, in which two cuneiform tablets were found. The tablets, which mention Akkadian, perhaps Babylonian, names of several individuals, were fully published and discussed in depth, whereas their context, the structures and their associated remains received only a preliminary publication in Hebrew and thus have remained the domain of a limited group of scholars. Over the past decade several interpretations of the tablets, the settlement itself, and its place within the Assyrian imperial matrix have been raised in scholarship, based on the limited information available. These suggestions are discussed in this paper as part of a reevaluation of the Iron Age settlement at Tel Ḥadid, which is emerging from the ongoing work on the final publication of the excavations at the site.

Aaron Burke (University of California, Los Angeles), "Identity Crisis: Architectural and Artifactual Parallels for the Great Temple at Hazor"
For more than 20 years, the large mud brick building of the Late Bronze Age in Area A atop the acropolis at Hazor has been identified as a palace by its chief excavator, Amnon Ben-Tor. Although other scholars, including the late Sharon Zuckerman, disagreed with this identification and published its identification as a temple of a traditional Syrian type, no systematic reappraisal of the structure has been undertaken to date. Consequently, discussions continue to advance this structure as a palace, despite the architectural, artifactual, and other proxy evidence that unequivocally identify it as a temple of the direct-axis type. Parallels are provided to similar Middle and Late Bronze Age structures in the greater Near East to demonstrate its correct architectural and functional identification.

Marcela Zapata-Meza (Universidad Anáhuac México), Rosaura Sanz-Rincón (Universidad Anáhuac México), and Andrea Garza Díaz Barriga (Universidad Anáhuac México), "Magdala Ritual Elements"
A significant characteristic that makes the archaeological site of Magdala special is its orographic position, since underground streams from Mount Arbel and Wadi Hamam supply the area with water leading to the Kinneret (Sea of Galilee). This natural element was critical for the development of the settlement from the Hellenistic period until the second century C.E. It was also a construction factor for numerous stepped water installations.

Magdala is the only port town where stepped water installations dated to the first century C.E. have been discovered so far, 12 small (1.60 x 1.00 m, 3.5 m deep) and 9 large (2.15 x 2.30 m, 2.0 m deep). The 12 small examples, which we consider to be for domestic use, were registered in different contexts: four are located at the market; six belong to the complex that the Israel Antiquities Authority has associated with the fishing industry; and two are located at the southern structure next to the synagogue's entrance. The nine large water installations have been identified as ritual purification baths or miqwa'ot. One is of a kind designed for receiving underground water; its architecture denotes a high economic status. Special features include: 1) a hydraulic system, keeping the water in continuous movement; and 2) the decorative elements, such as mosaic floor, masonry, and preserved white plastered benches and floor.

Chaim Ben David (Kinneret College on the Sea of Galilee), "Six Milestone Stations and New Inscriptions Discovered in the Negev along the Petra-Gaza Incense Route"
In 1965–1966 a pioneering survey was carried out along the incense route between Oboda and the Nabataean caravansary in Shaʿar Ramon by Zeev Meshel and Yoram Tsafrir. They noted two segments of a wide built road, along which were 11 milestone stations—five on the Nafha Plateau (south of Oboda) and six in Makhtesh Ramon. Meshel and Tsafrir dated the road and the milestones to the Nabataean period; other researchers subsequently dated them to the Roman period after 106 C.E., when the Nabataean kingdom became the Roman province of Arabia. In their survey, Meshel and Tsafrir noted that the two segments of the road and their milestones were about 7 km apart in the area of Mount Grafon. They surmised that the two segments were linked and proposed a route for that link, although they found no ancient remains along that presumed segment. In the last several months the lost section was finally found. Along this section six milestone stations were detected. At two stations three milestones each were found, at another station two milestones were noted, and at each of the other three stations we found only one milestone left. At four stations we found milestones with inscriptions. At Grafon 2 (numbering from south to north) a stone was found with 3–4 barely legible lines. At Grafon 3 were two almost complete inscriptions, at Grafon 4 only a few letters survived, and at Grafon 6 a few lines were visible. The new inscriptions are the first dated inscriptions from the incense route in the Negev. We will present these inscriptions and evaluate their historical implications concerning the Roman army and its presence along the incense route from Petra to Gaza.

Iosi Bordowicz (Israel Nature and Parks Authority), "New Discoveries at the Ancient Synagogue of Barʿam —Architecture, Preservation, and What's in Between"
The ancient synagogue at Barʿam is one of the largest and best preserved in the Galilee, and in the Land of Israel as a whole. Over the years, many scholars have explored the site, from medieval pilgrims to archaeologists from the 19th century and present day. The proposed restoration of the facade of the synagogue by Kohl and Watzinger from 1903 has been accepted in scholarship almost without question. However, it seems that Conder and Kitchner's proposal from 1880 was more accurate.

Following the proposal to restore and present the entablature of the Barʿam synagogue to the public, previously unknown architectural elements were discovered. With the help of these items, we recalculated the placement of the architectural items on the facade of the synagogue and were able to reconstruct with great accuracy many parts of the facade and the prayer hall. The conclusions of this study provide a new perspective on the appearance of the synagogue and the methods used to build it.

3E. Beyond Language: The Multimodality of Ancient Texts I

CHAIRS: Lisa J. Cleath (George Fox University) and Alice Mandell (Johns Hopkins University)

Marine Béranger (École Pratique des Hautes Études) and Katherine Burge (University of Pennsylvania), "Drawing in the Old Babylonian School Curriculum"
School tablets from Old Babylonian contexts at a number of sites in southern Mesopotamia, most notably Nippur and Ur, have provided a wealth of information about the educational curriculum of that period. These tablets consist of different shapes: rectangular tablets divided into columns and lines for longer compositions; and, for shorter exercises, small rounded "lenticular" tablets that fit neatly in the palm of the hand. Many of these tablets were reused, as students repeatedly erased their work while the clay was still wet in order to practice new exercises. Occasionally we find drawings incised on both types of tablet, usually over the erasures of text. These drawings often depict animals and are remarkably sophisticated in their execution and style. Certainly they represent more than the mere doodling of bored pupils; the high level of technical skill achieved in some of the best examples is clearly the result of some training and practice. The exact purpose of these drawings is unclear, however, as they appear to have little to do with the exercises written on the tablets. Incised drawings on tablets in the Old Babylonian period are otherwise associated with technical literature, and one possibility is that the school tablet drawings were themselves curricular exercises preparing students to render the illustrative figures and diagrams required by that genre. In this paper, we examine a number of school tablets with incised drawings and consider textual evidence alluding to curricular drawing in order to determine its place in the Old Babylonian school curriculum.

Jason Price (University of California, Los Angeles), "Accounting for Kingship: The Performance of Royal Authority in the Samaria Ostraca"
Scholars generally regard bureaucratic writing in the ancient world as little more than a storage device that extends memory and improves administrative capabilities. Such purely functionalist assumptions are pervasive in studies of the Samaria Ostraca (SO). This paper demonstrates that traditional models of bureaucratic inscription fail to explain writing's function in the SO. That is, the geographic spaces mentioned in the corpus are narrowly bound and not distant, the agents and amounts are meager not voluminous, and the documented exchange is personalized not depersonalized. The material nature of the SO instead implies that documentation was partially motivated by culturally determined conceptions of administrative writing as a performance of kingship. To support this, the paper primarily investigates the significance of the ostraca's form, which materially locates socially embedded relationships and exchange beneath the culturally loaded idea of royal time. Furthermore, the mostly consensus understanding of the SO as scratch pads is argued as indicating an excessive system of data proliferation that valued inscription for its performative rather than mnemonic capacities. A contextualization of the SO within their immediate archaeological setting and their broader cultural setting demonstratse that administrative writing shared semiotic categories with other displays of kingship in the ancient Near East and was thus experienced as a projection of power. While the paper's approach fits broadly within recent multimodal analysis of southern Levantine inscriptions, it is primarily informed by ethnographic work on bureaucratic documentation, which adduces the constitutive and emotive capabilities of administrative writing.

Marissa Stevens (University of California, Los Angeles), "The Ownership of Funerary Papyri as a Means of Defining Social Identity"
This research is fundamentally focused on how material culture can be used to reconstruct the social lives of past societies. Specifically studying the funerary materiality of Egypt during times of crisis and decentralization, this paper surveys the usage of 21st Dynasty (ca. 1070–945 B.C.E.) funerary papyri among the priesthood of Amun to understand how physical copies of text can be commissioned, controlled, owned, used, and displayed by the Theban elite to construct and maintain their social identity. The organization of social frameworks and maintenance of social status during Egypt's intermediate periods—times of political and economic fragmentation—reveal much about the perception of social status in Egypt, as the formal breakdown of kingship allows for more fluid expression of self in the material record. During these times of decentralization, and particularly the 21st Dynasty, which marked the onset of Egypt's Third Intermediate Period, the priesthood of Thebes overshadowed the king in terms of ideological, economic, military, and political control. Without royal influence, the decorum that traditionally governed the availability of funerary materiality to each stratum of Egyptian society disintegrated, leaving the priesthood with greater access to previously restricted texts and materials. This paper surveys the papyri from the perspectives of gender, priestly titles, and family associations, to demonstrate that texts reveal much more than their written content—they are also physical objects reflective of the status of their owners. This renegotiation of identity via materiality speaks to a broader issue of how all societies use materiality to reflect social status.

Madadh Richey (University of Chicago), "The Phoenician 'Magic' Squares from the Temple of Eshmun"
Expeditions to the Persian-period Phoenician temple of Eshmun at Boustan esh-Sheikh, Lebanon discovered a group of five enigmatic Phoenician inscriptions on stone. These have the appearance of letter grids, with letters aligned both horizontally and vertically. While these include theonyms such as Ashtart spelled in all directions, they are not "readable" in the traditional sense, i.e., as yielding linear content. Scholars who have engaged these texts have often attempted to wrestle some magical or metaphysical content from the squares. Perhaps they hide anagrammatic meaning; the comparbale Latin SATOR square is often claimed to obscure a Christian message. Or perhaps they are apotropaic; there is evidence that SATOR squares were used similarly in later European contexts.

Scholars have failed, however, to discern anagrammatic or pattern-based meaning in the Eshmun temple squares, and there are no comparanda with amuletic or similar functionality. Such cases can be helpful for advancing the study of non-linguistic texts, since they encourage focus on structure and find-context rather than speculative rearrangements. I argue that these texts and their find-contexts allow a reconstruction of composition practices based on the assumption of partial recognition: prospective readers were expected to discern the theonyms of the Eshmun temple squares, but they would also be baffled by the non-linguistic content of certain sequences. This combination constructed a text capable of engagement, but never full engagement, which had the

effect of marking the temple and its literate class as esoteric, even (perhaps especially) if there was no discoverable meaning behind the squares.

3F. Yerushalayim, Al Quds, Jerusalem II

CHAIR: Joe Uziel (Israel Antiquities Authority)

Christoph Uehlinger (University of Zurich), "Beyond Biblical Name-Dropping: Investigating Iron Age Seals and Bullae in Social-Historical Perspective"
Archaeological research in the southern Levant has long moved beyond traditional "biblical archaeology." One field of study seems to resist, however: the study of ancient Hebrew inscribed seals and bullae. This paper will argue that, while there may be some interest in ascertaining the historicity of individuals figuring in the Bible via seals or sealings mentioning them, doing so produces little added value in terms of historical knowledge; on the other hand, it devaluates the detached appreciation of most of the relevant material, since the items that can in one way or another be "biblicized" are after all few in number. Seals and sealings should be analyzed in their own right and in their actual contexts; doing so invites numerous questions, insights, and hypotheses and promises significantly more interesting knowledge, in terms of social history, than the biblicizing approach. Treating artifacts in the manner of relics may appeal to religious belief and/or historicist conviction, but it can hardly be regarded a truly scientific endeavour. Referring mainly to excavated bullae from Iron Age II Jerusalem, the paper will argue for more sophistication in the study of ancient Levantine glyptics.

Anat Mendel-Geberovich (The Hebrew University of Jerusalem; Israel Antiquities Authority) and Ortal Chalaf (Israel Antiquities Authority), "The People behind the Stamps: The Study of a Newly-Found Group of Bullae from the City of David"
During the Iron Age II, complex administrative systems were at play in the Judean kingdom. Key artifacts in understanding this system are seals and sealings (bullae), which have been found in large quantities in the excavations of the period, particularly in Jerusalem, where hundreds of such sealings have been discovered. Based on these finds, we can now reaffirm that, in the early stages of the period, the bullae are iconographic, whereas from the eighth century B.C.E. onward, the symbols are largely replaced with bullae indicating the names of officials within the bureaucratic system of the capital of Judah, Jerusalem. The following paper will present a corpus of newly-found bullae discovered in a row of buildings excavated along the eastern slope of the City of David, in the vicinity of Kenyon's Wall 1 and the Warren's Shaft system. The excavations revealed several structures, dating from the mid-eighth century B.C.E. to the destruction of the city in 586 B.C.E., likely domestic structures built along the slope as part of the urban expansion of Jerusalem. The paper will focus on the epigraphic study of the bullae found, and the way in which the bullae reflect both the context in which they were found and their distribution within Jerusalem's administrative system. Finally, select names and what they tell us about the officials in Jerusalem in the heyday of the Judean kingdom appearing on the bullae will be discussed.

Shira Faigenbaum-Golovin (Tel Aviv University), Eythan Levy (Tel Aviv University), Eli Piasetzky (Tel Aviv University), and Israel Finkelstein (Tel Aviv University), "From Jerusalem's Ophel to Kiriath-Jearim: How to Reveal Illegible Ostraca and the Level of Literacy in Judah"
Our study of the Jerusalem's Ophel ostracon demonstrated that multispectral imaging has the potential to reveal letters illegible to the human eye. In the case of Ostracon 16 from Arad, we achieved even more spectacular results, unveiling three lines of text on the supposedly blank side of the ostracon. These surprising outcomes led us to the inevitable question: How many ostraca have been discarded during excavations just because the sherds were considered blank? To tackle the problem, we designed an excavation protocol for screening ceramic potsherds prior to their disposal. We will demonstrate the application of this procedure on recently unearthed ceramic finds from the excavation at Kiriath-Jearim near Jerusalem. In addition, we will discuss possible lines of research related to these studies, which shed light on the question of the degree of literacy in Judah during the First Temple period.

Christopher Rollston (The George Washington University), "Women in Provenanced Old Hebrew Inscriptions: Powerful Data from Judah's Capital"
Although it is very rare, there are provenanced inscriptions that reference women, including some recent glyptic evidence from Iron Age II Jerusalem. The purpose of this paper is to detail that evidence and correct some previous (published) readings.

David Vanderhooft (Boston College), "At the Intersection of Divination and Epigraphy in Iron Age II Jerusalem and Judah"
Various types of divination inquiries and formal petitions to the deity—on behalf of the king or private individuals—are clearly attested in the Hebrew Bible. Loci for initiating such inquiries and petitions could include, among other possibilities, sacred sites (e.g., *'ēlôn môreh* [Gen 12:6], *'ēlôn mĕ'ônĕnîm* [Judg 9:37], *bāmôt*), specific towns (e.g., Mishal, Eshtaol, and Shiloh [so Na'aman]), the residence of an expert (e.g., En Dor, *bêt Micah*), and shrines and temples. No doubt the Jerusalem temple was one such locus (classically, J. Begrich). Experts of various capacities often facilitated such inquiries and petitions.

The present paper investigates whether, during the Iron Age II, some of these inquiries and petitions might have been formulated in writing, whether divine responses mediated by specialists could likewise be committed to writing, and how recipients of affirmative divine responses could have their gratitude recorded in texts (H. L. Ginsberg, J. Greenfield, P. D. Miller). Tomb inscriptions (e.g., Khirbet el-Qom), graffiti and plaster inscriptions (e.g., Kuntillet 'Ajrud), amulets (Ketef Hinnom), and select biblical texts illumine the intersection between divination and writing in Judah and Jerusalem during the Iron Age.

3G. Thinking, Speaking, and Representing Animals in the Ancient Near East: New Perspectives from Text and Images I

CHAIR: Laura Battini (French National Center for Scientific Research [CNRS]; Collège de France)

Margaret Root (University of Michigan), "The Arc of the Horn: Wild Goats in the Visual Arts of Ancient Iran"
The Persian bezoar ibex beckons us into a realm where our neat categories of the wild, the exotic, the domesticated, and the mythic/cultic comingle to defy easy classification. Working with excavated and well-documented evidence, I explore complexities of the arc of representation and meaning revolving around the Persian wild goat from late prehistory in the Zagros region of western Iran and neighboring Iraq through the Achaemenid Persian Empire (550–330 B.C.E.). Across this great span of time and shifting ecologies of social order, the ibex indeed occupied a fluid place between its natural wild state and subtle gradations of its culturally inflected roles, culminating in the metaphorically-laced visual landscape of Persepolis, heartland capital of the empire. Here we find a courtly program that evocatively mined and re-invented multiple ancient pasts of a vast hegemony. Indigenous traditions of long standing rippled through this creative project. A rich databank of ibex images gleaned from representational and social information obtained from the Persepolis Fortification tablet texts and associated seals shows the ibex in a wide range of scenarios and styles—used by people at varied levels of the social hierarchy. These data combine (paradoxically) with the extremely restrictive deployment of the ibex in monumental sculpture. The evidence raises fresh questions on the nature of cultural memory and production and on the cultural imperatives manifest in the formal, built visual/spatial experience of the Persepolis ceremonial context.

Sarah Costello (University of Houston–Clear Lake), "All Creatures Great and Small: Animals Carved in Stone at Neolithic Gobekli Tepe, Turkey"
The fantastic array of carved megaliths at early Neolithic Gobekli Tepe, Turkey powerfully expresses a relationship among people, landscape, gods, and animals. A humbler object found at Gobekli is a pebble carved with more abstract renderings of similar subjects. This small carved stone allows us to connect Gobekli's rich, but unusual, visual world to the better-documented tradition of small-scale Neolithic glyptic. This paper will revisit interpretations of the imagery of the Gobekli megaliths and connect that imagery to early Neolithic glyptic evidence, in an attempt to more fully understand people's interaction with these monuments and images, large and small.

Krystal V. L. Pierce (Brigham Young University), "The Roles of Domesticated Animals at Deir el-Medina, Egypt: An Analysis of Representational and Textual Evidence"
The New Kingdom site of Deir el-Medina in Egypt was a state-planned town that housed the laborers, craftsmen, and officials who worked on the royal tombs in the Valley of the Kings. Over 65 houses were located in the village, which also included over a dozen chapels and temples to various local and state deities. The inhabitants built and decorated rock-cut tombs with pyramid-topped chapels for themselves in a nearby cemetery. Representational evidence is plentiful on the walls of the tombs, houses, and temples, as well as on objects and figural ostraca. Textual sources include thousands of ostraca and papyri that mostly record subjects related to daily life, like personal letters, sales

transactions, prayers, court proceedings, and popular literature. At least seven domesticated animals appear across these representational and textual sources, including cats, dogs, monkeys, pigs, goats, cattle, and donkeys. This paper examines the roles that these domesticated animals performed at Deir el-Medina, based on an analysis of the representations and documents in which they appear. This will include a survey of scene types and textual categories, as well as a discussion focusing on the appearance of and terminology for these seven animals. The purposes behind the texts, tomb decorations, funerary objects, and figural ostraca featuring domesticated animals is also assessed, in order to gain a holistic viewpoint of the social, economic, symbolic, and functional relationships between these animals and their human handlers at Deir el-Medina.

Anastasia Amrhein (University of Pennsylvania), "Harnessing Liminality: Terracotta Animal Figurines in First Millennium B.C.E. Assyria and Babylonia"
This talk will consider the role of terracotta animal figurines in Mesopotamian daily life during the Neo-Assyrian and Neo-Babylonian periods through the analysis of find-spots as well as use-wear. The talk will focus on figurines excavated at Assur (currently in the Vorderasiatisches Museum, Berlin), with comparanda from other sites such as Tell Billa, Ur, and Nippur (in the Penn Museum). While figurines of *mischwesen* have been discussed at length—in the context of rituals associated with the official spheres of the palace and temple—animal figurines have received considerably less critical attention, interpreted until recently simply as toys. I argue that the manufacture of animal figurines was an important part of vernacular magic and identity-formation. In texts as well as visual representations in other media, animals are presented as liminal beings: in between humans and deities, and associated with both fertility and abundance, but also with danger and death. Animal behaviors were thus especially significant as omens. Similarly, the figurine corpus features dualities: representing wild and domesticated animals; predators and prey; foreign and Mesopotamian animals. Although most of the figurines were simply and quickly made by hand, they capture the essence of the animal's being and behavior, suggesting that even city-dwellers experienced closeness to animals. Creating and animating miniature animals in clay was a way for Assyrians and Babylonians of all social standings to exercise control over the unknown in their lives by harnessing aspects of animal liminality; such practices enabled embodied communication with the world of deities and demons.

Flavia Pacelli (Sapienza University of Rome), "What Does the Fox Say? Animals, Popular Sayings, and Wisdom in Ancient Mesopotamian Literature"
In Mesopotamia as well as in other cultures, animals have always played an essential role in human life. Texts frequently mention real or symbolic situations in which man needs to interact with them. Even Sumerian and Akkadian literature have reacted to the impulse released by the fascinating animal world: animals do not simply belong to the human daily life, but they often carry traditional human features and behaviours. In proverbs and popular sayings several domestic and wild animals are mentioned: they are able to think and speak as human characters. Even if several studies on the presence of animals in texts have been carried out, in-depth research on animal symbolism and function has been rather occasional. Animals often turn into vehicle of popular wisdom and are the main actors in interesting rhetorical structures, as we can see in disputations, proverbs, and

fables. A specific text from Assur, defined as popular sayings (Lambert 1960: 213–21), proves how these texts can be considered as a rhetorical tool of knowledge; this Assyrian tablet shows animals alternate in the construction of apologues with educational purposes, such as teachings and precepts. The aim of this paper is to define some figures of wild animals that appear in this text, such as the wolf, the fox, the mongoose, and the lion, contextualizing them within Mesopotamian literature and focusing on their recurrence in proverbial expressions. In this presentation I will also examine their metaphorical and didactic perspective as a means of creating an empirical wisdom tradition.

3H. Reports on Current Excavations—ASOR Affiliated

CHAIR: John D. M. Green (American Center of Oriental Research)

James Riley Strange (Samford University), "A Small Kiln at Kefar Shikhin, Lower Galilee"
In 2017 and 2018 the Shikhin Excavation Project excavated a small kiln in an industrial area of the town and only a few meters from the remains of a public building. This paper reports on the find and its stratigraphic context, and discusses the installation in the context of other kilns of the Roman period excavated in the Galilee and neighboring regions. The paper proposes that the kiln was used to fire oil lamps and other small vessels.

Leigh-Ann Bedal (Penn State Behrend), "The Petra Garden and Pool Complex, 2018"
The Petra Garden and Pool Complex is laid out on a large terrace at the heart of the city, overlooking the Colonnaded Street and adjoining the Great Temple complex. The existence of a monumental pool and ornamental garden in the midst of a desert landscape sent an unambiguous message of prosperity and conspicuous consumption. This field report summarizes the results of the summer 2018 field season with the goals to expose more of the architecture and plan of the monumental pool, its water source, and interface with the adjacent precinct (the so-called "Middle Market").

Oystein S. LaBianca (Andrews University), Stanley Lebrun (Andrews University), Jared Wilson (Andrews University), and Paul Roschman (Andrews University), "Ground-Truthing of Animated Renderings of the Historical Landscape of Hisban and Vicinity, Jordan"
This presentation will report on fieldwork during June and July 2018 involving ground-truthing by means of field survey of animated renderings that visualize changes over time in the historical landscape of the archaeological site of Tall Hisban and its hinterland in Jordan. This fieldwork is part of the Madaba Plains Project: Tall Hisban (Phase II). These renderings, which are being generated using ARCINFO CityEngine software, will be used as a means to: 1) posit and test scientific hypothesis; 2) provide access for researchers worldwide and the public to relevant texts, records, and images; and 3) reach out to the local community for the sake of conservation of the archaeological site and the

local environment. When online, the project promises to demonstrate a way forward for archaeologists to more effectively utilize online visual renderings, as a way to engage local host communities as partners in efforts to advance scientific understanding of the past and in conservation and presentation of archaeological sites. It will also inform of lessons from the past about risk management and resilience for living in a highly water-stressed and conflicted region of the world.

Lorenzo d'Alfonso (New York University), "Niğde Kınık Höyük (Cappadocia, Turkey): Research Questions and Recent Results"
Archaeological excavations at the site of Niğde Kınık Höyük (southern Cappadocia, Turkey) began in summer 2011, and became an ASOR affiliated field project in 2015. During the course of seven campaigns, five areas of operation have been set up. Located on the northern slope of the mound, Operation A consists of three sectors: sector A1 investigates the late Achaemenid and Hellenistic sanctuary; sector A2 investigates Iron Age public architecture; and sector A-walls investigates the citadel fortifications from the Bronze Age to their disuse in the late Achaemenid period. Operation B is investigating the occupation sequence of the summit of the mound. Here, Seljuk, late Hellenistic, early Hellenistic, and late Achaemenid domestic and productive occupations have been excavated. Operation C investigates the southern slopes of the mound, where extensive excavations of the fortification walls and Late Bronze to Iron Age occupation sequence inside of the walls have exposed an area devoted to storage and production activities. Operation D investigates the occupation of the lower town and the existence of defensive walls defining the terrace, while Operation E was opened in 2016, to extend the exploration of the sanctuary area (A1) towards the south. The paper introduces the main research questions of the archaeological project, and selects some of the results from 2018 campaign.

Ömür Harmanşah (University of Illinois at Chicago) and Peri Johnson (University of Illinois at Chicago), "The Poetics and Politics of Stone: A Hittite Fortress, Its Quarry and Mason's Village in the Southern Borderlands (Yalburt Yaylası Archaeological Landscape Research Project)"
Building in ashlar masonry is an important innovation of the Late Bronze Age (ca. 1600–1175 B.C.E.) in Anatolia. The material quality of the cushion-like, bulbous surfaces of Hittite ashlars in the central plateau presents distinct architectonic aesthetics and technology. The study of this architectural practice requires a contextualization of each monument in its local landscape of technological production, including the geological landscapes, quarries, and monuments. During the 2010–2016 seasons of the Yalburt Yaylası Archaeological Landscape Research Project (Konya), the team documented the well-preserved Hittite fortress of Kale Tepesi (Ilgın) featuring megalithic fortifications. The fortress is associated with the quarry at Yıldız Tepe near the village of Karaköy, a marl outcrop where galleries of ashlar blocks were harvested for the construction. The survey team identified fragments of green gabbro hammers scattered across the quarry. In 2016, a single-period Late Bronze Age settlement was identified at the site of Bağlar Mevkii on the lower slopes of Yıldız Tepe. The preliminary ceramic analysis suggests that the small single-period site may have been inhabited by the artisans of the Yıldız Tepe quarry. These sites give us an extraordinary chance to understand the socio-

technological mechanics behind building a fortress in the Hittite Empire. This paper will discuss the three sites while comparing the evidence to the well-known and nearby Yalburt Yaylası Hittite Sacred Pool complex, where ashlar blocks were used to inscribe one of the lengthiest and most politically charged imperial inscriptions at the time of Tudhaliya IV (1237–1209 B.C.E.).

3I. Archaeology of Anatolia I

CHAIR: Levent Atici (University of Nevada, Las Vegas)

Arkadiusz Marciniak (Adam Mickiewicz University in Poznań), "The New Çatalhöyük: Aftermath of 25 Years of the Çatalhöyük Research Project"
The Çatalhöyük Research Project came to an end in 2017. This project of an unprecedented scale became a model of long-term research projects in the Near East and elsewhere. It significantly contributed to a better understanding of different aspects of the life and existence of Neolithic communities and profoundly contributed to a thorough and comprehensive recognition of this important period in the history of the Near East. As the results of this large project are now being published, this year has brought about the beginning of a new project at Çatalhöyük. This paper intends to present an overview of major objectives of the new project at the site. In particular, it will address the scope and character of the planned research undertakings including field work in the previously unexcavated areas, integration of a wide range of data in addressing the most pertaining issues in Neolithic Anatolia, as well as investigation of multiscalar relations with neighboring areas in subsequent periods of the settlement's history. The paper will further present objectives of the conservation program aimed at effective preservation of the unearthed mud brick architecture of unprecedented cultural value. Finally, it will outline major objectives of different forms of the site presentation to general public and the development of the Çatalhöyük headquarters as a major research center.

Sharon R. Steadman (SUNY Cortland), Gregory McMahon (University of New Hampshire), and Jennifer Ross (Hood College), "New Discoveries at Çadır Höyük on the North Central Anatolian Plateau"
Work has continued in our three primary periods, the Late Chalcolithic, second–first millennia B.C.E., and Byzantine. Excavations in both the Lower and Upper Town areas of the Late Chalcolithic have helped us to better understand community planning and internal movement within what we now understand to be a "bi-level" settlement. We also continued investigation of the earliest occupation (early fourth millennium) in the western region of the Lower Town. Results of this work will be presented. Operations on the second millennium proceeded on both the eastern and northern slopes. We particularly focused on the northern slope trenches that allowed us to investigate the area just inside the monumental Hittite gate excavated in 2006. Work continued to document the Iron Age occupation that sits directly above the second millennium Hittite levels in this area. We also continued work on the major architecture exposed in the eastern slope Step Trench in 2017; this Late Iron Age gate and pathway also sit above second millennium levels. The majority of our work concentrated on the mound summit which

features our Late Antique and Byzantine occupation. New insights into the defensive structure that surround the summit and the lifeways of those sheltering inside of it were achieved and will be presented.

Ashley Cercone (University at Buffalo), "Mold Made: An Application of the Chaîne Opératoire Framework to the Production of Early Bronze Age Ceramics at Seyitömer Höyük, Turkey"
Due to the very nature of the archaeological record, scholars are forced to utilize the chaîne opératoire framework in order to reconstruct the process of how crafts were produced in the past. At the site of Seyitömer Höyük in Western Anatolia, researchers have been fortunate enough to be able to recreate almost the entire ceramic production sequence due to great preservation and the use of experimental archaeology. During the Early Bronze Age, craftsmen utilized an innovative mold making technique, as well as a clay coil and wheel combination method. This modus operandi produced a standardized diverse ceramic repertoire at a fast rate. This paper reconsiders the chaîne opératoire sequence in light of the Seyitömer Höyük excavations

Levent Atici (University of Nevada, Las Vegas) and Fikri Kulakoğlu (Ankara University), "Are Kings' Sheep Sweeter? Bones from the Early Bronze Age 'Palace' at Kültepe-Kanesh"
Kültepe-Kanesh, capital of the Assyrian trading colonies in Anatolia during the Middle Bronze Age (ca. 2000–1750 B.C.), is a two-part urban center consisting of a 21 m high city mound and fortified administrative quarter, mainly occupied by palaces and temples, surrounded by an extensive lower city that has conventionally been referred to as the *karum* of Kanesh. A large corpus of cuneiform tablets written in an Old Assyrian dialect combined with zooarchaeological data provide us with direct and indirect evidence for many aspects of life including animal food consumption patterns during the Middle Bronze Age in central Anatolia. Recent excavations at the city mound have unearthed a monumental structure that could arguably be dubbed a "palace," or some sort of administrative complex, that measures at least 75 m by 65 m. This palatial complex represents Level 13 and dates to 2500 B.C.E. or earlier on the basis of the established chronology at the site. As such, the animal bones excavated from this context offer us new insights into the Early Bronze Age (3100–2100 B.C.E.) animal management strategies before the establishment of the trade colonies in central Anatolia.

Oya Topçuoğlu (Northwestern University), "Putting the Bullae Back in Context: A Repositioning of Acemhöyük in the Old Assyrian Period Based on Glyptic and Archaeological Evidence"
Since the discovery of two monumental buildings containing large numbers of sealed bullae in 1980, Acemhöyük has become a site of interest for both Anatolian and Mesopotamian studies. The proposed association of the site with ancient Burushanda, the center of a major Anatolian kingdom known from the Mesopotamian narrative "King of Battle," combined with the information provided by Old Assyrian texts from Kültepe describing Burushattum as the center of a large kingdom ruled by a Great King, put Acemhöyük in the spotlight. However, despite relatively large areas of exposure on the mound, no cuneiform tablets have been found so far to help identify the site with an

ancient settlement and place it in a secure historical context. As a result, the chronological and historical framework for Acemhöyük relies heavily on archaeological evidence. The much-anticipated publication of the sealed bullae from Acemhöyük by Nimet Özgüç in 2015, which presents the site as ancient Burushattum despite recent evidence to the contrary, provides a dating of the monumental structures based on glyptic evidence. However, a closer examination makes it clear that Özgüç's work warrants a re-evaluation. This paper presents a closer look at archaeological and glyptic evidence from Acemhöyük in conjunction with dendrochronological data and contemporaneous textual evidence from Kültepe, in an attempt to clarify the history and role of the site during the Middle Bronze Age in relation to the Old Assyrian trade network, and explore the interconnections between Anatolia and northern Mesopotamia.

4A. ACOR at 50: A Retrospective and Prospective for the American Center of Oriental Research

CHAIR: S. Thomas Parker (North Carolina State University)

Barbara A. Porter (American Center of Oriental Research), "A Brief History of ACOR: Evolution and Expansion"

Since 1968, ACOR has grown with Amman, from the small rented apartment near Jabal Amman's First Circle and then on to the Third and Fifth Circles before landing in 1986 in its own permanent, purpose-built headquarters near the University of Jordan. During this opening paper to celebrate ACOR's 50th anniversary, many of the people who have been part of its history will be honored and their roles in its evolution and expansion considered. There have been significant ACOR projects throughout Jordan and the impact of some will be reviewed. As ACOR Director since 2006, I have often reflected on the history of the institution and its ongoing role in helping preserve Jordan's heritage. At the Boston Annual Meeting in 2008, I organized a session dedicated to ACOR at 40. Here I add my voice as we mark the current milestone. In multiple sessions at ASOR, one hears papers by scholars who have benefited from ACOR's support and for whom the center plays a pivotal role in supporting their research. Ensuring that this remains the case is part of the collective effort that extends from ACOR's Board of Trustees to the institute's dedicated staff in Amman and Boston.

Gary Rollefson (Whitman College), "How ACOR-Affiliated Projects Have Transformed Knowledge of the Prehistory of Jordan"

Although the prehistory of Jordan was investigated as early as the 1930s, it was not until the 1970s that ACOR actively encouraged more intensive research in the Paleolithic, Neolithic, and Chalcolithic/Early Bronze Age. While other foreign institutes supported prehistoric research in Jordan, the acceleration of sustained field work—both surveys and excavations—was largely inspired by teams affiliated with ACOR, transforming what seemed to have been a "prehistoric backwater" to a fully-fledged center of hominin-human cultural activity and innovation. Projects supported by ACOR demonstrated patterns of hunting and tool manufacture unique to Lower, Middle, and Upper Paleolithic Jordan; unanticipated cultural complexity appeared during the Epipaleolithic period

(20,000–9600 cal B.C.), followed by unexpected socioeconomic and sociocultural complexity in the Pre-Pottery Neolithic A (PPNA, 9600–8600 cal B.C.). Stunning artwork related to ancestor veneration characterized the northern part of Jordan during the Middle PPNB (8300–7500 cal B.C.), and the vulnerability of local environments was shown in sudden demographic pressures that led to the collapse of the Late PPNB "megasites" (7500–7000 cal B.C.). A previously unknown cultural entity called the PPNC (7000–6400 cal B.C.) coped with the degraded environments of the early seventh millennium, including what appear to have been major population relocations to what are today hyperarid deserts. Local development of ceramic production occurred in Jordan in the Yarmoukian Pottery Neolithic period (6400–5000 cal B.C.), though the contemporary aceramic Late Neolithic period and subsequent Chalcolithic/Early Bronze Age reflect the emergence of a new subsistence economy: the hunter-herders of the steppe and desert areas of Jordan.

S. Thomas Parker (North Carolina State University), "ACOR's Research Projects: A Scholarly Appraisal"
From its founding in 1968, ACOR has not only facilitated the research of many scholars and institutions both within and without Jordan, but has also frequently organized and conducted its own research agenda, sometimes in collaboration with others but often as independent research projects. What are the results of ACOR's own diverse research projects? This paper offers a reappraisal of ACOR's own research projects over the past 50 years. It would appear by any measure that ACOR, through a succession of directors and other staff, has made significant scholarly contributions through these projects to Jordan's history and archaeology as well as to cultural resource management. Several major projects have reached final scholarly publication although others remain in progress.

Jack Green (American Center of Oriental Research), "ACOR Looks to the Future in an Era of Rapid Change"
ACOR is in its 50th year, and like many organizations that reach such a milestone, it is fitting to look back to celebrate the great achievements of the past, to thank and remember all of those who have made it happen, as well as to be a little nostalgic about the past. This time of reflection also allows ACOR to also consider its immediate present as well as its future. In 2018, through its Board of Trustees, ACOR initiated a process of strategic planning. This involves a full overview of ACOR's role, and an assessment of its immediate and longer term needs for the future in Jordan, North America, and the wider world. This paper will take us through that process, looking at ACOR's mission "to advance knowledge of Jordan past and present," seeing how this aligns with the core activities of ACOR, and considering future directions for ACOR in the coming five years and beyond. For example, ACOR provides access to its library, and its fellowship program continues to provide vital resources for researchers in a range of fields, both modern and ancient. ACOR is also firmly rooted in supporting archaeological and cultural heritage initiatives, including through USAID funded projects such as SCHEP (Sustainable Cultural Heritage Through Engagement of Local Communities Project). In an unpredictable and changing world where funding sources, academic priorities, and political realities may shift, this paper looks forward and considers ACOR's next steps.

4B. Archaeology of Lebanon II

CHAIR: Hanan Charaf (Lebanese University)

Marta D'Andrea (Sapienza University of Rome*), "A Fresh Look at Northern Lebanon in the Late Third Millennium B.C.: The Early Bronze Age IV Pottery from Tell Fadous-Kfarabida"**
From 2004 to 2016, an archaeological expedition of the American University of Beirut directed by Hermann Genz investigated the coastal site of Tell Fadous-Kfarabida, located in the district of Batroun, in the North Governorate of Lebanon. The excavations at Tell Fadous-Kfarabida revealed more evidence of the EB IV in this area and yielded a collection of pottery that—after those from Tell Arqa and Byblos—is one of the largest assemblages of Lebanese ceramics from the late third millennium B.C. known thus far. It includes vessel types representing different functions—drinking, serving, cooking, storage, and ceremonial vessels for ritual feasting—as well as local and non-local wares.

This corpus of ceramics is currently under investigation for its publication in the final report of the excavations at Tell Fadous-Kfarabida. The paper will present a summary of this study, in order to discuss the organization of ceramic production, distribution, and consumption at the site and its region as well as patterns of interconnectivity and exchange with the neighboring areas. Building on these insights, connections between the EB IV pottery horizon of northern Lebanon and coeval traditions in western Syria, the southern Levant, Anatolia, and the eastern Aegean will be analyzed, in order to frame the pottery from Tell Fadous-Kfarabida within a global integrated scenario.

Hélène Sader (American University of Beirut), "Tell el-Burak: Results of the 2017 and 2018 Excavation Seasons"
The Tell el-Burak Archaeological Project has focused since 2011 on exposing the Iron Age settlement of the site. The remains of this settlement are found almost exclusively on the southern slope of the tell. The 2017 and 2018 excavations in Area 3, on the upper part of the slope, have attempted to define the western extension of the settlement and have exposed a monumental structure, maybe a gate, as well as several dwellings and a small rectangular and plastered vat, which seems to have been used for the processing of grapes. In Area 4, excavations have exposed wine press installations: a large, circular, collecting vat and a large, rectangular treading vat, the first of their kind to be excavated in Phoenicia. The evidence suggests that Tell el-Burak was the center of intensive agricultural activity centered on the cultivation of olives and grapes and on the industries relating to these cultures.

Jack Nurpetlian (American University of Beirut), "Putting Beirut on the Coin Map"
In recent years there have been a growing number of publications on coin finds from Beirut. This is mostly due to the large-scale excavations conducted there as part of the post-civil war reconstruction of the capital. These excavations have provided a unique

opportunity to study, on a large scale, the production and circulation of coins in the densely populated urban city. Yet another significance is the fact that a good number of the coins come from well-documented stratigraphic layers. This rather rare occurrence allows both a temporal study of the city's economic development through time and a spatial analysis of the coins retrieved from both the public and private sectors of ancient Beirut.

Until recently scholars have been relying on a very limited number of published coin finds from large-scale excavations in the Near East (namely Antioch and Dura Europos). The recently available data from Beirut, surpassing those of neighboring cities, are playing a leading role in bridging the gap between the geographically dispersed data sets of the wider region and have helped in elevating Beirut on the coin map of the ancient world.

May Hajj (Lebanese University), "A New Modern Approach to Study Wall Paintings in Lebanon"
The study of wall paintings is not limited solely to iconographic or stylistic analyses but deals also with technological researches on the different types of paint, mortar, and pigments used in the two techniques of *affresco* and *fresco-secco*. Indeed, to obtain satisfactory results, new studies are mixing visual observations together with technological and comparative analyses. The new technologies used in laboratory analyses identify pigments and mortar and combine with visual observations to reveal other unknown elements, such as the status of the person or the identification of the geographical place being painted.

Lebanon is very rich in different wall paintings of function and style dated to different periods. The evolution and the dating of these works are a characteristic part of the history of each city of the Lebanese coast where there is a concentration of wall paintings. This paper provides an overview of the different types of wall paintings found in Lebanon.

4C. Archaeology of the Southern Levant I

CHAIRS: Owen Chesnut (North Central Michigan College) and Joshua Walton (Capital University)

Felix Höflmayer (Austrian Academy of Sciences), "Egypt and the Levant in the Middle Bronze Age: Historical Implications of a High Radiocarbon Chronology"
In recent years, radiocarbon data from several sites throughout the southern and central Levant have challenged both the low and the traditional chronology of the Middle Bronze Age and subsequently its correlation with the Egyptian historical chronology. Data from sites in the southern Levant such as Tell el-Burak, Tel Kabri, Jericho, or Tell el-Hayyat as well as Tell el-Dabʿa in Egypt provide a consistent chronology about 100 years higher than the low and about 50 years higher than the traditional chronological scheme. In 2016, first results were presented at a member-organized workshop called "The Middle

Bronze Age in the Southern Levant Revisited: Chronology and Connections" at the ASOR Annual Meeting in San Antonio.

The revised chronology demands a critical reassessment of our current view of Egyptian-Levantine relations during the Middle Bronze Age. Textual sources such as the Execration Texts, the Mit Rahina inscription of Amenemhet II, the historical inscription of Khnumhotep at Dahshur or the Khu-Sobek inscription were interpreted along the lines of the traditional or the low chronology, as were art historical references, such as the Egyptianizing paintings at the Middle Bronze Age fort at Tell el-Burak. This paper summarizes the current state of research in the field of absolute chronology of the Middle Bronze Age Levant and its synchronization with Egypt and presents for the first time a historical interpretation of Egyptian-Levantine relations based on an absolute radiocarbon-backed chronological framework, challenging the accepted historical narrative.

Shay Bar (University of Haifa), "Tel Esur: Results of the First Eight Seasons of Excavation"
Tel Esur is situated in Israel's Sharon Plain, and comprises a tell 2.5 ha in area, and a nearby mound comprising 5000 sq. m. Presented here are the results from three excavation areas:

In Area B, on the north of the tell, an MB IIA fortification system with a 3 m wide city wall and a unique pyramidal tower were exposed. Abutting the city wall were storage rooms, and above them Bronze Age strata of later unwalled settlements.

In Area B1, next to Area B, a large Late Bronze Age 14th century B.C.E. structure was found. The structure was destroyed, and more than 80 complete vessels were found crushed on the floors. Among the local Canaanite ware, we found vessels exhibiting Egyptian influence. Petrographic and X-ray fluorescence (XRF) analysis of the Canaanite assemblage showed that half of the items were not local. The research also revealed trade in cooking pots and pithoi, valued for the vessels themselves rather than for their contents. A 15th century B.C.E. stratum was found below this one, supporting the identification of the place with *jft (D-f-tj)* mentioned in Thutmose III's Canaan campaign in 1457 B.C.E.

In Area D, on the small mound, the impressive remains of an early eighth century B.C.E. administrative building, including a large square tower and paved storerooms, were found. This is an indication of the efforts of the kings of Israel to enforce their jurisdiction over the coastal plain, probably in the time of Jeroboam II (784–748 B.C.E.).

Shlomit Bechar (The Hebrew University of Jerusalem) and Uri Berger (Israel Antiquities Authority), "The Eyes of Hazor Are upon You: Tel Mashav as a Fortress of Hazor"
Tel Hazor is one of the most extensively excavated sites in the southern Levant. It was a large urban center in the second and first millennia B.C.E., controlling the Upper Galilee (and probably also the Golan Heights)—its roads and hinterland. This conclusion is

known not only from the site's size and the finds exposed during the many years of excavations, but also from written documents found throughout the ancient Near East.

However, although we have acquired an immense amount of knowledge (which is yet so little) on the daily life in the city of Hazor in the Bronze and Iron Ages, we have hardly any data on its surroundings. One of the conspicuous sites in Hazor's vicinity is Tel Mashav, located about 2 km to the west of Tel Hazor. This paper will explore the connectivity and dialogue between the two sites. It will argue that Tel Mashav is a fortress settled in the Bronze and Iron Ages, controlling the road leading to the west, protecting Hazor's inhabitants, warning them in times of danger. It will be shown that similar fortresses have always been built in relation to large sites. Several follow-up questions will be raised in conclusion, in anticipation for future excavations at the site.

Katharina Streit (The Hebrew University of Jerusalem) and Felix Höflmayer (Austrian Academy of Sciences), "Tel Lachish during the Middle and Late Bronze Age—The Results of the First Two Seasons of the Austro-Israeli Expedition"
In 2017, a joint team of researchers from the Hebrew University, the Austrian Academy of Sciences, and the University of Vienna started new excavations at Tel Lachish as part of the project "Tracing Transformations in the Southern Levant," hosted by the Austrian Academy of Sciences. The project focuses on the Middle–Late Bronze Age transition, exploring chronological aspects, material culture, and political history of this major site in the Shephelah.

In the first two seasons, 2017 and 2018, two excavation areas on the western slope (Area S) and north of the Judean palace/fort (Area P) were explored. First results from 2017 include substantial architectural remains from several phases within the Late Bronze Age in Area S, as well as a rich assemblage of local and imported ceramics and small finds.

This paper examines the excavation results in context of earlier projects at the site and in light of the prevalent historical narrative of Egyptian control of the southern Levant throughout the Late Bronze Age. Finally, open research questions of the project, as well as the excavation strategy for future seasons in 2019 and 2020, will be outlined.

4D. Tell It in Gath! Presentations on the History and Archaeology of Israel in Honor of Aren M. Maeir

CHAIRS: Jeffrey R. Chadwick (Brigham Young University) and Itzhaq Shai (Ariel University)

K. Lawson Younger (Trinity International University–Divinity School), "The 'Tempelpalast' and Tomb 1: The Cult of the Royal Ancestors at Tell Ḥalaf during the Kapara Period"
There is much evidence for the cult of the royal ancestors at Tell Ḥalaf. This paper will investigate the evidence for it during the Kapara period—specifically, the evidence from Tomb 1 and the "Tempelpalast" structure. The majority of the discussion will quite

naturally center on the "Tempelpalast." However, Tomb 1, just to the north of the western corner of this structure, dates to the same time period and is rich in grave goods that yield important insights into beliefs about the dead at this ancient Aramean city-state. This presentation relates to our friend Aren Maeir's long interest in, and study of, ancient Aramean archaeology and history, reflected in his in his leadership association with the Minerva Center for the Relationship between Israel and Aram in Biblical Times (RIAB).

Joe Uziel (Israel Antiquities Authority), "New Perspectives on the Connection between Jerusalem and Gath of the Philistines"
In 2004, Aren Maeir published an article on the implications that the excavations at Tell es-Safi/Gath have on understanding particular biblical passages, and the way in which these data reflect on the biblical historicity of passages dealing with Jerusalem. According to Maeir, the excavations at Tell es-Safi/Gath have provided strong evidence for the historicity of the biblical accounts regarding Gath of the Philistines, and, therefore, this provides a strong basis for supporting the same accounts in their discussion of Jerusalem and its status. At the core of this study is an interesting approach that Aren used to show how one can learn about a given place or event by looking at what happened at a neighboring site. In this lecture I will present a continuation of the study, based on new data collected in the more than a decade since Aren's study, in order to further our understanding of the relationship between Jerusalem and Gath, as seen through the archaeological record, and to compare the site histories of and events that occurred at those two major entities of the Iron Age southern Levant. Particular importance will be placed on the cultural and economic interactions between Jerusalem and Gath, whether their strength came at the expense of one another or whether it coincided, and the way in which the two sites were viewed by external entities.

Itzhaq Shai (Ariel University), "What's between Libnah and Gath?"
For more than two decades Aren Maeir has directed the Tell es-Safi/Gath Archaeological Project, providing an enormous amount of data from excavating the site, and producing numerous studies about the site and its role in the Bronze and Iron Ages. Tel Burna (biblical Libnah) is located only 9 km south of Tell es-Safi/Gath, and nine seasons of excavations have been carried out at this site. The differences in the settlement of these two sites are significant; however, comparing some of the periods, finds, and characteristics of their settlement can shed more light on the Canaanite entities and their relationships in the Bronze Age periods, as well as the Philistine-Judahite border and political entities in the Iron Age periods. In this presentation I will use my experience as a core staff member of the Tell es-Safi/Gath Archaeological Project on the one hand and the director of The Tel Burna Archaeological Project on the other hand to compare these sites and their importance as border sites in the Bronze and Iron Ages.

Oded Lipschits (Tel Aviv University), "Cultural Borders between Neighboring Sites: A View from Tel Azekah"
The excavations at Tell es-Safi/Gath and Tel Azekah, only few kilometers from each other, expose similarities and differences in the material culture at these two neighboring sites in different periods from the Early Bronze Age to the Hellenistic Period. In this lecture, honoring our good friend and colleague Aren Maeir, I will discuss these

similarities and differences in the material culture, and will compare them to our knowledge of the geopolitical history of the region.

4E. Beyond Language: The Multimodality of Ancient Texts II

CHAIRS: Lisa J. Cleath (George Fox University) and Alice Mandell (Johns Hopkins University)

Vanessa Bigot Juloux (École Pratique des Hautes Études; Andrews University), "Behind Words and Divinities in the Cycle of Baʻlu and ʻAnatu of the Scribe ʼIlimiku: A Testimony of Historical Evidence of Amorite Migration to Ugarit"
The Cycle of Baʻlu and ʻAnatu (KTU 1.1–6) from the scribe ʼIlimiku of Ugarit has always been classified as a mythological narrative text where two clans fought to take over the throne. However, behind words and divinities, I postulate that this text is a testimony of the migration of an Amorite tribe to Ugarit. A deeply historical analysis has not been made so far, probably because of divine characters that are the cause of ambiguity of interpretation. My argument relies on the origin of the theonyms "Baʻlu" and "ʻAnatu" and their epithets in KTU 1.1–6, as well as in Ugarit generally. Among ample evidence that I shall examine, I will argue that tower-temples in Mari and Ugarit allow us to postulate of an Amorite origin of Baʻlu, called the son of Dagānu in KTU 1.1–6, and to go even further, reflect the legitimation of a new Amorite dynasty in Ugarit. Dagānu reflects the process of assimilation during the first stage of the foundation of Ugarit; afterward Baʻlu testifies to the end of acculturation. Thus, divinities and their action would be nothing more than a way of communication used in antiquity to narrate historical facts, as was the case later for the *chansons de geste* (among them *La Chanson de Roland*) in the 11th century A.D.

Apart from the historical topic, I will propose a new model of narrative texts analyses, by excluding text-genre to avoid an unbiased inquiry, choosing instead to focus on the intersection between archeological and textual testimonies.

Joseph Cross (University of Chicago), "'Suit the Action to the Word, the Word to the Action': A New Reading of a Northwest Semitic Incantation in Egyptian Script (P. BM 10042, col. XII)"
First deciphered in 1989, the Northwest Semitic incantation in Egyptian script found at the end of the Harris Magical Papyrus (P. BM 10042, ca. 1100 B.C.E.) has received scant attention. Though portions remain difficult to decipher, its source is likely an incantation used during a lion hunt. In the first part of the paper, I will present a new interpretation based on an improved reading of both its hieroglyphic orthography and its Semitic content, buttressed by an awareness of its original poetic features. In particular, I will show that the incantation consists of an apostrophic address to the hunter's weapon.

Proceeding from the strangeness of the text's apostrophe, now orphaned from its original setting, I will then demonstrate how its transposition creates a new incantational genre which is simultaneously written and oral, and which is not merely performative but

responsible for its effective context. To achieve this, I will apply contemporary multimodal theories of genre, based on non-linear reading methods, which will structure my close reading of the text's rich semiotic interplay. Furthermore, I will situate my reading within the known Egyptian practice of text creation by the transposition of incantations from object-based contexts (e.g., amulets) into collections on scrolls (e.g., the Book of the Dead). This approach will bring to light the rhetorically and, from the emic perspective, religiously effective strategy of adapting word and action to each other, and will show the potential of complex texts like these for rethinking ancient genres and their contexts.

Timothy Hogue (University of California, Los Angeles), "With Apologies to Hazael: The Tel Dan Inscription and the Ideology of Destruction"
Readings of the semantic content of the Tel Dan inscription have concluded that the monumental text was an apology of Hazael, legitimating the extension of his territory into Dan. While this is undoubtedly accurate for the initial production of the monument, the state in which it was found and its context suggest that later reception reversed this meaning. Most significantly, the monument appears to have been intentionally destroyed and then its broken pieces displayed. These ritual and spatial dimensions of the text afforded meaning to its audience in a way just as significant as, if not more than, its semantic dimension. Accordingly, this study suggests a two-phase history of the Tel Dan Stele's monumentality—the qualities of the text by which it afforded meaning to the community in which it was embedded. The text was produced and initially received as an extension of Hazael's presence in Dan to legitimate his control of the city. When Israel later recaptured the city, the monument was intentionally destroyed, thus ritually defeating Hazael. Furthermore, pieces of the broken monument were reintegrated and displayed as a counter-monument at the site. By comparison to the display of broken monuments as war booty elsewhere in ancient West Asia, this redisplay can be analyzed as a materialization of Aram-Damascus's defeat and Israel's victory in the region. The monumental text in secondary reception thus came to mean the exact opposite of what its semantic content alone suggests.

Benjamin Overcash (Macquarie University), "The Staurogram and Multimodal Discourse in Late Antique Egyptian Amulets"
A number of papyrus texts from late antique Egypt—including literary manuscripts, letters, documents, and amulets—attest a cross-shaped compendium of the Greek letters tau and rho, known as the staurogram. In his important work on this ancient Christian scribal phenomenon, Larry Hurtado has framed the staurogram as a material instantiation of an emerging Christian "visual culture" (Hurtado 2000; 2006). In a recent study, I examined the staurogram in its earliest function as a ligature within the *nomina sacra* forms of the words "cross" and "crucify" in Christian literary manuscripts and proposed that it served as a visual metonym, pointing intersemiotically to the cruciform imagery that served to represent the application of the divine name in Christian ritual settings. In this paper, I begin to expand my previous study to include non-literary papyri by examining the use of the staurogram in amulets, where it is employed as a freestanding symbol in juxtaposition with powerful names, ritual symbols, and performative elements of both Judeo-Christian and Graeco-Egyptian provenance. Drawing on theories of

multimodality and critical discourse analysis, I explore the ways in which the staurogram functions within the multimodal ensembles created by the concurrence and coordination of these elements. I argue that the interdiscursivities and metaphors linking the staurogram with the divine name in literary manuscripts were retained in its use in amulets despite its independent function outside of *nomina sacra.*

Michael Chen (University of California, Los Angeles), "Reading Movement, Composition, and Display in Late Egyptian Healing Statues"
Late Egyptian healing statues are completely inscribed with magical spells that define their religious efficacy. Practitioners would pour water over the statues in order to charge the water with magical healing properties—this water would then be imbibed or applied to the body to alleviate snake or scorpion venom. By means of persuasive analogy, the content of the inscribed healing spells translates a private individual-level need into a mythological precedent of when the god Horus was stung by a scorpion and was healed by the god Thoth.

In this study, I closely examine the layout of spells upon the statues' body surfaces to uncover the inherent planning behind the design of several of the statues. The strategic design of healing statues undeniably affects their ritual functionality and delineate ritual action surrounding the objects. I will argue for the centrality of aesthetic spell layout in the compositional design and how this emphasis reveals both a balanced spell arrangement and the inscribing order of the statue's construction. The innovative quality of these objects lies within their embodiment of the magical textual tradition and the consequent insertion of these depicted elite commissioners into private religious spheres. The patterns observed in my analysis permit a greater intertextual study of magical healing spells and a better understanding of these written spells' relationships with materiality. The design implications found broaden our knowledge of the larger corpus of Egyptian healing statues.

4F. Archaeology of Syria

CHAIRS: Caroline Sauvage (Loyola Marymount University) and Clemens Reichel (University of Toronto)

Patrick Biedermann (University of Liverpool), "Special Architectural Features in Third Millennium Kharab Sayyar, Syria: A Case Study on Sacred, Communal, and Residential Space"
During the excavations at Kharab Sayyar—one of the so-called *Kranzhügel* or round settlements in Northern Syria—two phases of a residential area of the Early Bronze Age have been found. This area contains two multi-room houses and a single-room structure, which will be the main focus of this paper. Single room structures are not special at all in residential areas in northern Syria; however, the manner of construction of this building is. Whereas the installations point towards a use for residential purposes, the manner of construction, with stone foundations and thicker walls than the surrounding buildings, seems to contradict this interpretation. Of course these particular attributes can be found

in some other buildings in the neighboring site of Tell Chuera and other sites in northern Syria, but there either in large, multi-room residential buildings or temple and administrative structures and not in single-room buildings, which leaves no other conclusion than suggesting a special role for this building. This leads to several questions regarding the organization of space and the existence of sacred or communal buildings in third-millennium residential areas and the interpretation of comparable structures in other sites, which will be further discussed.

Chris Monroe (Cornell University), "All the King's Wine? Late Bronze Age Vineyards in Texts from Emar and Ugarit"
Wine is conventionally understood as a luxury good in Late Bronze Age societies. Mythical texts from Ugarit associate wine with gods and kings, and the secondary literature suggests royal control of production for elite commensality, either in the palace or in the sanctioned context of the Ugaritian drinking party called the *marzihu*. The assumption of a dominant palace economy at Ugarit is partially responsible for this view, and is questioned in light of more recent evidence and readings thereof. A broader selection of texts mentioning wine and vineyards at Ugarit suggests a broader socioeconomic pattern that includes non-royal production, exchange, and consumption. At contemporaneous Emar a similar pattern exists where ritual texts suggest a pattern of royal wine versus proletarian beer consumption. As with Ugarit, theoretical presumptions partially drive the acceptance of this view, one that changes when the full range of texts is considered. Considering the textual and limited archaeological records of the two cities together (while admitting the lack of critical information on prices, and some stubbornly ambiguous terminology), the paper concludes that northern Syrian wine production had private and royal components within a complex drinks industry serving royals, the upper class, and probably other consumers..

Caroline Sauvage (Loyola Marymount University) and Greta Jans (KU Leuven), "Early Iron Age Loom Weights and Textile Industry at Tell Tweini (Syria)"
This paper presents the Iron Age loom weights and related tools for textile production from Field A at Tell Tweini, excavated between 2001 and 2010. In particular, we will focus on a cluster of 57 spool-shaped loom weights found in an Iron Age I room. Using data derived from experimental archaeology, as well as what we know of the textile production chaîne opératoire, we will examine the type of textile production attested in this room, as well as the evolution of the textile industry throughout the Iron Age levels at the site. Finally, we will replace Tell Tweini's production within the contemporary northern Syrian textile industry.

Maria Gabriella Micale (Freie Universität Berlin; Sapienza University of Rome), "The Archaeology of Syria in the Persian Period: New Insights from Tell Mardikh/Ebla"
The impact of Achaemenid dominance in the material and artistic production of the individual regions within the empire has been traditionally evaluated in light of local reception of the iconographic motives known from the monumental art of the heartland. An extraordinary assemblage of primary stratified material, including terracottas and stamp seals, from the excavation of the Achaemenid levels of Tell Mardikh (ancient

Ebla) sheds new light on some specific iconographic repertoires documented in the Persian period with a specific reference to Syrian artistic production, and offers the chance to engage in a broader investigation of a local (and still poorly explored) material production of the period reaching beyond the traditional concepts such as adoption or central imposition. The availability of such a large corpus of stratified material allows for a new perspective on the impact of Persian and Achaemenid culture in areas far from the heartland, and provides primary data relating to discussions on the dissemination of iconographies and material culture at the time, as well as the integration of different stylistic elements within the wider artistic repertoire.

4G. Thinking, Speaking, and Representing Animals in the Ancient Near East: New Perspectives from Text and Images II

CHAIR: Laura Battini (French National Center for Scientific Research [CNRS]; Collège de France)

JoAnn Scurlock (Elmhurst College), "Wild Animals in Ancient Mesopotamian Magic"
Ancient Mesopotamians, like the ancient Greeks, attributed souls to animals. We might attribute a soul to the family dog, but would be less inclined to grant that his wolf ancestor had one. Since, however, in ancient Mesopotamlia, wild creatures including even insects were not excluded from the ensouled category, it was possible both to use magic against them and to use their parts in protective, amuletic magic. In ancient Mesootamian society, dogs, although used and familiar, were not kept as household pets and this is reflected by the regular inclusion of dogs in the wild category. In this paper, I shall explore ancient Mesopotamian rituals designed to protect humans or their crops from attack and hunting magic, as well as amuletic charms that enlisted the soul substance of wild animals such as the lion in defense of humans.

Lorenzo Verderame (Sapienza University of Rome), "Lion's Head, Donkey's Teeth: Animal Figurative Language and the Construction of Hybrids"
The animal world provides a wide source of inspiration for Mesopotamian figurative language. Following Aelian's display of animal-based patterns of human nature, animals have offered elements of observation and direct confrontation for the human spectator.

In this paper, I discuss how the specific and representative attributes of wild animals are individuated, carved out, and reused to emphasize a specific characteristic or quality. We usually label "monster" what actually is an aggregation of several body parts taken from a number of different animals. Each body part adds to the construction of hybrid beings, not only elements of their image and appearance, but also the idea, attribute, or capacity that is culturally associated to that body part. Thus, the wings, the claws, and the beak of the birds of prey, the gaping mouth, the legs, and the claws of the lion, and the horns, the legs, and the hooves of the bull are elements that may be used to convey ideas of power, aggressiveness, velocity, etc.

Trudy Kawami (Independent Researcher), "Zebu Cattle in the Apadana Reliefs at Persepolis"
Processional reliefs on stairs of the north and east sides of the Apadana, at Persepolis, Iran depict two groups of people, Gandharans and Babylonians, leading zebu cattle (*Bos indicus*) with their distinctive shoulder humps. These two peoples are not neighbors nor appear to be in anyway related, but present the same type of bovid as a characteristic gift. This presentation will trace the movement of the zebu from its place of domestication in the Indus Valley as far west as the Negev, and examines the practical as well as symbolic function of this distinctive herbivore. In doing so the significance of its presence in the Persepolis reliefs will be addressed.

Laura Battini (French National Center for Scientific Research [CNRS]; Collège de France), "Animals in War in Historical Mesopotamia"
Mesopotamian official art is full of war and hunting images from the fourth millennium B.C. onwards. This paper focuses on animals used in human wars and on the relationships between animals and humans. By using images and texts it is possible to reach a better understanding of this forgotten topic.

4H. Theoretical and Anthropological Approaches to the Near East

CHAIRS: Emily Miller Bonney (California State University, Fullerton) and Leann Pace (Wake Forest University)

Omer Ze'evi (Tel Aviv University), Shlomo Bunimovitz (Tel Aviv University), and Zvi Lederman (Tel Beth-Shemesh Expedition), "Imitation vs. Entanglment: The View from Beth-Shemesh"
The Late Bronze Age in the eastern Mediterranean is characterized by a complex web of political and commercial interactions, which shifted artifacts, people, and ideas. An intriguing cultural phenomenon related to this intensive exchange are locally-produced ceramic vessels that closely resemble those that were imported. Traditionally, in the southern Levant, such vessels have been defined as "imitations" (e.g. Tufnell 1958; Bergoffen 2001).

Recently, excavations at Tel Beth-Shemesh have exposed a 14th century B.C.E. palace with a large assemblage of pottery vessels and other artifacts sealed under its heavy destruction layer. The vast pottery collection is composed of locally-made vessels, foreign Minoan and Cypriot pottery, as well as those that can be identified as imitations. Recent developments in scholarship have prompted a revision of the frameworks through which scholars analyze social interactions. In accordance, the current study explores the social and economic role these vessels played in Late Bronze Age Canaan. This discussion will examine the reasons for the manufacturing of such vessels, and their associated branding processes. Finally, the study will propose that these vessels are the result of cultural "entanglement" rather than mere imitation.

Michele Rau (Independent Scholar), "Thick Places: The Intersection of 'Affect, Habit, and Practice' from an Archaeological Point of View"
What makes a place thick? "Thick places are contrived in the imbrications of affect, habit, and practice" (Duff 2010). The concept was pioneered by philosopher Edward Casey (2001), but Duff (2010) points out that Casey's work lacks "a clear sense of how thick places might be identified." He "takes up this challenge" by studying how "affect and practice" produce place. I propose to take up the challenge from an archaeological point of view. To "thick place" theory-building, I believe archaeology can contribute a rigorous approach to places themselves, as well as multicultural and historical depth. In return, archaeologists are challenged to add the "affective" piece of the puzzle. To that end, I will compare and contrast two structures, the temple at 'Ain Dara and the Water Gate at Carchemish. Contributing to their potential thickness, both were venerable structures, bridging the Late Bronze–Iron Age transition and continuing in use for centuries. Both were North Syrian-style structures overlain with Hittite iconography, simultaneously bolstering Hittite kingship and commemorating the region's multiculturalism. However, if these structures were thick, they were thick in different ways to different people: differential access based on social standing, and different attitudes toward this cultural mixture based on cultural affiliation, would promote different affective relationships. To further contribute to understanding the affective piece, I will draw on multicultural neurological research to understand how people would perceive, understand, and use spatial aspects of these structures, and draw on additional bodies of evidence, such as depictions of similar structures in contemporary art.

Jill Katz (Yeshiva University), "Explaining Early Bronze Age City Walls from an Administrative Perspective"
The size and scale of Early Bronze Age walls in the southern Levant far exceeded what was necessary for defining city limits or for defensive purposes. One example is the impressive fortification wall recently discovered at Tell es-Safi/Gath (Israel). In this presentation, I consider the role that administrators played in state formation and why they would have been motivated to undertake such massive construction projects. The new administrative class stood at the nexus of a vast and innovative redistribution system of taxes and compulsory labor. Their task was to direct these resources in a way that served the common good while at the same time justified, confirmed, and even celebrated their new status as administrators.

Tobin Hartnell (American University of Iraq, Sulaimani), "Indigenous Conceptions of Water in Ancient Mesopotamia and Iran and Its Significance"
Because of its ubiquity and utility, water is often an underappreciated element of ancient ritual. Bradley's *An Archaeology of Natural Places* (2000) focused on prehistoric natural places associated with the supernatural but largely unaltered in form. In contrast, this paper will investigate three examples of ritual monuments from ancient Mesopotamia and Iran—the spring and sacred garden at Khinis, the rock pool at Kurangun, and the reservoir at Chogha Zanbil—that have become marked by human intervention. A consideration of the form and context of each monument will lead to preliminary conclusions about indigenous conceptions of water in each case. These conceptions will

be briefly compared to Achaemenid Persia in order to understand the transmission or otherwise of these indigenous concepts into the imperial age.

Matthew Winter (University of Arizona), "At the Crossroads of Empire: Postcolonialism in Practice in the Archaeology of Greco-Roman Judaea"
While postcolonialism has long had an intimate discourse with literary criticism and theory as well as historiography, postcolonialism has received less attention by archaeologists. Postcolonialism is more typically used for textual criticism and analysis and has been embraced by many practitioners of the social sciences, including archaeology's sister disciplines, sociocultural and linguistic anthropology. In the majority of postcolonial studies, material culture does not factor into the general colloquy. When archaeologists and material culture have contributed to postcolonial discourses, the topics have invariably concerned public displays of artifacts in postcolonial contexts—either because material culture had been misrepresented or because such representations displayed cultural insensitivities—or in generalized discussions that do not emphasize how archaeologists can utilize postcolonial thought in archaeological interpretations. The "material culture turn" has yet to pervasively intrude into postcolonial discourse; therefore, there is a need for more archaeologists to actively pursue utilizing postcolonial archaeologies in practice. The purpose of this paper is to explore archetypes that have arisen from postcolonialism in the Greco-Roman Near East, particularly focusing on aspects of hybridization and expressions of identity in response to Hellenization and Romanization, in order to demonstrate how postcolonial thought can shape our understanding of the activities and intentions of the people of the ancient Near East in practice. In a brief analysis of a few Hasmonean and Herodian period sites, including Maresha, Jericho, and Iraq el-Amir, it is possible to see how postcolonialism is useful in the interpretation of archaeological data.

4I. Archaeology of Anatolia II

Mara Horowitz (Purchase College, State University of New York), "Traces of Contact with Old Kingdom Hatti at LB I Tell Atchana/Alalakh"
In the period ca. 1600–1450 B.C., the city of Alalakh with its predominantly Northwest Semitic population underwent tremendous social and cultural changes predominated by the Hurrian influx from the East. This period is ahistorical at Alalakh, from the destruction of Period 7 to the beginning of Period 4, and material culture is thus the focus of investigation. Contact with central Anatolia, specifically Old Kingdom Hatti, can be seen in two categories: ritual pottery and cookware platters, both made locally at Alalakh. Ritual pottery includes a small fenestrated stand in relief decoration and tricolor paint, and a fragment of a red-slipped burnished upward-pointed handle. The large cookware platters are unprecedented at Alalakh but nearly identical to those of Hattusa. These types are rare at Alalakh but indicate the presence of central Anatolian culture or the desire to emulate it. Specifically, the cookware platters show signs of use and thus may be associated with a form of central Anatolian cuisine. As the gateway to Syria, Alalakh was always in the sights of the rulers of Hatti. This paper explores the possible avenues for

the introduction of Old Kingdom Hittite pottery, how these types may have been used locally, and how Alalakh may have interacted with the kingdom of Hatti after the disastrous raid alleged by Hattusili I ca. 1600–1575.

Paige Paulsen (Johns Hopkins University), "Reconstructing Past Perception of Tumuli in the Kanak Su Basin, Central Anatolia, Using Spatial Analysis"
This project uses the Iron Age tumuli of the Kanak Su Basin in Yozgat, Turkey as a case study for the application of geospatial methods to reconstruct past perceptions of a mortuary landscape. The tumulus fields—landscapes heavily modified by monumental burial mounds—of central Anatolia present an opportunity to investigate how burial practices reflect and create places of collective memory, territorial identity, and the social order. Understanding the nature of Iron Age settlement in the Kanak Su Basin remains an ongoing subject of study in central Anatolian archaeology, especially in regards to how the large, short-lived city of Kerkenes interacted with the existing long-term settlement history in the basin. This project seeks to understand the role of the tumuli in this landscape by investigating the relationship between the settlement pattern and the burial mounds along axes of proximity, visibility, and accessibility using spatial statistics, viewsheds, and least cost pathways. The spatial distribution of mounds suggests which sites might have participated in constructing tumuli and the possible motivating factors in their location. Larger sites in the study area appear to have participated more frequently in tumulus construction. This analysis also allows us to reconstruct the more general experience of living among the mounds, whether one participated in the practice or not, and results suggest the tumuli were located to increase the number of people who perceived and interacted with them.

Lorenzo Castellano (Institute for the Study of the Ancient World, New York University), "Grains, Granaries, and Polities: Some Considerations on the Role of Staple Products in Post-Hittite Anatolia."
With the establishment of the Hittite kingdom, agricultural infrastructure reached an unprecedented scale and level of sophistication, indicating a centralized effort to minimize agricultural risks—considered high in the Anatolian environmental and socio-political context. The two hallmarks of this program are large-scale storage facilities and water reservoirs. Not surprisingly, the dissolution of the Hittite empire is generally seen as corresponding with a widespread disappearance of that large-scale infrastructure, with storage generally reverting to local and domestic scale. Against this background, in this paper I argue for a more complex picture, proposing the survival into the Iron Age of a form of centralized agriculture in the former southern and eastern peripheries of the empire—inferred from the attestation of long-term large-scale storage infrastructures. The argument is based on the recent discovery of large-scale storage facilities at the site of Niğde-Kınık Höyük (south central Anatolia), radiocarbon dated to the tenth century B.C.E. The evidence from Niğde-Kınık Höyük will be contextualized into a broader context, by taking into consideration other archeological (e.g. Kilise Tepe, Tille Höyük, Arslantepe) and epigraphic (Hieroglyphic Luwian corpus) attestations of large-scale storage facilities in post-Hittite sites. By taking into consideration the case of storage, the general aim of this paper is to provide new insight on the economy of post-Hittite polities, per se and in relation to the previous Hittite political economy.

Scott Branting (University of Central Florida), Joseph Lehner (University of Central Florida), Sevil Baltalı Tırpan (Istanbul Technical University), Dominique Langis-Barsetti (University of Toronto), Tuna Kalaycı (FORTH Institute of Mediterranean Studies), Yasemin Özarslan (Koç University), Sarah Graff (Arizona State University), Lucas Proctor (University of Connecticut), Nilüfer Baturayoğlu Yöney (Abdullah Gül University), Burak Asiliskender (Abdullah Gül University), Canan Çakırlar-Oddens (University of Groningen), John Marston (Boston University), and Paige Paulsen (Johns Hopkins University), "The 2018 Season of the Kerkenes Project, Turkey"
The Kerkenes project (kerkenesproject.org) is an international collaboration dedicated to understanding the enormous late Iron Age city located near Sorgun in the province of Yozgat in central Turkey. For the past 26 years, work at the site has included excavations paired with extensive geophysical and geospatial surveys. This report details the results of the 2018 campaign within the context of the long-term project's goals.

5A. Archaeology of Jordan II

CHAIRS: Marta D'Andrea (Sapienza University of Rome) and M. Barbara Reeves (Queen's University)

PRESENTERS:

Abelardo Rivas (Andrews University), "Colors of Jalul: A Study on the Painted Pottery Found in Field G"
The significance of painted pottery in Transjordan continues to be a subject of debate. The suggested implications include ethic identities as well as chronological. The last ten years of excavations of Tall Jalul in Jordan have yielded ceramic finds that will contribute to this debate. A total of seven fields have been opened that range from administrative to domestic in nature. Field G represents a domestic area characterized by architectural remains that include a multi-room domestic complex. Excavations in Field G have been conducted since 2007 and have included the discovery of a significant quantity of pottery. Among the most important ceramic remains are a variety of painted vessels. This present paper aims to present a partial analysis and possible implications of the corpus of painted ceramics from the field. The analysis will consist of the description, comparison, and classification of the painted repertoire and possible suggestions about the contribution these vessels make to our understanding of the site during the Iron Age.

Michael Orellana (Andrews University), "Iron Age IIA Assemblage at Tall Jalul"
Iron Age IIA pottery is important for providing a chronological reference for several layers at Tall Jalul. For instance, Field G shows a pillared building that was occupied from the 11th century until the Persian period, and contains a large amount of pottery in need of a more comprehensive examination. Therefore, this research attempts to identify and describe Iron Age IIA pottery at the site and to provide an analysis of how it is connected with its stratigraphic contexts. The selection of pottery includes all fields that

have been excavated since 1992 until the present. By identifying the particular features of the Iron Age IIA ceramic assemblage of Tall Jalul, some criteria will be established to differentiate it from later ceramic assemblages at the tell. In order to provide points of comparison, this project also searches for parallels and connections with other sites in Jordan.

Josie Newbold (Brigham Young University), "New Lamps and Lamp Fragments from the Ad-Deir Plateau, Petra, Jordan"
Over the past four years, the Brigham Young University Ad-Deir Monument and Plateau Project (AMPP) has recovered a number of mold-formed terracotta lamps from Nabataean occupation contexts on the Ad-Deir Plateau above the ancient city of Petra, Jordan (300 B.C.E. to 106 C.E.). These lamps have been recovered from two main sites on the plateau, namely the Great Circle and the area north of the *Temenos* Slot Entrance into the courtyard of the Ad-Deir Monument (the Monastery). The Great Circle, a 60 m diameter Nabataean rock-carved pool and water catchment feature, has produced a small number of complete lamps and lamp fragments; however, the majority of the lamp fragments and complete lamps found by the AMPP project come from the erosion and occupation area directly north of the *temenos* entrance to the Ad-Deir Monument. So far, 30 complete lamps and/or lamp fragments with recognizable motifs have been found on the Ad-Deir Plateau. Although the majority of these motifs are well-known, there are several motifs that have never been published from Nabataean contexts in Petra. Unfortunately, the majority of the lamps from the AMPP excavations are fragmentary and cannot be identified by type. This paper will focus on the iconography of the lamps, the new imagery on the lamp fragments, and what the lamps and lamp fragments found on the Ad-Deir Plateau may reveal about the Nabataean culture as well as the occupants of this strategic plateau above the ancient city.

Cynthia Finlayson (Brigham Young University), "Results of the Comprehensive GPS Survey of the Ad-Deir Plateau in Petra, Jordan"
In June of 2018, the Ad-Deir Monument and Plateau Project will have completed a four-year pedestrian GPS survey of the entire Ad-Deir Plateau in Petra, Jordan as part of an effort to save the facade of the Ad-Deir Monument and identify critical ancient Nabataean, Byzantine, and Islamic archaeological elements on this massive escarpment above Petra proper. This paper discusses the results of this comprehensive topographical mapping of the Ad-Deir Plateau—a process that has identified over 400 new archaeological elements as well as systematically documented known structures such as the Berg-Berg Monument with drone imagery as well as modern GPS technologies for the first time. This study thus provides new information concerning the uses of the Ad-Deir Plateau in antiquity and presents, in visual form, some of the most interesting new archaeological elements, including massive water systems that existed above the ancient city.

Muhammad Al-Absi (Department of Antiquities of Jordan), "Initial Documentation of Private Archaeological Structures in a Branched Gorge of the Petra Siq and an Analysis of Their Functions and Context"

The ancient city of Petra's strategic location at the heart of ancient trade routes, and its seclusion and defensibility within narrow gorges and sandstone valleys, made it a point of continuous settlement since prehistoric times. The Siq is a naturally-formed 1.2 km gorge that snakes through the sandstone cliffs and serves as the main entrance to Petra. The Siq is a monument of archaeological significance characterized by numerous hydraulic and religious features dating back to Nabataean times. Alongside the unique hydrological system, the Siq's branched gorges, which connected the Madras high-places to the Siq, were used as staircases that facilitated access to the Madras religious activities. Among these gorges, one branched gorge is characterized by a unique set of structures. The initial documentation of this distinctive branched gorge showed that three main monuments were carved within the gorge facades: a temple facing a separated niche monument, a triclinium, and a water reservoir system. These structures were connected with stairs and water channels. Carved drawings of Nabataean gods have also been documented. This study includes a documentation of the gorge's rock-cut structures using 2D plans, 3D modeling, and high-resolution images. Mapping analysis of this branched gorge's location, features, and context showed that, due to its hidden location, small-scale structures, and self-contained supplementary water system, this location was used privately, which may indicate the demographic classification of Nabataeans at that time.

5B. Archaeology of the Near East: The Classical Periods

CHAIR: Michael S. Zimmerman (Bridgewater State University)

Benjamin Gordon (University of Pittsburgh) and Zeev Weiss (The Hebrew University of Jerusalem), "Samuel and Saul at Gilgal: A New Interpretation of the Elephant Mosaic Panel at the Late Antique Synagogue of Huqoq, Israel"
A figurative mosaic panel on the floor of a fifth century C.E. synagogue at Huqoq has recently been identified by the excavation team as a depiction of the Seleucid king Antiochus VII with the Hasmonean king John Hyrcanus I, or alternatively, of Alexander the Great meeting the Jewish high priest Jaddus. We argue that the panel shows the prophet Samuel's fateful encounter with King Saul at Gilgal, as told in 1 Samuel 15. Narratively, this is where Saul learns that God has rejected him as king, paving the way for the rise to the throne of David. In the lower register we see the aftermath of Saul's battle with Amalek, where he spurned the divine command to fully exterminate the Amalekites. In the middle register we have a formal portrait of an enthroned Samuel and his prophetic disciples, here styled as holy warriors, inhabiting an arcade. In the upper register we see an emboldened Samuel reporting the news of God's rejection to Saul upon his return from war with a looted bull for sacrifice in tow. Samuel appears here as spiritual victor over Saul, despite the king's formidable machinery of war and his stylization as glorified warrior-emperor of the East. The depiction draws on late antique religious and imperial iconography to illustrate the scene, which appears also in a few illuminated Bibles. We argue that a biblical scene is far more suitable to this social and architectural context than the extra-biblical tales proposed thus far.

Dawn Acevedo (La Sierra University), "Death, Delight, and Décor: Herod the Great's Use of the Tholos"
Herod the Great (r. 37–4 B.C.E.) was a master builder whose constructions still shape the Israeli and Transjordanian horizons. Among his many works, Herod makes use of an uncommon architectural form: the tholos. This form originated as multi-generational family tombs in the Bronze Age Aegean and evolved over time to become the recognizable form used in the Greco-Roman world, later repurposed in Neoclassical architecture which is still in use today. Herod utilizes the form five times that we know of: the Middle Terrace Reception Hall of the Northern Palace at Masada, the Pool Pavilion at Lower Herodium, the top of his three-story Mausoleum at Upper Herodium, the Reception Hall of the Third Palace at Jericho, and a possible family tomb outside the modern-day Damascus Gate in Jerusalem. This presentation examines the location, specifications, form, and function of each tholos according to the historical accounts by Josephus, preliminary and final excavation reports, as well as the work of the late Professor Ehud Netzer.

Michael Zimmerman (Bridgewater State University), Elizabeth Szylejko (Independent Scholar), and Martha Risser (Trinity College), "A Quantitative and Chronological Analysis of Lamps from the JECM Excavations at Caesarea Maritima"
In 2008, Joseph Patrich edited the first volume of the final reports from the Combined Caesarea Expeditions excavations at Caesarea, including a detailed report of the oil lamps and molds found in these excavations, completed by Varda Sussman. In his analysis of the lamps from these excavations, Sussman identified a series of lamps from the Hellenistic through Byzantine periods at Caesarea, both locally produced and imported. These included imported lamps from North Africa, Asia Minor, Greece and Italy, as well as locally produced mold-made and wheel-made lamps, such as "Herodian" or "knife-pared" oil lamps, Judaean volute lamps, "Beit Nattif" lamps, and Samaritan lamps. The series also included a significant number of "Caesarea 1" type lamps, possibly produced within Caesarea, or in its environs. Recently, work has begun on the analysis of lamps from the Joint Expedition to Caesarea Maritima (JECM) excavations at Caesarea, conducted from 1972-1988. This paper will attempt an analysis of these lamps, comparing our findings to those of the Combined Caesarea Expeditions, and attempting to answer a series of questions about lamps, lamp production, and trade at Caesarea. For example, can we narrow down possible production areas for "Caesarea 1" type lamps in northern Israel, and their subsequent distribution? What lamps were imported into Caesarea from abroad, and what connection might this have to possible trade routes in the Roman and Byzantine periods?

R. Steven Notley (Nyack College) and Mordechai Aviam (Kinneret College), "Has Bethsaida-Julias Finally Been Found?"
Since 1987, excavators at et-Tell have identified that site with Bethsaida-Julias. However, Et-Tell lacks the central feature in Josephus's description of Bethsaida-Julias (*Ant* 18:28), namely, Philip's urbanization of a village into a polis, like Tiberias and Sepphoris. The El-Araj Excavation Project began in 2016 at an alternative site for Bethsaida-Julias. Several strata were identified during the first season. In the upper stratum was a Crusader

(12th century) sugar factory, which incorporated walls from an earlier Byzantine monastery-church. The church is attested by gilded-glass tesserae that typically belong to wall mosaics in ornate churches, and fragments of marble and roof tiles. The church may be the one built over the house of Peter and Andrew, visited by Willibald, a Bavarian bishop, in 725 C.E. During the second season in 2017, two probes were dug almost 2 m below the Byzantine floors to the Roman level, where typical first- to third-century pottery and a silver denarius of Nero dated to 66 C.E. were found. Of greater significance, the remains of a Roman-period bathhouse with portions of white and black mosaic floor are the first evidence of urbanization in the region, indicating that el-Araj should now be considered the leading candidate for Bethsaida-Julias. This paper will consider the ongoing excavations at el-Araj and their consequence for the site identification of Bethsaida-Julias.

Benjamin Abbott (University of Pennsylvania), "An Asiatic Minority or Majority? Rethinking Army Composition in the Seleucid Empire"
More than an interim period between Alexander the Great and Rome, the Seleucid Empire has in recent decades become increasingly recognized as a significant chapter of classical and Near Eastern history. Despite the recent surge in scholarly interest, modern works have not adequately addressed the issue of the Seleucid army. More specifically, the few works that have dealt with the Seleucid army have overlooked the question of its composition. Influenced by Eurocentric ancient sources, modern works have focused on the actions of the Greco-Macedonian elite within the Seleucid army, while largely ignoring the presence and role of Asiatic, non-Greco-Macedonian peoples. The term Asiatic here refers to the area extending from Asia Minor and Syria east across Mesopotamia and western Central Asia to the western fringes of the Indian subcontinent—lands under Seleucid control up until the early second century B.C.E. Through an examination of the accounts of Diodorus Siculus, Livy, Polybius, and Arrian (among others), and of neglected relevant Near Eastern literary and archaeological sources, a new picture can be drawn of the Seleucid army and its composition. This paper will explore the possibility that, from the beginning of their empire, the Seleucids depended considerably more on indigenous manpower than previously supposed for the security and sustainability of their rule of what was in many ways a truly Near Eastern empire.

5C. Archaeology of the Southern Levant II

CHAIRS: Owen Chesnut (North Central Michigan College) and Joshua Walton (Capital University)

David Sugimoto (Keio University), "Necropolis at Beitin, Palestine, and Bethel's Occupation History"
The Palestinian Ministry of Tourism and Antiquities and Keio University, Japan, have been conducting archaeological excavations at Beitin (Bethel) in Palestine since 2012. This project has led to the discovery of a necropolis, including approximately 30 shaft

tombs from the Intermediate Bronze Age and 70 rock-cut tombs that span the Iron Age to the early Roman period, with excavation of some of the tombs.

Bethel provides the background to a number of biblical stories including Abraham's altar, Jacob's ladder, and the high place of the golden calf, and some scholars believe that it functioned as an Israelite religious center during the Exilic period. Although the historical nature of these events has been discussed based on previous excavation results at the tell, this discussion has been severely criticized. The presence of tombs at Bethel has not been considered previously.

The significance of the Bethel tombs is discussed here as part of a re-evaluation of site occupation history. Some scholars have played down the importance of a settlement at Bethel during the Intermediate Bronze Age, but the presence of shaft tombs is actually indicative of a sizable group of people. Numerous loculi tombs in this region also suggests the existence of a large Jewish community during the Hellenistic and early Roman periods, while the fact that some rock-cut tombs appear to be re-used Iron Age structures implies the continuation of family traditions between these periods.

William Ondricek (Tel Aviv University; University of the Holy Land), Assaf Kleiman (Tel Aviv University), Sabine Kleiman (Tel Aviv University), and Erez Ben-Yosef (Tel Aviv University), "Early Edomite Fabric and Cultural Interconnections: New Studies on Pottery from the Early Iron Age Copper Production Sites in the Timna Valley"
The dramatic change in our understanding of the absolute chronological framework of copper production in the Timna Valley, which fixes the peak in activity there in the tenth century B.C.E., necessitates a reassessment of the pottery found in the main smelting sites in the region. Reevaluation of pottery found by Benno Rothenberg and the Arabah Expedition, as well as substantial new ceramic assemblages uncovered recently by the Central Timna Valley Project, sheds new light on several important questions. This includes the involvement of Egyptians and people from the Hijaz ("Midianites"?) in the Arabah copper industry, the characteristics of local pottery traditions, population overlaps with nearby regions, trade connections with Philistia and other regions, and more. Our ongoing research has yielded important corrections to errors caused by the previous "Egyptian paradigm," while providing substantial new insights on a formative period in the emergence of a local, nomadic, Edomite Kingdom.

Madaline Harris-Schober (University of Melbourne), "They Practice Divination Like the Philistines! A Re-Analysis of Cultic and Ritual Architecture of the Southern Levant"
This paper aims to provide an insight into the characterization of Philistine cult, ritual, elite, and domestic space through archaeological, inferential, and comparative site-by-site analyses. In studies of the southern Levant, the identification of Philistine ritual practice has been a matter of controversy since the 1980s due to the scarcity of evidence. It has become apparent that the ritual-related architecture and finds have been overlooked by some archaeologists, who failed to consider the significance and nuances of the structures

and finds. Instead, they relied on "cult" or "ritual" as a misinterpretation of "otherness" and selectively-chosen comparisons to assert their claim. The corpus of Philistine cult sites is fragmented across various studies and excavation reports; only in the past decade have scholars begun to collate studies of Philistine iconography and architecture. This paper sets out to provide a collection of reliably identified—and less reliably identified—cult sites by re-assessing their previous interpretations. It will focus on examples from Tel Miqne-Ekron and Tell es-Safi/Gath to demonstrate this shift in thought, re-examining these cult-related buildings through domestic, elite, and ritual approaches, working towards a more cohesive framework of ritual and cult identification and interpretation

Charles Wilson (University of Chicago), "A Phoenician-Made(?) 'Cosmetic' Palette at Gezer"
During the final season of the renewed excavations at Gezer, a "cosmetic" palette was recovered from the elite, eighth century B.C.E. four-room house in Field West. The palette originally included six polychrome glass plaque inlays (three extant) of Phoenician make, similar to plaques recovered from Samaria and Nimrud. Similar palettes, sometimes called bowls, occur throughout the eighth and seventh centuries in the Northern Kingdom of Israel (including several from Gezer), Judah, and the Transjordan. Scholars have variously postulated Phoenician and local production. The glass inlays in the most recent Gezer example are likely of Phoenician production—these will be analyzed in summer 2018—but what of the palette itself? It is hoped that a provenience analysis of the stone will narrow its source and the finished palette's region of manufacture (if they are one and the same). The analyses, whatever the results, will likely yield data concerning exchange, whether the plaques alone, or plaques and palette, are of Phoenician or some other origin. This presentation will share the archaeological context of the palette and the results of the summer analyses.

Madeleine Mumcuoglu (The Hebrew University of Jerusalem) and Yosef Garfinkel (The Hebrew University of Jerusalem), "Crossing the Threshold: Architecture, Iconography and the Sacred Entrance"
Recessed openings have received surprisingly scant attention in studies of ancient Near Eastern architecture and iconographic representations. The motif has likewise been overlooked in research into later Greek, Roman, Byzantine, and Gothic architecture. This is the first time that a thorough study has been performed over the course of many years. We have compiled the excavations reports and documents concerning more than 110 sites and gathered more than 250 samples that represent a wide-ranging corpus of this architectural motif. We present here the conclusions of the completed study. First, our study led us to document the surprising history of recessed openings from their emergence in the late prehistory of the ancient Near East to their representation in contemporary architecture. Second, it seeks to offer explanations for the cultural continuity of this phenomenon for some 6500 years. We demonstrate that this feature is a universal symbol for the sacred and is found almost exclusively in buildings or items with a divine connotation. Interestingly we discovered that it is absent in certain cultural groups. Although economy, technology, demography, social organization, settlement patterns, religion, burial customs, iconographic styles have undergone immense changes during this time, the concept of recessed openings has never been abandoned.

5D. Digital Archaeology and History I

CHAIR: Tiffany Earley-Spadoni (University of Central Florida)

Eric Kansa (Open Context, Alexandria Archive Institute), Ixchel Faniel (OCLC), Anne Austin (University of Missouri), Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute), Jennifer Jacobs (University of California, Berkeley), Ran Boytner (Institute for Field Research), and Elizabeth Yakel (University of Michigan), "Writing and Reviewing Responsible Data Management Plans"
Archaeology is a data-rich discipline, and the management and preservation of digital data are integral to all aspects of ethically responsible professional practice. Public and private granting bodies recognize the importance of data, and often formalize this recognition by requiring grant seekers to provide "data management plans." However, many archaeologists lack familiarity with good research data management practices and how these articulate with other aspects of research. This paper is informed by the ongoing, NEH-funded Secret Life of Data (SLO-Data, https://alexandriaarchive.org/secret-life-of-data/) study which uses evidence from observations of ongoing excavations as well as interviews with reusers to improve archaeological data workflows and guide researchers in how to create meaningful data management plans. The discussion will consider each step of the research life-cycle from planning, data modeling, fieldwork, laboratory, and collections studies, to collaboration within teams and, finally, dissemination, preservation, and reuse. We will highlight the intellectual commitment needed to contextualize data, including the need to link and relate project data with the data contributions curated by other experts. The paper will also highlight criteria that need to be considered in peer review so that grant review processes can better recognize and reward excellence. Finally, responsible research data management needs to be more integral to publishing and not just granting practices. Therefore, the paper will conclude with recommendations to help guide publishers, editors, and peer reviewers in evaluating the reproducibility of claims made with research data.

John Sigmier (University of Pennsylvania) and Peter Cobb (University of Pennsylvania), "Filling in the Gaps: Visualizing Uncertainty Using Augmented Reality"
This paper explores the use of augmented reality (AR) technology to convey archaeological uncertainty. An archaeological application for 3D technologies is the presentation of reconstructed ancient viewscapes to diverse audiences. However, 3D reconstructions have similar limitations to 2D images in terms of representing uncertainty—no consensus has been reached on how to clearly display degrees of conjecture in archaeological reconstructions that are aimed at viewers of varying backgrounds. Visualizations are often evaluated less critically than texts, and can be misinterpreted as being historical realities rather than knowledge representations. We hypothesize that AR projections of virtual 3D models into real spaces will provide more intuitive and interactive presentations of uncertainty than 3D models displayed on 2D

screens, both in field and museum environments. We test this by developing a set of 3D architectural models that give context to architectural fragments currently on display in the Penn Museum, with each model representing a different degree of certainty in the reconstruction of the building context. We then import these models into a Microsoft HoloLens, an AR headset that enables spatial integration of digital models into reality, and we use this headset to present various audiences with a range of virtual reconstructions that directly incorporate the museum objects. AR's ability to invite users to engage with different views, coupled with its prioritization of real artifacts within the virtual reconstructions, should make it a tool well suited for pedagogy, scholarly conversation, and public interface. This paper presents the results of our experiments.

Paul Flesher (University of Wyoming), "Broadhouse and Galilean/Basilical Synagogues: Which Had the Better Acoustics?"
3D modeling has enhanced archaeologists' ability to depict and analyze the structural and visual character of many ancient buildings. It is now time to add a fourth dimension for some edifices, that of sound. Buildings such as synagogues, churches, mosques, and theaters were built to present an aural performance to an audience contained within them. In some structures, an audience's aural experience was more important than their visual experience.

This paper builds on the techniques of 3D reconstruction to extend the analysis of synagogues in ancient Galilee to include their acoustic character. Our knowledge of construction techniques, building materials, and surface coverings provides the data necessary for the mathematical modeling of a synagogue's acoustic nature. The question of which synagogue type provided the superior sound experience for the congregation—the broadhouse or basilical type—enables the exploration and comparison of their sound dynamics.

The paper will begin by articulating how the architectural design of each synagogue type—using excavated synagogues—shaped sound trajectories through its location of platforms, walls, doors and locations for the audience. It will then compare the strengths and weaknesses of the designs by mathematically reconstructing each congregation's acoustic experience of the Sabbath ritual of Torah reading and translation.

Ran Kaftory (EyeCue Vision Technologies; University of Haifa), "Qlone—The All-in-One 3D Scanning App"
The need for 3D models is rapidly increasing as augmented and virtual reality become an immersive technology that allows students to interact with artifacts while visiting virtual museums and historical sites. Moreover, 3D modeling has become a common protocol for archaeological data collecting in order to safeguard the finds, create interactive catalogues and perform geometric morphometric analysis. Unfortunately, current 3D digitizers are expensive, not portable, use external software that takes a long processing time, and require skilled personnel to operate.

Qlone is a revolutionary app that was created in order to democratize 3D modeling, enabling everyone with a smart device to quickly scan objects everywhere. It reconstructs

the object's shape by using hundreds of 2D images taken by the smart device's camera and digitally represents it in the form of a wireframe and associated texture layer and map. Scanning is performed by placing an object on a scanning mat that can be printed with any home printer, and capturing images while circling around the object or rotating the object around itself. The processing is done instantaneously on the device, including in-app optimization options. Affordable and direct export to 3D databases and various file formats make Qlone a perfect fit for fast and portable 3D modeling for content creation and data collecting.

Travis Corwin (University of Central Florida) and Tiffany Earley-Spadoni (University of Central Florida) "Shared Armenia: Empowering Stakeholders through Digital Storytelling"
Digital storytelling is an incredibly effective way to engage with communities and provoke public interest in heritage preservation through the production of short, multimedia presentations. Provoking such interest is important, since cultural heritage is at risk worldwide from a variety of factors such as economic development, warfare, and looting.

In 2018, we co-hosted a digital storytelling workshop in Yerevan with the aim of informing a worldwide audience about the threats that Armenian cultural heritage faces and the efforts that research teams are making to prevent future losses. During the workshop, each participant produced a digital short on the topic of opportunities and challenges in cultural heritage management in Armenia. We developed stories in both Armenian and English (with subtitling/captioning) to reach an international audience. This presentation will showcase the efforts and results of the project's digital storytelling initiative. We argue that incorporating the described digital humanities techniques into their archaeological practice proved beneficial for engagement with both scholarly and non-scholarly audiences.

Bruno Soltic (Southwestern Baptist Theological Seminary), "A Day on a Dig"
"A Day on a Dig" is a short film, that presents a day-in-the-life view of Tel Burna, Israel, during the 2018 season. The film is a digital storytelling project that depicts how and when archaeologists prepare for the day; travel to the site; excavations, excitements and disappointments; meals, pottery washing, lectures, and leisure time (if any). The goal of the movie is to bring archaeology closer to the public eye, and to make it more understandable to a wider variety of people. One goal of the film and paper is to engage in an interdisciplinary dialog about how digitally-engaged practice improves scholarship, a stated goal of the session.

5E. History of Archaeology I

CHAIR: Kevin M. McGeough (University of Lethbridge)

Raz Kletter (University of Helsinki), "Who Are We? A Look at the ASOR Annual Meeting, Boston 2017"

The Boston Annual Meeting of ASOR (2017) was a large and successful meeting, with over 600 lectures offered in 120 sessions. The Program and Abstract Book of this meeting is 216 pages long. Using this book as a database, we can portray a picture of ASOR at this time. The study of one meeting does not offer a *longue durée* and the data do not reflect the entire organization, or even all those attending the meeting. However, it portrays the scholar members—lecturers, poster presenters, session organizers, and chairpersons—and their research. We can query the database about the geographical areas, periods, and subjects of the posters, lectures, and sessions; the gender and affiliations of lecturers and chairpersons; the possible differences between ASOR-organized and member-organized sessions, etc.

An interesting picture emerges about the Near Eastern archaeology of ASOR member scholars: which institutions lead the research? Where is our research happening? Which periods or subject are "hot"? Where are the gaps, and the "others" that perhaps we miss? ASOR has been unearthing the past of the ancient Near East since 1900, and it too is a worthy topic of research. The data are clear, while the conclusions can (and should) be debated.

Steven Edwards (University of Toronto), "The Six Degrees of ASOR: A Network Analysis of Participants at the Annual Meeting"
In this paper, I explore the social networks of Annual Meeting participants through an analysis of paper co-authorship and participation in academic sessions. The first case study examines how co-authorship has changed over time, with recent years showing a significant increase in multi-authored papers. In this network, individuals are considered linked to other individuals if they have co-authored a paper. The second network is based on the links between presenters and session chairs. In this network, presenters are considered linked to both their fellow presenters and their session chairs if they participated in the same academic session.

My analysis demonstrates the "small world" structure of the network of Annual Meeting participants, meaning that most participants are linked to each other through a limited number of individuals, even though they have neither co-authored a paper with, nor participated in the same sessions as most other presenters.

Finally, I address the importance of "weak ties" in both case studies. That is, I identify the individuals who bridge the gaps between the mostly disparate clusters of researchers that make up the ASOR Annual Meeting community.

Beth Alpert Nakhai (University of Arizona) and Amanda Bauer (University of California, Los Angeles), "'In Honor or Memory of' Whom? Exploring the Gendered Nature of Festschrifts and Memorial Volumes"
While commemorative volumes in our field date back to the late 19th century, their popularity has grown exponentially in recent decades. The editors of Festschrifts and memorial volumes invite contributions to a body of scholarship that pays tribute to an esteemed colleague and, in doing so, they make a statement about their special relationship to the honoree, whether living or deceased. Those whom they invite to write

for the volume become part of an exclusive coterie, which is enshrined in the book and made manifest to all who read it. Scholarly consideration of those who produce commemorative volumes and those who write for them is therefore a matter of professional significance. Given what is known about the field of Near Eastern archaeology, one might assume that honorees, editors, and contributors would be almost exclusively men and, indeed, this assumption is correct.

This presentation explores the gendered nature of commemorative volumes. It looks, historically and in the present, at volumes that honor archaeologists working in various countries across the ancient Near East. It reveals that in no decade, including the present one, are women well represented among honorees, editors, or contributors, while noting some geographic regions and subject areas in which women are increasingly included. It considers the causes of both disparities and change—and concludes by reflecting upon their significance for our field.

Rachel Hallote (Purchase College, State University of New York), "'Soft Power' and the American School in Jerusalem, 1900–1920"
"Soft power" has a long history in archaeology, from acquiring and disbursing funds to inviting local government officials to visit excavations. It also means bringing the scholars and public through the doors of overseas research centers. This paper examines American archaeologists and archaeological personnel in Jerusalem in the first two decades of the 20th century, and will focus on how American scholars reacted to, influenced, and were influenced by the regime changes in the Middle East.

Among the evidence to be examined are the logbooks of the American School of Oriental Research, reports of the School's early directors, and other data regarding interpersonal relationships between archaeologists and local residents. These provide a record of how American archaeologists interacted not only with other scholars but with diplomats and local residents. American archaeologists cultivated relationships that enabled them to maintain their presence in Jerusalem during the contentious years before and after World War I, while positioning themselves for the future. These informal interactions helped solidify the directions of official American diplomacy and the discipline of archaeology for the next half-century.

Felicity Cobbing (Palestine Exploration Fund), "The Reinvention of the Palestine Exploration Fund"
2018 sees the relocation of the Palestine Exploration Fund, the world's oldest society for the study of the Levant, from its 18th century premises in Marylebone, central London, to a new building in the Royal Borough of Greenwich, overlooking the River Thames. By making this radical move, the PEF is realizing an ambition of many decades to provide a better home for its unique collections, and a better facility for those who wish to use them. It is hoped that our new building will enable increased engagement with a wide variety of audiences from all backgrounds, and will open a window for those audiences to appreciate a fascinating part of the world which most only see through the lens of conflict as reported in the media.

The move to a new home marks the first step in a program of realignment of a society founded in 1865, to service the needs of the scholarly community and the diverse audiences of the 21st century.

5F. Bioarchaeology in the Near East

CHAIR: Lesley A. Gregoricka (University of South Alabama)

Rachel Kalisher (Brown University), "Perspectives on Ancient Disability and Healthcare: Examination of a Trephination from LB I (ca. 1550–1400 B.C.E.) Megiddo, Israel"
Investigations into disability and access to healthcare in the ancient world are rare despite the large number of paleopathological cases from archaeological excavations. It is reasonable to assume that past populations had their own infrastructures for dealing with the sick, with some likely having trained medical specialists able to address debilitating diseases. Shifting the discussion from descriptive differential diagnoses towards one that includes the sociocultural implications of disability can lead to productive conversations about health in antiquity. These considerations were applied to a recently discovered adult male skeleton from Late Bronze Age I (LB I) Tel Megiddo, Israel, which was found in an elite context. Despite numerous skeletal abnormalities likely indicative of a congenital syndrome, this individual shows no signs of severe physiological stress during childhood. Additionally, this individual has a large perimortem trephination at the midline frontal bone (forehead), directly on top of an uncommon persistent metopic suture. Published osteological evidence, as well as later medical texts from the classical period, show a universal aversion in antiquity to trephining along cranial sutures, primarily because of the increased risk of fatal complications. I suggest that the evidence from Megiddo reveals two components about healthcare at this site: first, at least some individuals with disabilities were cared for during childhood; and second, there was a skilled medical practitioner available to these individuals during periods of severe health decline. This information provides new insight into how the sick were cared for, regarded, and treated in LB I Megiddo.

Annie Laurie Norris (Arizona State University), Brenda Baker (Arizona State University), Kelly Knudson (Arizona State University), and Natalya Zolotova (Arizona State University), "Temporal Trends in Diet and Morbidity at the Qinifab School Site, Sudan"
Stable carbon and nitrogen isotope analyses were conducted on bone collagen samples from individuals buried at the multicomponent Qinifab School site located between the Fourth and Fifth Nile Cataracts in modern Sudan. The cemetery component dates from the late Meroitic through Christian periods, ca. 1–1400 C.E. Rib samples were taken from 20 individuals dated to the Post-Meroitic (ca. 350–550 C.E.) and 40 from the Christian period (ca. 550–1400 C.E.). Of the 60 samples, 46 returned C:N ratios within acceptable quality parameters. A temporal shift in diet between the Post-Meroitic and Christian periods is indicated by differences in the carbon and nitrogen isotope values and by greater variability within the Christian period sample. Lower $\delta^{13}C$ values suggest an

increased incorporation of C3 plants, such as wheat, barley, and dates, into the diet. The $\delta^{15}N$ values are also lower in the Christian period sample. Interpretation of $\delta^{15}N$ values is complex, as differences may relate to trophic level, environment, and protein stress, or inclusion of aquatic resources in the diet. Comparison of the isotopic data with paleopathological data allows assessment of nutritional changes on health status. A greater proportion of individuals in the Christian period are affected by cribra orbitalia, a non-specific skeletal stress indicator of ambiguous etiology that is often associated in the literature with nutritional deficiencies or malaria. The possible relationship between the observed changes in diet and pathology are explored within the historical and biocultural context of medieval Nubia.

Antonia Carter (University of South Alabama) and Lesley A. Gregoricka (University of South Alabama), "Cremation and Secondary Burial Practices among Umm an-Nar Communities in Bronze Age Arabia"
Umm an-Nar (2700–2000 B.C.E.) communities in southeastern Arabia experienced social change as evidenced by the appearance of monumental towers and tombs associated with growing settlements, facilitated by date palm domestication. As part of this increasingly sedentary lifestyle, the ways in which living communities treated their dead correspondingly shifted. In some cases, Umm an-Nar tombs appear to have had two levels, with lower levels reserved for primary interment and decomposition prior to their removal, cremation, and re-interment atop the second story. The timing of such funerary practices, however, is poorly understood, particularly with regards to intervals between primary and secondary manipulation of the dead. Here, we assessed the extent of soft tissue decomposition and skeletal articulation at the time of cremation by evaluating changes in bone color associated with exposure to high temperatures. It was hypothesized that articular and non-articular surfaces would exhibit comparable color changes consistent with decomposition and disarticulation preceding cremation. This hypothesis was tested using distal humeri from tombs Unar 1 (2400–2200 B.C.E.) and Unar 2 (2300–2100 B.C.E.) at the Shimal Necropolis (UAE).

Results indicated no significant differences between articular and non-articular bone surfaces and the general absence of tissue shielding, consistent with the cremation of remains that had undergone extensive decomposition and suggestive of an extended period of time between primary and secondary funerary rites. Additionally, considerably more bones were calcined (800°C+) over time, which may suggest shifting preferences towards enhanced body processing linked to broader social changes among the inhabitants of these sites.

Kathryn Marklein (The Ohio State University), "The Romans Are Coming; the Romans Are Here: Differential Biological Responses to Roman Rule in Rural and Urban Anatolia"
Strategies of Roman expansion into and establishment within geographically peripheral territories demonstrate extensive interregional and intraregional variability. Arguably, this variability ensured the successful retention of imperial power over an otherwise culturally disparate expanse of populations. In the last 20 years, archaeologists and archaeological specialists have investigated the effects of sustained Roman authority in

territorial and provincial regions on local communities, challenging past models of "Romanization." On this critical foundation, bioarchaeological analyses have enhanced our understanding of biological changes associated with Roman conquest and political control. The current study considers the variability in Roman influence on rural and urban sites within Anatolia, utilizing human skeletal series as records of local adaptive behavior to Romanization. Skeletal and dental proxies of violence (fracture), diet (carious lesions; calculus; antemortem tooth loss, AMTL), childhood stress (linear enamel hypoplasia, LEH), and specific and non-specific infection (periosteal new bone, PNB; periodontal disease, PD) are compared between the more geopolitically remote, rural community of Oymaağaç and contemporaneous urban Anatolian sites. Results show no significant differences in prevalence of trauma, carious lesions, LEH, and PNB between rural and urban communities. However, percentages of calculus, AMTL, and PD within the Oymaağaç sample divert significantly from percentages within the urban Anatolian reference sites. The biological and biocultural variability and similarity observed between urban and rural (liminal) populations in Roman Anatolia are testaments to the intraregional and interprovincial diversity of "Romanized" landscapes, physical and socio-political landscapes that reflexively shape and are shaped by local, provincial communities.

Karl Berendt (University of Alberta) and Sandra Garvie-Lok (University of Alberta), "The People Left Behind: Disaster Skeletal Assemblage at Tel Azekah, Israel"
In the late 12th century B.C.E., the Canaanite city of Azekah was violently destroyed. From the destruction layer, the remains of four individuals were discovered in an elite dwelling and/or manufacturing facility. This presentation details the final results of analysis of these skeletons, using osteological, chemical, and archaeological data to reconstruct a profile of their lives and the events of their deaths. Morphological evidence for age at death and biological sex, analysis of pathology and trauma, habitual activity reconstruction, stable isotope analysis, and analysis of taphonomic processes are methods which each add details to this story.

The analysis shows that these four individuals were teenagers and adults of mixed sex. Despite the apparent elite context, they show signs that they suffered from poor nutrition, disease, and heavy physical labor during life. The evidence indicates that they died suddenly in the burning and collapse of this building, and seemingly no attempt was made to recover their bodies. Borrowing methods from forensic anthropology, the fire scene is reconstructed, giving clues to what happened in their final moments.

This new information is discussed in context with what we currently know about households and cottage industry in the Late Bronze Age, and what happened in this city's destruction. It is also compared to destruction layer skeletons at other sites in the southern Levant. Taken together, the results of this analysis provide the first human perspective on Azekah's Late Bronze Age society in the moment of its destruction.

Sherry Fox (Eastern Michigan University), "One Moment in Time: The Bioarchaeology of the Earthquake Victims at Kourion, Cyprus"

Multiple seasons of excavations on the acropolis of Kourion in Late Roman/Early Byzantine Cyprus have yielded a number of earthquake victims as a result of a natural disaster that destroyed the homes situated within the city walls. Many people were literally buried under the rubble of their fallen homes during the mid-fourth century A.D. as a result. These excavations have revealed a moment in time on the island, a glimpse into life in the hinterlands of the Eastern Roman and early Byzantine Empire during the mid-fourth century A.D. at Kourion—a time when Christianity was taking a hold on the island. Who was living in the city and who ultimately died as a result of this devastating earthquake? Although the vast majority of the human remains represent adults, based on bioarchaeological study, both an infant and an adolescent are included among the skeletal remains. Evidence for stress can also be detected among the human remains at the site, perhaps from a series of droughts in the region known from both the written record and environmental data. Although the inhabitants of once grand homes situated on the desirable acropolis should not have been poverty-stricken, it appears that the region had fallen on bad times. The devastation was so great that the Roman capital of the island moved from Paphos to Salamis, and at Kourion, those who survived the earthquake did not rebuild there, but rather moved the city inland to the present-day village of Episkopi.

5G. Approaches to Dress and the Body

CHAIR: Megan Cifarelli (Manhattanville College)

Emily Miller Bonney (California State University, Fullerton), "Do Clothes Make the Man (or Woman)? The Report from Bronze Age Crete"
Our understanding of the relationship between dress and body among the elite women of Late Bronze Age Crete as represented in frescoes and seals seems clear. The elaborate flounced garments both conceal the women's lower bodies and expose their breasts. In the paintings in particular the intricate patterns and pleatings of their clothing stand in for the otherwise two-dimensional bodies as a definition of their status. Men by contrast appear to wear little more than a codpiece. Both genders convey meaning with a carefully defined set of gestures. But when we move outside the ritual centers of Knossos and Phaistos and into the rural sanctuaries and villages where we expect to encounter non-elites, the picture changes, and while the differences in the garments of the women in the clay figurines from those in the paintings may result in part from the medium, these women also wear an array of headgear that does not appear in the paintings. On the other hand, men continue to appear wearing only a codpiece, and there appears to be substantial commonality between these categories of images in the gestures by which the figures communicate. This paper will consider the fluid relations between dress and body and the issue of social identity on Bronze Age Crete as a way of addressing the larger question of whether non-elites are visible in prehistoric imagery.

Vanessa Workman (Bar-Ilan University), Naama Sukenik (Israel Antiquities Authority), Orit Shamir (Israel Antiquities Authority), and Erez Ben-Yosef (Tel Aviv University), "The Unique Iron Age Textile Assemblage of Timna's Copper

Smelting Sites: A Window into Dressing Codes and Social Structure of the Early Edomite Society"
The qualities, textures, materials, and ornamentation of clothing in the Near Eastern Iron Age are often imperceptible. Outside of rare artistic depictions and brief textual evidence, our knowledge of the adornment of bodies in this period is fractional. The rare textile fragments discovered in recent excavations of early Iron Age copper production sites in the Timna Valley, Israel feature a diverse collection of woven, braided, and spun materials that help move us towards a more cohesive picture of dress, which can speak to the outward portrayal of personal and group identity in the desert environment and within the culture of the local society. Moreover, a new discovery of textiles adorning several bodies interned in a stone-built grave provides an opportunity to better understand the use of clothes in burial customs to link between garments and sex. A number of aspects of the new textile collection, including the use of dyestuff (the earliest evidence of madder and woad in the Levant) for ornamentation, striking similarities to Egyptian depictions of the local Shasu nomads, selective use of raw materials, and more, also help to construct a vivid picture of the early Edomite society with probable implications on our understanding of nearby early Iron Age societies.

Betty Adams (La Sierra University) and Kent Bramlett (La Sierra University), "Iron Age Cosmetics: The Proof Is in the Palette, Everyone Is an Esthetician"
In 1974 Dr. Henry O. Thompson wrote the definitive article categorizing "cosmetic palettes" as an item excavated with "regularity" throughout the southern Levant dating from 1000 B.C.E. to 500 B.C.E. He further noted that the use of the "cosmetic palette" was assumed, and never proven. Thompson documented over 120 palettes from sites as varied as Samaria, Megiddo, Tawilan, and Beth Shean. In the 44 years since Thompson researched the palettes, excavations on both sides of the Jordan have continued turning up specimens in various contexts, including Tall al-'Umayri and Balu'a. Here we utilize X-ray fluorescence (XRF) scanning electron microscopy with energy dispersive X-ray spectroscopy (SEM-EDS) and gas chromatography with mass spectrometry (GC-MS) to analyze residue extracted from several Iron Age palettes in the La Sierra University collection to prove cosmetic use. Preliminary results indicate both organic and inorganic residue on the palettes. Known cosmetic ingredients compiled by ancient authors are compared with residue found on mortars, palettes, and pestles from 'Umayri and recreated in an experimental archaeology component. Additionally, we examine the archeological contexts of cosmetic use by men and women through the Iron Age to demonstrate widespread use by both men and women. Residue testing is frequently used to investigate food production; however, minimal testing information exists for cosmetics. Finally, our testing evidence leads us to suggest that a second category of palettes exists—cosmetic mortars, which were more frequently found in domestic assemblages at Tall al-'Umayri.

Kristine Garroway (Hebrew Union College-Jewish Institute of Religion, Los Angeles), "(Un)Dressing Judean Children in the Lachish Reliefs: Revealing Gender and Status"
The Lachish reliefs offer a unique snapshot of Judean dress in the eighth century B.C.E. While some attention has been given to the adults, and to the fact that families were

deported as a group, less attention has been paid to the children and infants in these family groups. Using the adult Judeans as a point of comparison, I examine the display of gender, status, and age shown though clothing and the lack of clothing. In doing so, I draw upon anthropological theories that discuss the presentation of gender and status through dress. My study utilizes unique images of the deported children taken with reflectance transformation imaging (RTI) technology, which, with its ability to move and combine different light sources and the angles of these sources, brings out features previously hidden within the stone texture of the relief. I conclude that for male children, belt length and decoration are markers of identifiable male gender, age, and status. Females are not as decorated and seemed to be gendered at an earlier age. With respect to infants, I explore the possibility that one of the naked infants has a side-lock, which raises many questions in light of the Egyptian use of the sidelock. As a whole, this study adds to our understanding of the role of dress and the display of gender within eighth century B.C.E. Judah.

Caleb Chow (Trinity International University), "The Sword as a Dress Accessory in the Neo-Assyrian Empire"
While its use as a battlefield weapon is obvious, the sword is also seen in Neo-Assyrian iconography as an integrated part of court dress among high-ranking individuals. Based on depictions of sword-wielding individuals such as the Khorsabad throne room reliefs of Sennacherib and the Nimrud Central Palace relief of Tiglath-pileser III depicting sword-bearing scribes, it is clear that swords were also carried off the battlefield and worn in non-military contexts. In scenes depicting hunting or battle, the Neo-Assyrian reliefs often show soldiers and kings wearing a cross-body shoulder strap that held the sword scabbard outside the armor, but in depictions of sword-bearers outside the battlefield the sword is shown to be worn directly in the clothing and at a more horizontal angle. It therefore stands to reason that there is not only a prestigious and symbolic aspect to sword-carrying outside the battlefield but there may also be a functional design in Neo-Assyrian dress that allowed for the convenient carry of swords as well as for their ease of access in times of need. To identify such possible functional aspects of Neo-Assyrian non-battlefield dress, this paper will analyze and compare the Neo-Assyrian iconographic evidence for sword-bearing in both military and non-military contexts by examining the differences in the position of carry, features of the scabbard and hilt designs, and especially the differences in the clothing depicted in Neo-Assyrian art.

Jane Hickman (University of Pennsylvania Museum of Archaeology and Anthropology), "The Active Role of Jewelry in an Iron Age Anatolian Burial"
Gold and electrum jewelry was recovered from Tumulus A, a sixth century B.C.E. cremation burial at Gordion, Turkey. The burial contained the remains of a young woman, who was interred with a horse-drawn funerary cart and many objects of value, including a religious statuette, a silver mirror, a carved ivory box and inlays, fine pottery, alabaster vases, and spindle whorls.

What is most interesting about this burial is the large number of gold ornaments that were recovered in different contexts. Some of the objects were found in the burned deposit and were black, melted, or fused. They may have been worn by the deceased or placed with

the burial before cremation or just after. Other objects appear to have been added after the embers cooled. Some gold objects, such as a lion's head bracelet and a series of pendants, are complete and appear to be untouched by fire.

The assemblage of jewelry from Tumulus A—over 160 pieces—includes considerably more jewelry than would have been worn at one time. For example, among the discoveries are perhaps six necklaces and three pairs of earrings. I would argue that some of the jewelry was indeed worn by the deceased, but many other pieces were added to the grave after the cremation. This paper looks at the possible explanations for the abundance of jewelry found in Tumulus A, in addition to those pieces that adorned the deceased.

5H. Archaeology of Mesopotamia

CHAIR: Darren P. Ashby (American Schools of Oriental Research)

Emily Hammer (University of Pennsylvania), "Spatial Organization and Demography of the Iraqi Marshes: Ethnographic Information Derived from Newly-Declassified Aerial and Satellite Imagery"
Ethnographic analogy has a problematic role in archaeology, but all archaeologists rely to some degree or another, implicitly or explicitly, on ethnographic details from their own experiences and from ethnographies. Early to mid-20th century ethnographies have been particularly important for southern Mesopotamian archaeologists' reconstructions of the lifestyles and activities of people such as pastoralists and marsh dwellers who lived and operated outside of the cities that have been targeted for excavation. Such ethnographies frequently include archaeologically-useful information on preindustrial technologies of subsistence, craft production, and dwelling construction as well as information on social organization. However, these studies were carried out before the "spatial turn" in the humanities and social sciences and before the concept of "landscape" became central in anthropology and archaeology. They also typically provide a picture of only a narrow time frame. These ethnographies therefore largely lack information on the spatial organization of communities and the transformation of their landscapes through time. In an effort to generate such data for marsh communities of southern Iraq, I turn to newly-declassified aerial imagery captured by U2 spy planes in 1959–1960 and satellite imagery captured by the Hexagon program in 1971–1984. Unlike widely-used Corona imagery, these datasets are high-resolution enough to map individual structures and boat paths within marsh communities 35–60 years ago and to allow for detailed tracking of community and landscape spatial organization over time and between seasons. This analysis generates data that can inform our reconstruction of the marsh landscape in which the earliest Mesopotamian cities may have arisen.

Holly Pittman (University of Pennsylvania), "Report on the Early Dynastic I Administrative Complex at Al Hiba, Ancient Lagash"
This paper will summarize the results of three seasons of excavations at the site of Al Hiba, ancient Lagash in southern Iraq, undertaken in 1972, 1975, and 1990 by Donald P. Hansen of the Institute of Fine Arts at New York University. The excavation uncovered

four construction phases of a building complex comprising small and medium sized rooms and courtyards. To the east of the complex a large oval enclosure wall was uncovered that is clearly associated with the western complex. The final analysis of the excavations of the area has been completed, the pottery and small finds re-integrated into their contexts, allowing for a functional discussion of the complex. This paper will present a summary of the results including a description of the complex, its evolution, and the contextualization of an important corpus of administrative residue in the form of seal impressions carried on various closing devices. The complex is contemporary with the Seal Impression Strata at Ur and can be placed in the middle of the long Early Dynastic I period.

Yasmin Abdul Karim (University of Mosul) and Helen Malko (Columbia University), "Architectural and Funeral Practices at Tell Abu Daheb"
Excavated by the Iraqi State Board of Antiquities and Heritage, Tell Abu Daheb is located about 45 km to the southeast of Di Qar Governorate in the Iraqi Marshlands. The site is oval, and is divided into two parts, the eastern and western mounds, by a small river. Excavated over three seasons (2011–2013), the settlement revealed a rich and diverse material culture, including private and public architecture, graves, and artifacts such as ceramics and jewelry. Based on preliminary on-site examination of the architecture and the ceramics, the excavators concluded that the site belongs to the Old Babylonian period. In this paper we will first synthesize the excavation results, focusing on architecture and tombs. By comparing these data with other sites in the region, we will attempt to reconstruct the socioeconomic organization of the settlement and propose a possible Kassite occupation at certain parts of the site.

Daniel Calderbank (The University of Manchester), "Inter-Regional Connections in the Sealand Period: Pottery from Tell Khaiber, Southern Iraq"
The Sealand Dynasty (ca. 1740–1450 B.C.) emerged in response to diminishing Babylonian power to exercise some level of control over southern Mesopotamia. Yet, the territorial extent and inner workings of this political dynasty remain poorly understood. It is in this context that recent excavations at Tell Khaiber (2013–2017) assume significance. This small rural site, located ca. 20 km northwest of Ur, is the first to reliably produce stratified archaeological and textual material associated with the Sealand period. Analysis of the Khaiber pottery assemblage, composed of approximately 400 complete vessels and 10,000 diagnostic sherds, therefore provides unparalleled information for shifting social and economic patterns during this unstable period. This material implies an erosion of the urban-centred settlement system of the Old Babylonian period, and instead suggests a movement towards smaller-scale, more dispersed settlement. Significantly, the closest ceramic comparisons emerge from sites in the Gulf, thus suggesting that shared identities were forged between the inhabitants of southern Mesopotamia and those across the waterways to the south. This paper aims to define these inter-regional connections, and in doing so attends to the points at which pottery engagements articulated with the everyday (re)production of Sealand society.

Norma Franklin (University of Haifa), "The Assyrian Stylized Tree: Propagation Not Pollination"

There are ca. 180 wall reliefs depicting the Assyrian Stylized Tree decorating the walls of Ashurnasirpal II's palace at Calah (Nimrud). The scene is usually thought to represent the pollination of a date palm; however, it is the propagation of a female date palm that is depicted. A date palm replicates itself by producing basal offshoots that grow into a new identical palm, it literally clones itself. This paper will explore how the date palm came to represent immortality, at Calah and elsewhere in the ancient world.

5I. Archaeology of Anatolia III

CHAIR: Levent Atici (University of Nevada, Las Vegas)

Timothy P. Harrison (University of Toronto), "The 'Lady of Tayinat' and Other Recent Discoveries at Kunulua, Royal City of the Kingdom of Palastin/Walastin"
A monumental female statue was uncovered during the 2017 excavations at Tell Tayinat (ancient Kunulua), royal city of the Neo-Hittite kingdom of Palastin/Walastin, located in the northern Orontes Valley, southeastern Turkey. The statue was found deposited in a pit next to a large gate complex that provided access to the citadel area of the upper mound at Tayinat, and in the vicinity of several other monumental sculptures discovered in previous field seasons, including a lion figure and a statue of Suppiluliuma, an early ninth-century ruler of the Kingdom of Walastin. The identity of the female figure is not yet clear. However, stylistic elements suggest the statue represents a human figure, possibly the wife of Suppiluliuma, or—more intriguingly—Kupapiyas, the wife (or possibly the queen mother) of Taita, the presumed dynastic founder of Palastin/Walastin. The discovery of the "Lady of Tayinat" further accentuates the remarkable sculptural tradition of the Iron Age communities of Syro-Anatolia, while also highlighting the prominent role women played in the political and religious lives of these early Iron Age communities. This paper will present the results of the 2017 Tayinat Archaeological Project (TAP) excavations, including the results of investigations of the late third millennium (EB IVA/B) settlement as well.

Virginia Herrmann (University of Tübingen) and David Schloen (University of Chicago), "Zincirli Höyük, Turkey: Recent Results from the Chicago-Tübingen Excavations"
Excavations at Zincirli Höyük, Turkey (ancient Sam'al) by the Universities of Chicago and Tübingen in 2017 and 2018 have produced significant new results concerning the Bronze Age prehistory of this well-known Iron Age city, the chronology of Iron Age urbanization, and the socioeconomic organization of the first settlers of the Iron Age lower town. Remains of the EB IV were first discovered beneath the southern part of the Iron Age lower town in 2015, and continued excavations in Area 4 have revealed substantial structures of this period. On the citadel mound in Area 2, we have further followed the burnt stratum dating to the MB II, and the buildings uncovered have produced a rich assemblage of ceramics and material culture, some with long-distance connections to Anatolia and the Euphrates. Most significantly, these excavations have shown that the massive foundation known as Hilani I, long considered to be the city's earliest Iron Age palace, was actually constructed in the Middle Bronze Age. Continued

excavation in Area 8 in the southwest has enlarged our sample of the first settlement of the lower town, produced unique artifacts, including an inscribed cosmetic container, and revealed a functional shift in this area toward industrial production in the Iron Age III. Excavation in Area 3 at the southern edge of the citadel mound is providing new information about the earliest Iron Age II occupation of Zincirli after a hiatus in the Late Bronze Age and Iron Age I.

Stephanie Selover (University of Washington), "Of Winged Women and Stone Tombs: Finding Anatolia in Archaic Lycia"
Culture and identity are important components of any society. These concepts can change and merge through time, due to any number of variables, including shifts in population, times of warfare and peace, increases or decreases in trade, or changes in political leadership. The Lycian region of southwestern Turkey is a fertile area for a study of such changes. The origins of the Lycian peoples remain one of the more contentious aspects of Lycian study. The archaeological literature reveals a continuation of some cultural aspects within Lycia, from the Bronze Age through the Hellenistic era, including the shape and materials used in architecture, types of burials, and, likely, religion, though the last is harder to definitively identity. Too often, however, Lycia has been viewed through a Greek/Hellenistic lens, rather than from its unique place between the Near Eastern and Classical worlds. The architecture and art of Lycian funeral monuments have often been considered borrowed from and in imitation of either Greek or Persian contemporary styles, with less regard for native contribution or innovation, or how the Lycians themselves would have understood their burial customs. This paper is an overview of the current scholarship on Lycian burial architecture and possible avenues of future studies to better understand the Lycians and their own contributions to their art and society. The study of Lycian tombs gives us a small but tantalizing view into the Lycian understanding of religion and death, and a culture that is distinctly its own.

Daniel C. Browning Jr. (University of Southern Mississippi), "Stylite Sites in Rough Cilicia?"
The bizarre phenomenon of stylitism began in early Byzantine Syria before appearing in nearby regions and beyond. Suggestions that this practice of "pole-sitting" by Christian ascetics found inspiration in the *phallobates* at Hierapolis described by Lucian are unresolved. Nevertheless, a long-established predilection for pillar-reverence is demonstrable for Syria. Recent studies suggest a pillar emphasis was also present in neighboring Cilicia—which, along with Syria, remained a pagan stronghold well into late antiquity. This paper will survey evidence for the geographic spread of stylitism and examine largely unknown sites that exhibit physical remains relating to the practice in eastern Rough Cilicia.

6A. Archaeology of Jordan III

CHAIRS: Marta D'Andrea (Sapienza University of Rome) and M. Barbara Reeves (Queen's University)

PRESENTERS:

David Graf (University of Miami), "The Nabataean Crocodile Betyl"
In addition to the 628 monumental rock-cut tombs and 730 non-monumental tombs at Petra, there are over 1000 rock-cut betyls or cultic niches. The "Petra Niche Project" launched by Robert Wenning and the late H. Merklein in 1997 has already recorded 840 votive niches in the eastern half of Petra alone, two-thirds of which were previously unrecorded, with an estimated total of over 1200 in the Petra region. The predominant type is aniconic (a square unmarked stone in some instances), but there are a few that have figurative theophoric representations (identified as one of the Nabataean deities Dushara, Allat/al-Uzza, or the Egyptian Isis). During the 2017 survey of the Ba'aja region just 10 km north of Petra, a unique iconographic betyl was discovered in Wadi Umm Thabet. This betyl has a vertical crocodile strung across its face. As is well known, the crocodile is a familiar symbol of the Nile, where it was worshipped as a god—the crocodile god Sobek. Arsinoe in the Fayyum was also called Crocodilopolis. The connections with Egypt are attractive, perhaps in connection with the Isis cult that penetrated Petra in the late Hellenistic era. There are depictions of Isis seated with a crocodile at her feet at her cultic center at Philae in Upper Egypt and in the Temple of Isis at Pompeii in Italy which offer support for the hypothesis.

M. Barbara Reeves (Queen's University), "Stepping into History: A Contextual Analysis of the Footprint Images in Humayma's Hills and Roman Fort"
The archaeological site of Humayma in southern Jordan retains traces of human occupation dating from the Upper Paleolithic period until the present day. Notable among the occupational remains are a Roman fort, the Nabataean through early Islamic settlements, and a variety of activity areas on the adjacent hills and ridges. Three decades of excavation and survey across the site, targeting different chronological periods, have revealed a great deal about the material culture, behaviors, and belief systems of Humayma's past occupants. This makes Humayma an excellent site for contextual interpretations. Footprint images provide a pertinent case study. Although deliberately displayed images of human footprints are common across the world in time periods ranging from prehistoric to modern, their placement at Humayma can be related to particular locations and particular time periods. The purpose of this paper is to discuss the types of footprint images at Humayma, their specific locations, and their meaning for their creators and/or displayers and for those who subsequently viewed them. As will be shown, although some footprint images at Humayma likely predate the foundation of the Nabataean town and others were created in the 20th century, there are significant groups of images associated with the Roman fort, with one particular site in the hills, and with Humayma's Nabataean, Roman, and Byzantine periods of occupation.

Darrell J. Rohl (Canterbury Christ Church University) and Elizabeth Osinga (Independent Scholar), "The Hisban North Church: New Insights on the Byzantine Period at Esbus/Esbounta (Jordan)"
Tall Hisban is a well-known archaeological site in central Jordan, with an occupational history from the Iron Age through modern periods. Extensive excavation, regional field

survey, and food systems research have highlighted the site's apogee within the Byzantine period, when it reached a peak of agricultural and settlement intensity and was known as Esbus or Esbounta. Two Byzantine basilicas have been excavated: the Acropolis Church (1968–1976) and the North Church (1978).

Despite this noted peak, Hisban's Byzantine period has not yet received a full synthetic publication. As Hisban is central to LaBianca's influential "intensification and abatement" model for understanding the Near East over the *longue durée*, it is important that this period receives considerable attention. In this paper, we present the results of the 2018 renewed excavations of the Hisban North Church, which are designed to clarify remaining questions as part of Byzantine Hisban's final publication initiative.

Key objectives include confirming the current status of the church's mosaic pavements and clarifying the church's chronology through a new fully quantified and stratigraphic ceramic collection methodology that will allow for a reassessment of the existing unpublished corpus. Excavation and recording will follow the established Madaba Plains Project methodology, with new squares focused on the apse and narthex, including areas both within and outside of the church. This will lead to a better understanding of the church's uncertain foundation and changing use patterns from the Byzantine to early Islamic periods.

Robert D. Bates (Andrews University) and Bethany Walker (University of Bonn), "Living the Domestic Life: A Preliminary Report of the Medieval Village at Tall Hisban from the 2016–2018 Excavation Seasons"
In the summer of 2018, the Hisban Cultural Heritage Project celebrated its 50th anniversary as part of the Madaba Plains Project. Initially the project explored the Iron Age, Roman, and Byzantine remains and hoped to find evidence of a Late Bronze Age settlement. In recent years, excavations have focused on the western, northern, and southern slopes of the tell to better document the history of the occupation of the village associated with the public buildings on the summit of the tell in the medieval (Byzantine and Islamic) periods. The project has also developed a larger program of heritage preservation and site presentation that seeks to engage the local community in a wider, more culturally diverse understanding of the history of the site.

This paper will examine the recent discoveries at Tall Hisban in light of the medieval village, presenting the results of the 2016–2018 excavation seasons. It will include a preliminary report on the domestic living spaces found at the site within the wider context of the Late Byzantine through Late Islamic periods, an update on the botanical studies, the results of ongoing quantification of later Islamic pottery from stratified contexts, preliminary analysis of non-ceramic small finds, the state of current digitization efforts, and the plan for future excavation and site preservation. We conclude with an assessment of the contributions the site has for the household archaeology of medieval Jordan and lessons learned about daily life in an economically and socially well-connected rural community on the imperial frontier.

Maria Elena Ronza (Andrews University; Sela for Vocational Training and Protection of Cultural Heritage) and Erin Addison (Independent Scholar), "Community Archaeology in Jordan—A White Paper"

Community archaeology has been *the* trend worldwide for some years now. A broader narration of history and the rise of interest in exploring and narrating not only the history of empires, but also the history of resilience of local populations, sheds light on the many possible narrations of the past. The academic world has become aware of how a preferred Eurocentric past has dominated the historical narration for many years, and of how local perspectives of the past have been too often ignored. In addition, the dawn of archaeology in the Middle East, and Jordan is not an exception, is strictly intertwined with colonialism both politically and practically, with foreign missions looking for a preferred past that represented their own past. Pioneering times of community archaeology are over, and, even if relatively new, it is defined as a discipline of its own. Moreover, in the particularly challenging political, historical, and cultural conjuncture we live in, community archaeology has become an ethical and moral imperative. Community archaeology is inverting the still existing trend of attempting to overcome the colonial past by pouring money into countries (which once were colonies) to implement projects that are still managed predominantly by foreigners, and based on foreign institutions and cultural assumptions. Those projects often created economic and cultural dependency rather than empowering local residents. Local communities are gaining back centrality in the discourse around their heritage and are seen as a resource for a more sustainable preservation of the heritage.

6B. Archaeology of Cyprus I

CHAIR: Nancy Serwint (Arizona State University)

Alan Simmons (University of Nevada, Las Vegas), "Sailing Neanderthals: Early Mediterranean Voyagers and the Role of Cyprus in Perspective"

While there have always been claims for an early, pre-Neolithic, human presence on many of the Mediterranean islands, including Cyprus, these generally have not withstood critical archaeological scrutiny. The lack of large assemblages, absolute dating, and poor stratigraphic associations have been particularly problematic. Over the past several years, however, the situation has changed. We now know that there is a strong Late Epipaleolithic presence on several islands, including sites that are not in proximity to the coast. One of the best documented and dated is Akrotiri-*Aetokremnos* in Cyprus. Since its discovery, additional claims for contemporary sites in Cyprus have been made, but these generally still lack compelling supporting evidence, despite additional convincing Late Epipaleolithic sites now documented on other islands. Even more dramatic have been sites that appear to date to "deeper" time, including the Middle and, possibly, Lower Paleolithic. These are best represented in Crete and Naxos. Such discoveries are significant on many levels, not the least of which is the indication that even pre-*Homo sapiens* possessed the cognitive abilities and motivation necessary for seafaring and navigation. This presentation briefly summarizes this recent research, noting that rigorous archaeological criteria are still necessary for documenting early sites. I then ask if, given

these finds on other islands, might one reasonably expect that similarly early sites exist on Cyprus?

Kathryn Grossman (North Carolina State University), Tate Paulette (North Carolina State University), Andrew McCarthy (University of Edinburgh), and Lisa Graham (University of Edinburgh), "Pre-urban Trajectories on the Northwest Coast of Cyprus: The First Two Seasons of the Makounta-*Voules* Archaeological Project"
In 2017, our team began a new research project at Makounta-*Voules*, a prehistoric site located in the foothills near the coast of Chrysochou Bay in northwest Cyprus. Our work, to date, has shown that Makounta-*Voules* is a large (7–10 ha) settlement with continuous occupation dating from the Chalcolithic to the Middle Bronze Age. This long-lived settlement promises to provide an invaluable, long-term perspective on the period preceding the urban transformation of the island during the Late Bronze Age. Our project is explicitly focused on exploring the backstory to urbanization on Cyprus, that is, the pre-urban social trajectories, economic intensifications, and material flows that underpinned and gave shape to the urbanization process. It is typically argued that urbanization in Late Bronze Age Cyprus was a direct result of rapidly increasing copper exploitation, as Cypriot societies responded to an upsurge in the demand for copper across the eastern Mediterranean. Although Makounta-*Voules* has produced preliminary, yet substantial, evidence for metallurgical activities, our project is exploring how developments in other social and economic sectors parallel and intersect with the intensifying copper exploitation on the island. In this paper, we present the results of our first two seasons of work at the site—a surface collection and geophysical survey conducted in 2017 and the first season of excavation conducted in the summer of 2018—and present our plans for the future.

Lindy Crewe (Cyprus American Archaeological Research Institute), "Kissonerga-*Skalia* Bronze Age Settlement Excavation"
The coastal Bronze Age settlement at Kissonerga-*Skalia* in western Cyprus was a site of exceptional longevity. It remained occupied from the Philia, ca. 2500 B.C., through the entire Early and Middle Cypriot Bronze Age until ca. 1600 B.C., the threshold of the Late Cypriot Bronze Age. During the final phase, a large building complex was constructed, with evidence of large open spaces, delineated by a monumental wall, and industrial-scale cooking/heating facilities, including a malting kiln associated with beer manufacture. This paper will report on the 2018 season of excavations as we work towards understanding the sequences of construction of the complex, its functions, and why it was occupied only for a short period of one or two generations before the entire site was abandoned.

Christine Johnston (Western Washington University), "Import Distribution and Network Integration in Bronze Age Cyprus"
In this paper, I examine import distribution at three sites on Cyprus to assess the political and economic organization of the LC I and II periods and the varying integration of Cypriot sites into the broader Mediterranean Bronze Age trade network. Kition, Maroni, and Idalion, three sites of varying size (by number and variety of Late Helladic I–IIIB

imports) are analyzed through micro-level network analysis to profile the interaction between micro- and macro-scale exchange systems. This study is part of a multi-scalar approach to trade that examines the institutional networks governing agents at the study sites and then contextualizes these results within the larger trade system extant during the period. This broader system was reconstructed through a network analysis of Cypriot (LC I–IIC) and Aegean (LH I–IIIB) pottery throughout the eastern Mediterranean. Network measures of this previous project revealed a relatively decentralized island economy with broad access to ceramic imports. In this study, the degree of economic centralization and the existence of market-place exchange at each site is examined through both network models and the application of the distributional approach. Combining micro-scale analysis with larger network systems has the potential to cross scalar divisions, creating a more comprehensive model of ancient economic activity, and facilitating the examination of socio-political and economic institutions of Late Bronze Age Cyprus. Understanding the movement of imports across the island also sheds light on the role of Cypriot agents in the dissemination of Aegean exports—namely Mycenaean ceramics—across the Mediterranean.

Ellis Monahan (Cornell University), "A History of Violence? A Reassessment of the Evidence for Internecine Conflict in Bronze Age Cyprus"
The archaeology of historical periods has long attended to practices of warfare and strife that animate the grand narratives of political history, but prehistorians have often dismissed violence among less complex societies as an inconsequential factor in cultural or social change. This is due, in part, to the mistaken views that warfare was infrequent or less serious prior to the rise of complex societies or that prehistoric warfare was "ritual" or "irrational." Prevailing accounts of Prehistoric Bronze Age society on Cyprus rarely mention violence, and in recent decades the monumental fortresses of the Middle to Late Bronze Age transition, long described as a time of instability and conflict, have been reclassified as animal enclosures or distribution centers.
This paper confronts the possibility that the study of societal change on Bronze Age Cyprus is being hampered by what Lawrence Keeley has aptly called the "pacification of the past." By considering the variability in the practice of warfare in non-centralized societies, I bring together various neglected categories of evidence for prehistoric warfare present in the Cypriot archaeological record, including large-scale demographic changes and migration; skeletal trauma and settlement destructions; weapons and "warrior burials"; and especially fortresses and fortifications, incorporating recent data from the Ayios Sozomenos Excavation and Survey Project. In constructing a case for the presence and growth of internecine conflict through the Early and Middle Bronze Age on Cyprus, I highlight its importance in understanding social developments of this period.

6C. Archaeology of the Southern Levant III

CHAIRS: Owen Chesnut (North Central Michigan College) and Joshua Walton (Capital University)

Ian Cipin (University of Evansville), Jennie Ebeling (University of Evansville), and Danny Rosenberg (University of Haifa), "Basalt Artifact Manufacture at Early Bronze Age Jezreel"
Excavations at Tel 'Ein Jezreel (2013–present) have revealed a uniquely large assemblage of Early Bronze Age basalt artifacts, including more than 2000 utilitarian tools (grinding stones, mortars, pestles, pounders, and the like) and prestige/cultic items (Chalcolithic and EB I vessels, stelae). Several of these objects are preforms, or incomplete vessels and tools abandoned during the process of manufacture. Located on top of a basalt outcrop that overlooks the spring 'Ein Jezreel, the Early Bronze Age settlement at Tel 'Ein Jezreel included at least one EB I curvilinear structure that incorporated this basalt "bedrock" into its foundation. An excavated cultic area dating to the EB I containing large in situ grinding slabs and a carefully-carved basalt stele indicate cereal processing in the context of ritual activities. Along with a perennial water source and the fertile agricultural land of the Jezreel Valley, basalt apparently constituted an important natural resource that attracted settlers to the site. In this paper, we will present the evidence for basalt artifact manufacture at Jezreel and suggest how these initial findings will be used to reconstruct an industry for utilitarian and prestige/cultic basalt items in the Jezreel Valley in the Early Bronze Age.

Steven Collins (Veritas International University; Trinity Southwest University), "Tall el-Hammam—City and State: Insights from 13 Excavation Seasons"
This paper presents the results of over 15 years of research, exploration, survey, and excavation on the eastern Middle Ghor, including 13 consecutive excavation seasons (2006–2018) at the largest Bronze Age site in the southern Jordan Valley, Tall el-Hammam (TeH). By all definitions of an ancient Near Eastern "city-state," TeH—with its many satellite towns, villages, hamlets, megalithic field, and incorporated landscape components—constituted such a polity. It evinces every evidence of societal complexity, large-scale urban planning, monumental construction, large-scale agro-economics, purposeful placement of "guardian" towns, discreet visual integration of its territory, and a possible extended hegemony in the Rift Valley. The evolution of the TeH city-state began during the Chalcolithic Period, at a time when settlements spread across the southern Jordan Valley. During the Early Bronze Age, Tall el-Hammam coalesced into a major urban core, with 26 ha of its 50+ ha footprint surrounded by heavy fortifications. Four strategically-located towns (all likely fortified to some extent) grew up virtually equidistant one to the next within a 3 km radius of TeH, to the south, southwest, northwest, and north. Defensively, this was a pre-emptive plan on a mega-scale that seems to have worked, as there is no evidence of military damage to the fortified urban core through two millennia of continuous operation. Collectively as a city-state, TeH and its neighbors were a force to be reckoned with during the Early, Intermediate, and Middle Bronze Ages.

Francesco de Magistris (Oxford University), "The Land of Yarimuta as the Central Coastal Valley: A Re-Evaluation of Rib-Addi's Letters in Light of Recent Excavations in Jaffa and Aphek"
The land of Yarimuta played an important role in the Amarna Letters from Rib-Addi. The King of Byblos describes it as an Egyptian territory, with a sea outlet and capability to

store and produce grain. Because of its importance in the reconstruction of the Egyptian administration of the southern Levant during the New Kingdom, its location is a highly debated topic. In this presentation, the pieces of information regarding Yarimuta are reassessed, the previous identifications revaluated, and a new one proposed in light of the recent excavations in Aphek and Jaffa: the central Coastal Valley. Traversed by the Yarkon River, the central Coastal Valley is a fertile region located between the Mediterranean Sea, the Shephelah, and the Lower Galilee.

Written documents and archaeological excavations have shown an Egyptian presence at both the springs and the outlet of the Yarkon River: Jaffa was an Egyptian stronghold, port, and granary, and recent excavations of its Ramesside Gate have shown a continuous presence in the area since the time of Thutmose III. On the other side, at the springs of the Yarkon river, it has been proven that the Egyptians developed a farming estate during the 19th Dynasty, and there are reasons to believe that their presence should be predated to the time of Amenhotep II.

Rafael Lewis (Ashkelon Academic College) and Rona Avissar Lewis (David Yellin Academic College), "El-Kankuzah, 'Precious' Site in the Hattin Landscape"
The Landscape of Hattin Archaeological Project (Zinman Institute of Archaeology, University of Haifa), explores the development of the landscape overlooked by the volcanic hill called the Horns of Hattin. This landscape is mostly known as the site where, on July 4th, 1187, the forces of the Latin kingdom of Jerusalem were defeated by the Muslim armies led by Saladin. But the landscape of Hattin had seen a good number of other historical events and human activity that can be traced from as early as the Middle Paleolithic and onward through Early Antiquity and Late Antiquity to the more recent past. The detailed landscape archaeology project, initiated in 2007, has led to the discovery and excavation of numerous new sites and manmade features, which have enabled us to reconstructed the landscape of Hattin during various periods and events.

One of the most intriguing sites explored during the study is a settlement named on the Palestine Exploration Fund map (Sheet X) as *El-Kankuzah* (in Arabic, "small treasure" or "precious"). Located at a vantage point overlooking the Sea of Galilee, on top of a volcanic chimney, the dramatic view from the site is the backdrop to the even more dramatic finds excavated, including finds dated to the LB II and Iron Age I–II, fortification walls, towers, and a sanctuary built of megalithic stones with a standing stone. The finds and other matters related to this enigmatic site, its location, and connection to other landscape features will be presented for the first time.

Stephen Pfann (University of the Holy Land) and Yehudah Rapuano (Israel Antiquities Authority), "Comparative Methods in the Dating of Terraces of the Late Hellenistic to Islamic Periods in the Galilee and in the Judean Wilderness"
A variety of methods have been used to clarify the dating of terraces in both temperate and arid zones of the southern Levant and adjacent countries. Recently, the optically stimulated luminescence (OSL) method of dating has been adopted by some scholars as an alternative method for the dating of terraces, independent of methods of landscape archaeology used hitherto.The authors present here data derived from their excavation of

terraces at Nazareth in the Galilee and at Qumran in the Judean Desert. The results of this work are compared with the terrace studies made with with OSL data derived from similar areas and periods.

6D. Digital Archaeology and History II

CHAIR: Tiffany Earley-Spadoni (University of Central Florida)

Adam Anderson (University of California, Berkeley), "Mapping Archaeological Networks and Neighborhoods in Kanesh"

Archaeology in the Middle East or Near East has a long history, spanning more than 150 years of scholarship. From the 1840s onward western archaeologists like Sir Austen Henry Layard made early discoveries of textual artifacts in the heart of Mesopotamia, and awoke a deep curiosity in deciphering the beginnings of human history. Unfortunately, these discoveries inadvertently incentivized a significant amount of looting in the area, resulting in hundreds of thousands of unprovenanced artifacts. To illustrate, I focus on one peripheral Bronze Age site at Kültepe (ancient Kanesh), Turkey, which yielded more than 5000 unprovenanced "Cappadocian" tablets, sold in bazaars and collected by western museums. After decades of textual scholarship, we can now situate these texts in a reconstructed social setting, which can be analyzed and described using network analysis. The major question that I will pursue is how we get from the holes in the ground and the lumps of clay to the neighborhoods and the people of the distant past—"a presumptuous journey, it would seem" (Larsen 2015).

Maurits Ertsen (Delft University of Technology), "Modeling Mesopotamia—Agent-Based Modeling for Emerging Power Relations"

Small-scale activities many thousands of years ago in southern Mesopotamia changed the capacity of such regions to sustain large populations over long periods of time. Mesopotamia's early anthropogenic irrigated landscapes seem to have emerged from short-term activities, but long-term effects were massive. Water and irrigation can bring wealth and stability to communities and nations, but can also harm landscapes and food production in the long term. A narrow environmental threshold may separate stable, irrigated landscapes from unstable, over-used ones. Ancient Mesopotamia may have "collapsed" because of salinization due to over-irrigation. However, as with the emergence of Mesopotamian society, its "downfall" would have unfolded over centuries too. It is very likely that full-scale effects of interventions are only visible by humans after some time has passed, possibly only in the next generation—which should make it very difficult for these next generations to relate the effects back to actions of their predecessors. The archaeological record of Mesopotamia is rich, and as such allows building mathematical agent-based models within which all different kinds of (human and non-human) agents "act" and "link" in building a computer-based society—which in this case would shape itself as the closely controlled irrigated landscapes of Mesopotamia. This contribution will show the results of first modelling efforts for early Mesopotamian agriculture. These results are based on close cooperation between

modelers, irrigation experts, and archaeologists. Therefore, this paper will also discuss how such cooperative efforts can be shaped in order to maximize productive outcomes.

Megan Lewis (Johns Hopkins University), "Genre vs. Topic: A Computer-Assisted Approach to Categorizing the Royal Inscriptions of Mesopotamia"
The abundant royal inscriptions of ancient Mesopotamia are traditionally grouped into genre categories such as "votive inscription" or "building inscription." However, a question that arises in their study is whether the classifications imposed upon them by modern scholars accurately reflect how they were thought about by the cultures that produced them. Topic modeling, a computer-based process that groups co-occurring terms in a textual corpus, may provide a method for addressing this concern. The semi-automated nature of the process helps to mitigate against modern assumptions about textual classification and thus can offer a productive approach to an emic understanding of the textual evidence.

David Danzig (New York University) and Michal Bacon (The New School), "Common Babylonian Religious Participation: Statistical Comparisons of Religious Theory and Practice"
Access to common Babylonian religion through texts is very limited. By comparing the dates of ordinary transactional texts with religious calendars, or hemerologies, we aim to gain entry to the realm of non-elite religious practice. Elaborating upon cultic calendars, hemerologies list days of the year with positive or negative associations, allowing adherents of Babylonian religion to best manage their activities and thereby maximize their success (Livingstone 2013). We compare over 1000 dated texts from the region of Nippur, central Babylonia, from the first millennium B.C.E. with select hemerologies in order to assess for adherence to the calendars. We look for potential difference in adherence by dividing results along socio-economic and ethnic lines, the latter based mainly on the language of the names of persons in the texts. This study follows on the heels of a similar one by Waerzeggers (2012), but uses a different data set, aiming to corroborate her results, while also varying some of her methodology to improve general results. In a more particular analysis regarding persons of one ethnic group, Judeans, we assess the religious development of Judaism in the context of the Neo-Babylonian and Persian empires. In search of potential adherence to the Judean/Jewish Sabbath, a crucial component of early Judaism (Hallo 1977), we compare the subset of dated texts related to Judeans to the seven possible series of seven-day-skips by means of statistical analysis (Rani and Sikka 2012). Visual representations of these two investigations will be developed to enhance understanding of our results.

Bradley Erickson (University of North Carolina at Chapel Hill), "Digital Cuneiform: The Use of 3D Technologies to Provide Access to Difficult-to-Reach Material"
Accessibility is a problem inherent to any field dealing with material culture. A scholar wishing to study a particular object must visit the location at which the object resides. If an instructor wishes to teach about a particular object, he or she must rely on two-dimensional photographs, drawings, or videos. Such media requires a person to imagine what the "real object" might look like in relation to its flat representation on a page or

screen. Recent progress in 3D modeling allows for the dissemination of difficult-to-access material. Objects can now be digitized and shared three-dimensionally through virtual means, such as augmented and virtual reality, and through physical means, such as replication with 3D printing. In this paper, I present a case study of the digitization and circulation of a difficult-to-access series of cuneiform tablets housed in the special collections library at the University of North Carolina at Chapel Hill. Six never-before-published cuneiform tablets were turned into 3D models via the process of photogrammetry. Those models were then made available online for open access to the material. Each model was also 3D printed to grant researchers, students, and the public access to the physicality, scale, and dimensionality of the object. Further, the digital models allowed for the production of new types of research data within cuneiform studies, such as Digital Elevation Model (DEM) images that measure the depth of incisions on each tablet. The project methodology, 3D models, and 3D prints will be presented and analyzed in this paper.

David Falk (University of Liverpool), "Improving Scholarship with Digital Humanities: Reconciling the 14 Years of Horemheb as a Case Study"
Unlike other technological advances, e.g. radiocarbon dating, which have self-evident utility, the open-ended nature of the digital humanities requires considerable reflection in order to elevate a project to where it can contribute meaningfully to scholarship. This paper will use the problem of late Dynasty 18 Egyptian chronology as a case study to show how digital humanities can make just such a contribution.

The problem under consideration involves the tabulation of wine dockets from the tomb of Horemheb (KV 57), which suggested that Horemheb reigned about 14 years. Lowering Horemheb's reign from 28 to 14 years creates a gap in chronology that must somehow be accounted. Current low chronologies cease to be consistent when the reign of the Horemheb is decreased to less than 21 years. Rita Gautschy attempts to account for the new reign-length of Horemheb by creating a high chronology for Dynasty 19 but proposes a 30-year gap between the New Kingdom and the Third Intermediate Period, an 18-year gap between Kurigalzu I and Kadashman-Enlil I, and a seven-year gap between Zababa-Shuma-Iddin and Marduk-Kabit-Ahheshu, making her chronology possible but implausible. This paper will demonstrate how *Groundhog: Chronology Test Laboratory* (a digital humanities project) was used to work out a plausible new solution to a real world problem and how the methodological approach used with this project could improve the digital humanities utility to scholarship.

6E. History of Archaeology II

CHAIR: Kevin M. McGeough (University of Lethbridge)

Joseph Greene (Harvard University), "Nelson Glueck, Deities, Dolphins, and the Archaeology of the Nabateans"
In Nabatean archaeology, Nelson Glueck is known for the excavation of a single site, Khirbet et-Tannur, which he later published in a general work with the enigmatic title *Deities and Dolphins* (1965). Previously, Glueck had conducted wide-ranging

archaeological surveys in Transjordan, during which he mapped hundreds of sites, many with Nabataean occupation, and which he afterwards published with admirable promptness in the *Annual of ASOR* (1934–1951). This included Tannur, where he dug in 1937 before moving on to Iron Age Tell el-Kheleifeh in 1938–1940. Despite his earlier engagement with Nabatean archaeology, Glueck never considered himself a "Nabataean archaeologist," nor what he wrote in *Deities and Dolphins* to be an "Archaeology of the Nabataeans." It was subtitled instead *The Story of the Nabateans*. Glueck was not a "Nabataean archaeologist" but rather a "biblical archaeologist" in the mold of his mentor and teacher, W. F. Albright. In *Deities and Dolphins*, Glueck undertook a synthesis of ancient texts and Nabataean archaeology, drawing on texts for the "story," supplementing it with "illustrations" from archaeology. Thus the book is a narrative history based on the principal ancient written sources for the Nabataeans, the geographer Strabo and the historian Josephus, and not an "Archaeology of the Nabateans." This does not, however, diminish Glueck's efforts to expand knowledge of the Nabataeans. With decades of hindsight made possible by the work of Glueck's successors who truly were Nabataean archaeologists, it is possible to judge fully and fairly Glueck's pioneering contributions to the archaeology of the Nabateans.

Gary Arbino (Gateway Seminary), "One Square, Three Digs: Excavating Hebrew Union College Field X at Gezer"
During the 2017 dig season, the Tandy Institute's Gezer excavation cleared and partially excavated an area previously dug by both Hebrew Union College and R. A. S. Macalister. One square, known as HUC Field X, lies along the southern edge of the tell, at the west end of Macalister's "Maccabean Castle," between HUC Fields II and III, and extending from the west side of Tandy Field W. When examined in light of all three digs, "Field X" reveals much. Using materials from Macalister, unpublished records from the HUC 1973 excavation, and the recently excavated materials from the Tandy dig, this paper shows how this one square illustrates both the nature of ancient Gezer and modern archaeological methodologies, and is a step toward the publication of the 1973 materials.

Eric L. Welch (University of Kentucky), "Ignorance is Bliss or Was Bliss Ignorant? Contextualizing the Culturally Biased Conclusions of the 1899 Palestine Exploration Fund Expedition to Tell es-Safi"
In 1899 F. J. Bliss and R. A. S. Macalister embarked on an archaeological campaign in the Shephelah under the auspices of the Palestine Exploration Fund. Among their targets was the formidable site of Tell es-Safi, a potential location for the ancient Philistine city of Gath. In his first report, Bliss devotes much of his attention to the remains of the ancient fortifications. Bliss concludes that the city was established in "pre-Israelite times" and likely fortified in the "Jewish Period." A careful examination of Bliss's own report demonstrates sufficient evidence to date the fortifications to an earlier time period. So what led Bliss to date the fortifications to the "Jewish Period"? Was this a case of biblical positivism or were the PEF excavators the victims of the prevailing cultural sentiments of the late 19th and early 20th centuries? This paper will explore the evidence presented by Bliss in the context of the modern excavations of Tell es-Safi's fortifications and examine his conclusions as a blend of biblical positivism and the cultural bias typical of science at the turn of the 20th century.

William Krieger (University of Rhode Island), "The Evolution of Theory and Method in Philistine Archaeology"
The goal of this presentation is to use recent excavations at two Philistine capital cities as a case study, showing how changes in the theoretical landscape have impacted (and have been impacted by) changing archaeological methods. The mid-20th century marked an important period in archaeological theory. Proponents claimed that a "new archaeology," founded in philosophy and the "hard" sciences, would transform the field's goals and methods. Indeed, by the 1970s many archaeological projects in Israel were self-consciously scientific; and methodologically, survey and excavation projects used new tools, employed a wide variety of specialists, and worked to collect scientifically reproducible data and results. However, by the 1990s, many archaeologists (and scientists in general) became disillusioned with the "new" (now processual) archaeology. Over the decades, initial expectations for a purely scientific archaeology were met by disappointment, disillusionment, and hostility. The original, extreme positions for and against processual archaeology have given way to a range of nuanced theoretical models more reflective of (and reflexive in regard to) archaeology's foci.

To explore the changing roles and goals of archaeological theory and practice, this presentation will focus primarily on two Philistine sites: the 1981–1996 project at Tel Miqne-Ekron, representing an excavation that grew in response to processualism; and the 1996–present excavations at Tell es-Safi/Gath, representing a variety of current approaches to archaeological theory. These digs' publications, as well as interviews with staff, will show how changing theoretical models shape our understanding of the (here Philistine) past.

Izaak J. de Hulster (University of Helsinki), "Female Contributions to Biblical Archaeology during the Victorian Era"
The 19th century is marked by significant changes in science, technology (including photography and steamers), archaeology and biblical studies, as well as society and politics (including Orientalism)—all these have marked the attitude towards and the exploration and description of Egypt and the Near East, often with a special interest in the Bible. This paper investigates the role of women in this development during the Victorian era, within the wider context of a few decades—with a special focus on Palestine. Although there seem to be no women directing excavations in Palestine (not including Hester Stanhope at Ashkelon, 1815), many women were involved in "opening up" this area by composing travel reports, contributing to botanics or ethnography, taking leading roles in fundraising, collecting (e.g., biblical manuscripts), and even by participating in excavations—surprisingly, many local women were active in larger projects (e.g., under Bliss at Tell el-Hesi). These examples of female contributions will be considered against the background of the 19th century, the image of women, and developments in archaeology, especially in Egypt (also a "Bible land") and Mesopotamia, and the women active in these regions, such as Jean Dieulafoy and Amelia Edwards, as they also contributed—partly or fully beyond their intentions—to the study of the historical context of the Bible.

6F. Landscapes of Settlement in the Ancient Near East

CHAIRS: Emily Hammer (University of Pennsylvania) and Jesse Casana (Dartmouth College)

Stephanie Rost (New York University) and Amir Hamdani (Durham University), "Umma Revisited"
The Ur III period (2012–2004 B.C.E.) is known for its exceptionally rich historical record—in particular on the workings of an early state economy. This sheer size of textual record stands in stark contrast to the lack of archaeological data from this period. This is particularly true for the Umma province, home to the largest and most coherent archive of economic records of the Ur III period. The surveys of Robert McCormick Adams and Hans-Joerg Nissen (1972) recorded only 19 sites dating to the Ur III period and the following Isin-Larsa period. The textual analysis by Piotr Steinkeller (2007), however, indicates that there were at least 110, and possibly 158, settlements in the Umma province. In a more recent survey Amir Hamdani and his team recorded a much greater number of archaeological sites in the Umma area. This paper will discuss the results of the first season of a five-year in-depth archaeological reconnaissance project in the region of the former Umma province. This project builds on the survey work conducted by Amir Hamdani and his team in 2003–2009 and will include a broad-scale remote sensing as well as a detailed intra-site analysis. The overarching goal of this project is to collect the necessary archaeological evidence to reconstruct the social and geographic context within which the Ur III economy operated. Funding was provided by the Mesopotamian Fellowship of the American School of Oriental Research.

Tina L. Greenfield (University of Saskatchewan), Augusta M. McMahon (University of Cambridge), Cameron A. Petrie (University of Cambridge), and Tamsin C. O'Connell (University of Cambridge), "Herd Animal Management and Mobility in Early Dynastic Sumer"
This paper presents the results of the first two phases of a project to assess domestic animal management strategies and potential intra- and inter-regional mobility in the third millennium B.C. in southern Mesopotamia. Through combined zooarchaeological and isotope analyses, we explore the varied diets and water intake of oxen, sheep, goats, and donkeys from Ur and Abu Salabikh. Integrated data from two contemporary sites allows for robust comparisons of both animal management strategies and economic behavior. Isotopic analysis can inform on intra- and inter-regional mobility, while the zooarchaeological data inform on status, consumption and ritual behavior. Initial results suggest a variety of feeding strategies, including optimal barley to sub-optimal weed/marsh resources. Drinking water sources for these animals also included optimal free-flowing and more stagnant water. Consumption patterns suggest varied preferences that potentially link to differential access to meat resources. These results allow a picture of the varied diets, resources, and micro-environments near southern Mesopotamian cities and the choices available to these cities' inhabitants.

Elise Jakoby Laugier (Dartmouth College), "Reconstructing Mesopotamian Land-Use Histories in Environmentally-Transitional Landscapes: Multi-Spectral Analysis in the Upper Diyala (Sirwan) Watershed (Kurdish Region, Iraq)"

Reconstructing land-use histories is important for understanding the relationship between people (their sites, institutions, and socio-political structures) and the environment in the past, including risk management strategies, sustainability practices, and the structure of agro-economic systems. Fourth-second millennium B.C.E. land-use features, such as canals, field boundaries, and trackways, are well documented from satellite imagery in both northern and southern Mesopotamia. However, smaller-scale land-use features in the more environmentally diverse landscapes, especially at the Mesopotamian-Zagros interface, are not as well-documented or discernable in historic CORONA or visible light spectrum satellite imagery. As part of the Sirwan (Upper Diyala) Regional Project (SRP), this study deployed a drone-mounted multispectral sensor with the aim of resolving traces of off-site land-use features at several single-period sites of the fourth-second millennia B.C.E. in both irrigated and rain-fed agricultural zones. Resolved remotely sensed land-use features provide direct evidence of synchronic and/or diachronic variation in agro-economic strategies as well as the suite of agricultural management practices necessary in transitional environmental zones. Results may also provide insight and allow future investigations into: 1) the degree to which agricultural practices are environmentally or socio-politically mediated; 2) the degree to which early settlements were making use of multiple agricultural strategies; and (3) the reliability and sustainability of agriculture in environmentally-diverse landscapes.

Andrea Squitieri (Ludwig-Maximilians-Universität München) and Mark Altaweel (University College London), "From Small States to Large Empires: Population Movement and Social Change in the Near East during the Age of Empires"

In the Near East, there is a pattern in the Bronze (3000–1200 B.C.E.) and Early Iron (ca. 1200 to the ninth/eighth centuries B.C.E.) Ages whereby city-states and small states were the political norm, punctuated by periods of larger territorial empires (e.g., Cline and Graham 2011). From about the seventh century B.C.E. onwards this pattern reversed, with large territorial empires becoming the norm, and very large cities, far larger than any seen earlier, developed. This is the Age of Empires. These changes were contemporary or nearly contemporary with social transformations such as the emergence of universal governments, the spread of coinage, more direct long-distance trade, shared artistic elements, increased use of common languages, more diverse cultural groups living together, and eventually the rise of universal religions, whose doctrine is intended to be relevant for all people. We argue that the persistence over many centuries of large empires led to the emergence of the new socio-political structures and institutions mentioned above, and the primary processes that enabled all of this were large-scale and long-distance population movements. Once disproportionate population concentrations in large centers or regions developed, along with a more rural countryside, the emerging social and political patterns were not easily reversed, as the established patterns became self-reinforcing. In this paper, we will present archaeological data and computer simulation analyses covering a period from the eighth century B.C.E. until the seventh century C.E. from an area spanning from Egypt to Central Asia to support our stated position.

Amy Karoll (University of California, Los Angeles), "Between Resilience and Collapse: Living through a Vulnerable System in the Early Bronze Age IV"
The Early Bronze Age IV (EB IV, ca. 2500–2000 B.C.E.) in the ancient Near East is characterized as a period of political and social change. It is posited that towards the end of the third millennium B.C.E., previous urban systems broke down and the majority of the population fled major archaeological sites. This change has often been called "collapse" and is thought to be a complete break from previous settlement systems. However, this oversimplifies the diverse motives for change. Geographic Information Systems (GIS) and survey data are utilized to diachronically analyze shifts in settlement location from the EB II-III (ca. 3000–2500 B.C.E.) through the MB I (ca. 2000–1600 B.C.E.). I argue that over this time the settlement systems, both from a large-scale landscape perspective of the entire Levant and from the perspective of small-scale case studies, were resilient. Resilience is the ability of a system to take in turbulences and experience alterations yet still maintain, in one form or another, the same purpose and basic arrangement. Social memory at the large scale allowed societies in the EB IV Near East to reorganize in such a way that they fit within already established systems and maintained some sense of stability.

Kathleen Bennallack (University of California, San Diego), "It's Not You, It's Me . . . Probably: Connections and Disconnections in the Archaeology of the Late Neolithic of the Southern Levant and Adjacent Regions"
Since the 1990s, research on the later Neolithic and early Chalcolithic periods of the southern Levant has surged forward; previously undocumented regions now have ongoing research projects, and older research is being reevaluated. Perceptions that the Late Neolithic of the southern Levant consisted mainly of a corridor between the Jordan Valley and eastern Mediterranean coast and the more "advanced" peoples in Syria are looking more and more like an artifact of research history rather than an accurate representation of the region at the time. Research in locales that are now arid or underwater is revealing that we have heretofore had a very incomplete picture. Because so much of this knowledge is recent, and because modern nation-state borders and geopolitical upheaval often make cross-border projects tricky if not impossible, many of these new research projects exist in isolation from each other. Though researchers of course are often aware of each other's projects, synthesizing what all of this might mean in aggregate has been difficult. This paper will include a brief mention of some of the major new insights from southern Levantine and northern Arabian late prehistoric archaeology and how they have changed our perceptions of the period—or should. It will then propose some possibilities for a more integrated way forward, including observed connections and discontinuities—not only vis-à-vis how we conceive of the peoples and materiality of the Late Neolithic of the southern Levant, but also for how we, the archaeologists who study them, communicate with one another.

6G. Gender in the Ancient Near East

CHAIRS: Stephanie M. Langin-Hooper (Southern Methodist University) and Regine Hunziker-Rodewald (University of Strasbourg)

Regine Hunziker-Rodewald (University of Strasbourg), "Going East—Philistine Female Figurines in Transjordan"
When recording the assemblage of anthropomorphic figurines from Iron Age sites in Philistia, the most often or even exclusively discussed topics are their typical style (merging Aegean/Cypriote and Phoenician/Canaanite elements) as well as the chronology of the basic types. Scholars agree that there are distinct Philistine iconographic peculiarities and common conceptions of human depictions. Some are even tempted to describe Philistia as an "ethnic enclave" (Ben-Shlomo 2010). Nevertheless, the presence of Philistine figurine types in Transjordan – in the Jordan Valley and in the Central Highlands – indicate that the correspondence of distribution of figurine and political boundaries is indeed superficial (Press 2012). Within the Jordanian corpus of female figurines from the Iron Age, the crudely modeled seated females represent real "foreign bodies" and attest cultural exchanges and migration processes that need to be examined in more detail. Consideration must also be given to the textual evidence. This paper offers an inventory, observations, and a provisional evaluation.

Megan Cifarelli (Manhattanville College), "Discovering Others at Hasanlu: Can We Find Non-Binary Gendered Individuals in the Archaeological Record?"
The site of Hasanlu, Iran, is best known for its destruction around 800 B.C.E. at the hands of the Urartian army. The period leading up to the destruction, Hasanlu IVb, was one of rapid change at the site, located where the burgeoning of the Urartian state to the north conflicted with the expansion of the Assyrian Empire from the west. Changes—which have been loosely attributed to "militarization"—are evident throughout Hasanlu, including in the approximately 100 burials from Period IVb on the site's lower mound. For example, for the first time at Hasanlu, the IVb burials include militaristic dress items, including weapons and armor. This paper explores the relationship between the osteologically determined biological sex of the human remains and the gendering of mortuary assemblages and artifacts. Based on durable dress items found in these burials, this paper challenges assumptions about binary sex and gender in antiquity, arguing that in Hasanlu Period IVb, dress played an active role in the construction of an "other" or third gender at the site.

Emily Liske (University of Tennessee) and <u>Erin Darby</u> (University of Tennessee), "'The Holy Brick of Birth-Giving': Reconstructing the 'Private Lives' of Ancient Near Eastern Women"
The bricks of birth are often described as a birthing tool used in ancient Near Eastern societies. Assertions about their function and usage are based on ancient religious texts, artifacts, and ethnographic studies. Upon closer investigation, terms in the religious texts are plagued by a lack of scholarly consensus. Although some artifacts are mentioned in scholarly discussions, the strength of the archaeological data is much weaker than the claims based upon them suggest. Finally, as is the case with many aspects of ancient female experience, a small number of ethnographic studies play an outsized role in

reconstructions of the function of birth bricks, despite the fact that the ethnographic studies are of questionable origin.

In order to assess the likelihood that birth bricks were used as a medical aid during labor, this paper will summarize related scholarship and then evaluate the available textual and archaeological sources, the central terminology, and commonly-cited ethnographic studies. The paper will then make suggestions about the actual function of the bricks based on modern clinical studies and analysis of the aforementioned sources. The paper will conclude that bricks may have served a ritual function during birth in the ancient Near East but are unlikely to have played a functional role during delivery. The paper will also generate some methodological reflections about the way scholars incorporate ethnographic comparanda in the reconstruction of ancient women's experiences.

Kathleen McCaffrey (Independent Researcher), "Spousal Abuse in Ancient Mesopotamia: Double Messaging in Gilgamesh 45–47"

M. Worthington has recently suggested a new reading of a line in the Gilgamesh Epic Flood Story that appears to communicate on two levels. This paper proposes that the sixth tablet also contains sections of dual-level messaging. Complex wordplay that communicates secretive aspects of Mesopotamian religion helps to explain why Assyrian scribes were reluctant to abandon the cuneiform writing system.

Limiting the focus to the three-line tale of Dumuzi, the first bridegroom in Gilgamesh's speech, several literary devices are identified that were used by Mesopotamian poets to create hidden words. The technical review will identify punning that employs homonyms, similarly articulated sounds, and altered word boundaries. The subtextual narrative reveals Gilgamesh's private thoughts about Ishtar's treatment of her first husband that he does not dare speak out loud to the goddess, referencing in particular Dumuzi's forced departure to the realm of the dead.

6H. Career Options for ASOR Members: The Academy and Beyond

CHAIRS: Susan Ackerman (Dartmouth College) and Emily Miller Bonney (California State University Fullerton)

H. Katharine Sheeler (National Cathedral School), "Those Who Can Teach: Have You Considered a Career in Secondary School Teaching?"

Having attended last year's session of this workshop, I was immediately struck that I work in "The Beyond." Is that where you reside? What drew you to this session? Last year's speakers were a dynamic group of individuals: a fellow at the Smithsonian, a State Department civil servant, a librarian, and a computer game developer. What we have in common is our academic training. What sets us apart is that we have followed a path outside of the academy. The interdisciplinary nature of archaeology may make you a great candidate for secondary school teaching. You can find a fulfilling career that satisfies your intellectual curiosity and academic ambition. I am a high school Latin

teacher with a BA in Latin from The College of William and Mary and an MAT in Latin from the University of Virginia. I have also worked actively as a field archaeologist for 30 years. Currently I am the sole Latinist on an Iron Age site. (You will have to come to the session to learn how that works.) What is your area of specialization? Is there a comparable component in a secondary school curriculum? Does your experience and skill set lend itself to classroom teaching? In this presentation I will share my experiences from the classroom and the field, and ask you to consider whether a career in teaching is where you are headed next.

Sarah Lepinski (National Endowment for the Humanities), "Tracking a Course beyond the Academy in Humanities: Grant-making"
Career trajectories in the academy have become increasingly complicated in recent decades, as institutional and administrative structures in higher education shift, impacting research and pedagogical practices and significantly altering traditional career opportunities for PhDs in the humanities. In this presentation, I focus on the implications of this changing terrain for my career path and continued scholarship—and discuss the manner in which I have adapted and applied skills acquired through academic and archaeological training, as well as professional experiences in museums, universities, and research institutes, beyond a traditional academic track. I will also describe how these experiences, including post-doc positions, inspired my search for alternative professional directions and how they continue to inform my current work supporting grant programs as a Senior Program Officer at the National Endowment for the Humanities

Gabriela Castro Gessner (Cornell University Library), "From Prehistorian to Librarian"
While I was completing my PhD in Near Eastern archaeology, I began working as a reference assistant in an academic library. At the time it made sense: my foundation in anthropology coupled with a dissertation on learning and the acquisition of skill were a strong basis for assisting students with their research needs. Despite being a good fit, I had no intention of becoming a librarian. Yet, interesting projects emerged, projects that benefited from my anthropological lens—how faculty conduct research, how students learn, how people use the library. Over time, the library engaged my expertise in greater and greater ways, culminating in my current role as a Research and Assessment Analyst. My responsibilities include designing research studies, knowledge of human subjects research, using applied anthropological methods, teaching, leading teams, working collaboratively, and presenting and publishing in academic fora. In this talk I focus on how I navigated from scholar to academic librarian and some of the benefits and/or drawbacks that someone making a similar transition might want to consider.

Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute) and Eric Kansa (Open Context, Alexandria Archive Institute), "Thriving and Surviving on the Edge"
In 2001, with newly-minted doctoral degrees in hand, we set out on alternative career pathways that led to the development of Open Context, an online data publishing platform for archaeology. In this presentation, we discuss the many factors that led to our choosing this path, the challenges we have faced along the way, and the benefits of doing

this work through an independent non-profit technology organization. We also discuss how this work is situated both in the academic world and in the ever-growing "alt-ac" community.

John Green (American Center of Oriental Research), "Careers in Museums and Cultural Heritage"
As a panelist, I intend to discuss a range of potential pathways and career trajectories in the museums and cultural heritage sector. Based on personal career experience in a range of museum settings, both academic and non-academic, this presentation will touch on aspects of professional growth and leadership in the museums sector, issues related to faculty and academic-related positions and the importance of academic engagement, the balancing of work and research time, and the creation of professional opportunities outside of academia. I am currently Associate Director at the American Center of Oriental Research, Amman, Jordan. I have over a decade of career experience in museums, including at the Ashmolean Museum (UK), the Oriental Institute of the University of Chicago, and the Corning Museum of Glass. My current work with ACOR involves a significant engagement with cultural heritage, archaeology, and museums, which provides a balance of work among hands-on experience, team-building, strategic planning, and administration.

6I. The Huqoq Excavation Project

CHAIR: Jodi Magness (University of North Carolina at Chapel Hill)

Jodi Magness (University of North Carolina at Chapel Hill), Shua Kisilevitz (Israel Antiquities Authority; Tel Aviv University), <u>Matthew Grey</u> (Brigham Young University), and Dennis Mizzi (University of Malta), "The 2017–2018 Excavations at Huqoq in Israel's Galilee"
Since 2011, Jodi Magness of the University of North Carolina at Chapel Hill has directed excavations in the ancient village of Huqoq in eastern Lower Galilee, assisted by Shua Kisilevitz of the Israel Antiquities Authority. The excavations have brought to light parts of the Jewish village of the fifth–sixth centuries and the Ottoman period Muslim village of Yakuk. In this paper, we report on the results of the 2017–2018 excavation seasons, which focused on a monumental, Late Roman (early fifth century) synagogue paved with extraordinary mosaics depicting an unparalleled series of biblical scenes. The synagogue was expanded and reused as a public building in the Middle Ages (12th–13th centuries), when the stylobates and pedestals were lifted one meter, and the aisles were paved with mosaics. This paper provides an overview of these recent discoveries, which shed new light on Galilean Jews and Judaism against the background of the rise and spread of Christianity.

Martin Wells (Austin College), "The Architecture of the Huqoq Synagogue and the Medieval Public Building"
Since 2011, the Huqoq Excavation Project has been excavating the remains of a monumental building in the hills northwest of the Sea of Galilee. Excavation over the last

seven seasons has revealed the entire east wall, and parts of the south and north walls, of a large synagogue building dating to the fifth century. The plan of the building uncovered to date indicates that it was a basilica, with the short walls on the north and south sides. A pi-shaped stylobate carried bases with columns decorated with painted vegetal designs, creating aisles on the east, north, and west sides. The plan, together with architectural fragments (decorated voussoirs, a Corinthian capital) recovered from later medieval constructions, are typical of Galilean type synagogues.

While the plan of the synagogue is clear, if not complete, the bigger mystery is the appearance and function of the even more monumental 12th–13th century building. The medieval builders repurposed much of the original architecture, using the north and east walls as foundations for the walls of their larger structure. They used the architectural elements of the synagogue, either dismantled or destroyed in an earthquake, for benches around the walls and to raise the level of the floor nearly a meter. They also appear to have reused the original stylobate and column bases to support a portico roof, leaving the center of the building open to the air. This paper will examine the architecture of the Late Roman synagogue and its transformation into this enigmatic medieval structure.

Shana O'Connell (Howard University), "The Painted Plaster and Stucco Decoration of the Huqoq Synagogue"
Due to its relatively delicate nature, most ancient wall painting survives in an advanced state of deterioration. In this respect the painted plaster of the Huqoq Synagogue is not exceptional. However, the large quantity of fragments at Huqoq, the existence of comparable material from a small number of ancient synagogues, and digital technology make the original appearance of the painted plaster at the synagogue within our reach. In my paper I discuss the remains of the painted plaster walls and columns at Huqoq as well as their phases of painting and re-painting.

At present the fragments do not indicate that the interior architecture featured any true figural representation. While it is too early to fully rule out the possibility of figural motifs in the painted plaster at Huqoq, I propose that at least two types of painting derive from the imitation of marble and vegetal motifs, respectively. Even if a complete reconstruction of the painted plaster at Huqoq is impossible, the quantity of material and its consistency offers an important corpus of evidence for the decor of fifth-century synagogues in the region and the tradition of ancient painting in Israel.

Karen Britt (Western Carolina University) and Ra'anan Boustan (Princeton University), "Recent Mosaic Discoveries from the Huqoq Synagogue: Emerging Themes and Shifting Paradigms"
Since 2011, the Huqoq Excavation Project has been bringing to light a monumental, Late Roman synagogue paved with stunning mosaics. As in previous seasons, the subject matter of the most recently uncovered mosaics departs in significant ways from the common repertoire of images found in other synagogues in the Galilee. After providing an overview of the mosaics discovered in 2017–2018, we offer preliminary observations concerning their relationship to the mosaics uncovered in previous seasons, as well as to comparable material from Galilee and beyond. We argue that the distinctive character of

the Huqoq mosaics challenges conventional scholarly assumptions concerning the limited range of imagery used in synagogue mosaics. In particular, the Huqoq synagogue contains a series of panels depicting narratives from the Hebrew Bible that seldom appear in other synagogue mosaics, considerably expanding the corpus of biblical scenes. The excavation is ongoing and therefore it would be premature to identify overarching programmatic principles for interpreting the Huqoq pavement. Nevertheless, a number of overlapping themes appear to recur in the panels thus far uncovered, most notably Israelite military victory over "foreign" rulers, the destructive or punitive power of the seas, and God's guiding hand in the fate of both the people of Israel and the rest of humanity. We suggest that these emerging themes shed light on some of the pressing concerns of the Jewish community at Huqoq, even as they also demonstrate the wide variation in attitudes, preferences, knowledge, and resources from one local community to another.

Daniel Schindler (Elon University), "The Pottery from the Huqoq Excavations and the Dating of Galilean Synagogues"
The ceramic assemblages from Area 2000 (the ancient village) and Area 3000 (the synagogue) indicate that Huqoq was a prosperous Jewish village, continuously occupied from at least the fourth century to the Early Islamic period, with a monumental synagogue building constructed in the early fifth century. The foundation of the Huqoq village and synagogue in the Late Roman period makes a significant contribution to the long-standing debate concerning the chronology of monumental synagogue buildings in Galilee, especially those excavated as part of the Meiron Excavation Project. Using published and unpublished coin and pottery data compiled from the sites of Horvat Shema and Gush Halav, the second part of this paper argues that the monumental synagogues at both sites were contemporary with the Huqoq synagogue. The paper concludes with a brief discussion of the potential implications on synagogue studies and our understanding of Jewish settlement in Late Roman Galilee.

7A. Ambiguity in the Ancient Near East: In-Between Spaces and Otherworldly Encounters I
CHAIRS: Lauren K. McCormick (Syracuse University) and Elizabeth A. Knott (New York University)

James Osborne (University of Chicago), "Ambiguous Nation-States: Diaspora and the Rise of the Syro-Anatolian Culture Complex"
One of the most salient features of the Iron Age Syro-Anatolian city-states is their resistance to ethnic and political characterization. Quite unlike their contemporaries in Israel and Assyria, the Syro-Anatolian city-states comprise multiple ethnolinguistic populations in a highly fluid political landscape. As a result, scholarship has not even settled on a term to label this culture. To quote anthropologist James Clifford, these polities and their subjects make for "complicated natives." This diversity has not prevented scholars from trying to fit the available data, especially the languages of royal inscriptions, into tidy historical reconstructions of nation-states and their ruling dynasties shifting from one discrete ethnic formation to another. In this paper, I draw on diaspora

theory to erode our association of ethnolinguistic communities and political formations, and to propose that the messiness and inherent ambiguity of our available data are not a problem to be solved or removed, but rather the very nature of the Syro-Anatolian city-states' identity. At the same time, despite accumulating evidence for ethnolinguistic diversity in this time and place, there is nevertheless an observable shared cultural expression that cuts across these polities, such that their populations should best be understand as a number of groups who were "living together, differently."

Heidi Fessler (Independent Scholar), "The Assyrian Political Network in the Southern Levant: Reconsidering Provincial Boundaries"
The notion that Assyria imposed a strict governmental system on the southern Levant is influenced by scholarship from the early 20th century that sought to demarcate organized Assyrian provincial territories. Forrer's (1920) seminal work presented a conjectural map of Assyrian provincial boundaries based primarily on textual sources from Assyrian military campaigns, town lists, and biblical references to geographical features. Despite a lack of definitive evidence regarding the Assyrian provincial configuration in the southern Levant, modern atlases and history books still perpetuate Forrer's proposal of concise territories. Recent archaeological and historical studies focusing on material culture during the invasion of the Assyrian Empire challenge the notion of a foreign occupation that sought to develop the economy and political structure of the southern Levant. My paper sheds light on these conflicting data in order to reconsider the character of the Assyrian Empire in the southern Levant and the current accepted concept of Assyrian provincial boundaries.

Mahri Leonard-Fleckman (College of the Holy Cross), "A Fresh Biblical Lens on the Iron Age Shephelah: Social Ambiguity versus Order in Judges-Samuel"
Textual studies of the Shephelah have yet to catch up with the archaeological portrait of identity ambiguity or "entanglement" in this Iron Age landscape of ancient Israel (Maeir and Hitchcock 2017). Biblical studies continue to view the Shephelah's social landscape simplistically from the categories presented in the final form of the Bible's narratives. Such categories (Philistine, Israelite, Judahite) are particularly apparent in the Shephelah wanderings of Samson (Judges 13–16) and David (1 Samuel 21–29, echoing into the surrounding material of 1–2 Samuel). Through a combined literary-historical and anthropological investigation of the textual evidence, this paper proposes that while the narratives' final forms conceptualize clear boundaries in social geography, earlier traditions within these texts present a social landscape that is ambiguous and hazy to the contemporary interpreter. Such haziness comes alive specifically through relationships, including Samson and his lady friends (Judges 14–16); and David and certain men of Gath: Achish (1 Samuel 27, 29); Obed-edom (2 Sam 6:9–15) and Ittai (2 Sam 15:18–22; 18:2). These relationships present a landscape without clear geographical boundaries or language barriers, in which people intermarry, create political alliances, and protect each other's most sacred religious objects. This evidence invites us to reexamine our own sense of classifications in the landscape of ancient Israel, to recognize that the biblical evidence itself demonstrates a desire to organize, classify, and border people that develops over time, and to take seriously the ramifications of the archaeological evidence as it helps to illuminate the multi-layered biblical portrait.

Andrew Danielson (University of California, Los Angeles), "*QWS,* Edom, and Identities: Exploring the Use of Theophoric Elements in Onomastica as Markers of Identity"

In the study of the Iron Age southern Levant, individuals are often assigned ethnic identities on the basis of theophoric elements within their names, a categorization that becomes a conflation of ethnicity, religious association, and "national" origins. These characterizations have seldom nuanced the inherent flaws in assigning these conflated types of identities, especially considering the diverse nature of socio-political organizations and cultic practices within the region. Using the southern Transjordanian region of Edom as a case study, this paper examines the long-held assumption of the theophoric element *qws* within onomastica as being an a priori marker of "ethnic" Edomites. Instead, I propose that the *qws* element is evidence of dominant religious practices tied to certain elite, rather than ethnic, ideals. Combining new advances in identity theory with spatial and temporal distributional analyses of the attestations of this theophoric element, this paper will track the use of *qws* to demonstrate its association with elite status. Additionally, by considering the forms of social and political organization within this region, together with cultic practices and the fundamental nature of many of these deities as tied to regional locales, this paper will properly situate *qws*, as well as the individuals bearing his name within particular communities of naming conventions. The distribution of these names will then be argued as markers of community affiliation, and, when found outside of their region of dominance, particularly in frontier contexts, as markers of difference rather than immediate indicators of ethnicity.

Michael Stahl (Converse College), "A Divine Ambiguity: Will the Real 'Lady of Byblos' Please Stand Up?"

Who was the "Lady of Byblos"? Generally, scholars have sought to answer this question by seeking out a proper name for the goddess — a pursuit perhaps more reflective of modern sensibilities regarding personhood and identity than ancient ones. However, this approach, which assumes that the divine designation "Lady of Byblos" is a title in lieu of the goddess's actual name, glosses over precisely what is most important about this divine identity. Regardless of whether the designation "Lady of Byblos" originated as a title of a more familiar goddess or is to be regarded as a proper name itself, this primary designation for the goddess highlights the deity's special relationship to the city of Byblos as a political community. As it so happens, the written evidence indicates that Byblos maintained a robust corporate political tradition, and that the "Lady of Byblos" was central to the city's collective political identity. Yet, first- and second-millennium sources also frequently privilege the goddess's relationship to king and palace. This paper therefore explores the goddess's relationship to Byblos's political economy as a case study for better conceptualizing, through the lens of religion, the complex range of potential interactions in the ancient world between decentralized, collaborative political traditions and royal, centralizing political strategies as parts of a single social-political system. In this way, the "Lady of Byblos" may stand up not only as an integral member of Byblos's social order, but also as an example of the fundamental role that deities played in shaping ancient political realities.

Naphtali Meshel (The Hebrew University of Jerusalem), "Identifying Intentional Ambiguity"
Particular genres of ancient Near Eastern literature including the Hebrew Bible are characterized by intense ambiguity. In particular, divination, wisdom literature, and erotic poetry thrive on a special type of ambiguity—"double-edged words"—in which a single graphic or phonetic sequence is employed to convey a message and its precise opposite, at one and the same time. However, it is often difficult to demonstrate that a specific case of "double-edged wording" is in fact intentional rather than a product of an eager reader's over-interpretation.

This paper offers three criteria for identifying intentionality in the formulation of ambiguous texts, based on examples from biblical texts: 1) ungrammaticality: Sometimes an author is forced to use an ungrammatical form in order to preserve two opposite meanings. This happens when smooth grammar could have been achieved only at the price of losing the ambiguity; 2) Multiple representation: At times the same exact ambiguity is evidenced in identical contexts, but in different words and by means of different sentence-structures (occasionally even in different languages, e.g., Hebrew and Aramaic); when it can be demonstrated that coincidence is highly unlikely, the argument for intentional crafting is strong; and 3) Leo Strauss and the Art of Writing: When the author addresses an issue that was demonstrably contentious (from the author's perspective), potentially subversive formulations are particularly suspect. The intersection of two or three of these criteria in a single text strongly suggests intentionality.

7B. Archaeology of Cyprus II
CHAIR: Nancy Serwint (Arizona State University)

Zuzana Chovanec (Institute of Archaeology, Slovak Academy of Sciences), "The Symbolic Landscape of Prehistoric Bronze Age Cyprus as Represented in Figural Representation in Ritual Vessels: A New Interpretation"
The use of symbols is fundamental to human communication and underpins societal and environmental relationships. An archaeological examination of this phenomenon may focus on the distribution, context, and transformation of symbols in a ritual space that is marked by physical and metaphysical boundaries, functional contradictions, and multiple levels of meaning. As such, detailed depictions of the interaction of animals, people, and structures on specialized ceramic vessels are less likely to represent the mundane routines of daily life, but rather encapsulate, as Geertz described, "an organized collection of meanings" conveyed through "public symbols and actions." This paper explores these patterns of human behavior and meaning-making by considering the distribution of symbols in the repertoire of figural representations from the Prehistoric Bronze Age in Cyprus and argues that the iconography of these ritual objects constitutes a dynamic symbolic system.

Thierry Petit (Université Laval), "The First 'Ruler's Dwelling' in Cyprus? A Pre-Palatial Building on the Acropolis of Amathus"
Until recently the first (monumental) phase of the palace of Amathus, dated from ca. 800 B.C.E., was considered the first human building on the acropolis of the city. In 2006 and 2009, however, beneath the floor, two architectural structures were found, as well as a large quantity of local and imported pottery (including Euboean pottery) from the late 11th to 9th centuries B.C.E. C14 analysis confirmed this chronology. Since the material obviously belonged to an elite family of the Iron Age, this very first architectural construction could belong to a so-called "Ruler's Dwelling" (A. Mazarakis-Ainian). It would be the first evidence of such a building in Cyprus during the Cypriot "Dark Ages." I shall study the relationship between this pre-palatial phase and the first monumental building, which followed it on the same spot, and I shall also consider the meaning of such a discovery in the actual debate on the origins of the Cypriot city-kingdoms within the eastern Mediterranean context.

Nassos Papalexandrou (University of Texas at Austin), "Tomb 79 Salamis, Cyprus: The Griffin Cauldron in Its Local, Near Eastern, and Mediterranean Context"
Since its discovery, the griffin cauldron deposited outside the burial chamber of "royal" Tomb 79, Salamis, Cyprus has always stood out as an exceptional object. Its type has no parallels in Cyprus before or after the date of Tomb 79 (ca. 700 B.C.E.) and is hitherto unparalleled in the Near East, in Egypt, and in the Levant. Moreover, the arrangement of its figurative elements (hollow cast griffin protomes and hammered human-headed, bifacial birds or "sirens") has close comparanda in the Aegean, especially in a series of cauldrons produced there for deposition in internationally networked sanctuaries like the Heraion of Samos or Olympia. However, the Cyprus griffins and human-headed birds are technically and stylistically divergent from the standard Aegean series. These ambivalent comparanda invite attention to the nature of the Mediterranean interconnections of the patron of Tomb 79. It is, therefore, worth exploring in detail the materiality and visuality of the griffin cauldron of Tomb 79 and the implicit or explicit motivations behind the choice of exotic forms, technologies, and the practical or ritual functions this cauldron exhibits. This paper argues that the patron of Tomb 79 was fully cognizant of Aegean griffin cauldrons and dictated the type to bronze smiths practically acculturated to Near Eastern techniques and modes of bronze working but without first-hand knowledge of the Aegean prototypes they were producing. If this hypothesis is true, its implications for our standard models regarding the unidirectional flow of Near Eastern ideas in the Early Iron Age cannot be emphasized enough.

Georgia Bonny Bazemore (Eastern Washington University), "Aphrodite Aside: The Sanctuary of the Male Deity and the Religion of the Ancient Paphian Kingdom"
Homer and the authors of Greek religious tradition appointed Paphos in Cyprus as the birthplace and home of their goddess, Aphrodite. In addition to the famous sanctuary of Aphrodite, the Paphian city-kingdom was host to a wealthy and powerful cult of a male deity. His sanctuary complex is located 6 km to the east of the city on a hilltop known today as *Lingrin tou Dhigeni*, in the Rantidi State Forest. Accidents of discovery prevented this site from having been identified by the great 19th century archaeological surveys of Cesnola and the British Museum in this area. Discovery of this site in 1910

resulted in hastily-conducted excavations whose results have yet to be published, with the single exception of a volume of syllabic inscriptions recovered by T.B. Mitford.

The Rantidi Forest Excavations have conducted multiple seasons of survey and excavation in and around the sanctuary of the male god. We are in the process of the final publication of our finds, as well as the results of the 1910 excavations. This paper will provide a brief and very general overview of the layout and contents of this sanctuary, including proposed reconstructions. An extensive necropolis lies within and surrounds the sanctuary complex and includes areas of ritual activity. The rock cut tombs of the necropolis are observed to intermingle with oracular practice. This paper is among the initial efforts to bring to this important sanctuary, and its rituals, the academic attention it deserves.

Laura Gagne (Carleton University), "Silencing the God Who Speaks: The Destruction of the Sanctuary at *Lingrin tou Digheni*"
The Sanctuary at *Lingrin tou Digheni* near Paphos in Cyprus was dedicated to an oracular god known in a single inscription from the site as "The God Who Speaks." The earliest excavations at the site were carried out by Robert Zahn, who claimed the site had an evil spirit causing him to abandon his work and never return. He found thousands of fragments of terracotta statues, server of them life-sized. Our more recent excavations have turned up hundreds more. They are made of a coarse, local fabric and slipped or painted perhaps in imitation of limestone statues. They are predominantly male and may be representations of the deity or worshippers. The closest parallel in style are the statues found at Ayia Irini in the Morphou Bay area, dedicated to an unknown god. Unlike those statues, which were found complete and nearly complete in situ around an altar, those at *Lingrin tou Digheni* had been destroyed completely and their remains scattered about the site.

This paper examines the nature of the destruction of the statues and their dispersal over the site. Is it possible that rather than simple breakage resulting from the destruction of the temple, there might have been a ritual murder of the oracular god by the attacking Kinyrads of Paphos in their attempt to erase the memory of the Tamyrad defenders and their god? After the destruction of *Lingrin tou Digheni*, the Paphian kings built their own sanctuary and usurped the power, oracular functions, and worship for their own cult.

7C. Daily Life in Ancient Judah in the Iron II: Papers in Honor of Professor Oded Borowski

CHAIRS: Zev Farber (Project TABS [Torah and Biblical Scholarship]—TheTorah.com), Jacob L. Wright (Emory University), and Cynthia Shafer-Elliott (William Jessup University)

Yuval Gadot (Tel Aviv University) "Using OSL for Dating the Advent of Dry Farming Terraces in the Highlands of Jerusalem"

The terracing of Israel's highlands to conduct dry farming is among Oded Borowski's diverse fields of research. As much as 60 percent of Israel's highlands are landscaped with precisely engineered, stone-tiered terraces built by man. Terracing operations had a major impact on the landscape and constituted an important technological innovation in the history of agriculture; it transformed valleys and slopes into flat plots while reducing soil erosion, increasing filtration, and dramatically expanding the carrying capacity of the land. It is therefore not surprising that, in the early days of archaeological research, terracing and the Israelite settlement of the last two centuries of the second millennium B.C.E. (the Iron Age I) were coupled together. In this paper I wish to present the results of an ongoing research project, entitled "The Formation of Terraced Landscapes in the Judean Highlands." It is a comprehensive terrace dating venture involving the use of optically stimulated luminescence (OSL) dating of terrace walls and other agricultural features that are related to human impact on the landscape. Specifically, I wish to trace the socio-economic and historical contexts in which terraces spread over the rural periphery of Jerusalem, a thriving political, economic, and religious center for four millennia, as well as later chapters of terrace construction. Whereas the current paradigm correlates the population increase and extensive terracing in general and their association with the settlement of the Israelites during the Iron Age I specifically, the results presented here challenge this consensus.

Jennie Ebeling (University of Evansville), "Circles on Plans: New Insights into Oven Locations in Iron Age Houses"
Clay ovens are found in diverse locations in and around Iron Age domestic structures, including interior rooms, entryways, and outdoor spaces; excavated examples associated with the four-room houses at eighth-century B.C.E. Tel Halif bear witness to this variability. Oven researchers have used ethnographic sources from the 19th and early 20th centuries and more recent ethnographic and ethnoarchaeological studies in the Middle East to explain the spatial locations of ancient clay ovens. These explanations primarily relate to comfort, such as using indoor ovens in the winter and outdoor ovens in the summer, and accessibility, such as locating ovens shared by multiple households in outdoor spaces. Although these "common sense" explanations are supported by ethnographic evidence, they often fail to consider the agency of those who made and used these essential tools of daily life. In this presentation, I will use insights gleaned from recent ethnographic and ethnoarchaeological studies of clay ovens in the southern Levant to argue that generalizing about domestic installations in the Iron Age—particularly those associated with women—hinders our understanding of the creativity, intentionality, and resourcefulness of the individuals who made and used them.

Cynthia Shafer-Elliott (William Jessup University), "'He Shall Eat Curds and Honey': Food and Feasting in Late Eighth Century Judah"
Professor Oded Borowski has spent his career focusing on the daily life of Iron Age Israel and Judah. In honor of his significant contribution to the study of food, this paper will utilize both textual sources and material culture to provide an overview of how meals were prepared in Iron Age II Judah. More specifically, texts from the Hebrew Bible and the methodology of household archaeology are employed to highlight the everyday activity of food preparation including diet, cooking ovens, cooking pots, and cooking

techniques. The same ingredients, cooking techniques, and technology were also used for special meals, or feasts, but the added element of occasion is also discussed.

Avraham Faust (Bar-Ilan University), "Funnels as Indicators of Iron Age Storage Activities"
Oded Borowski has contributed substantially to the study of daily life in ancient Israel, and in this paper, I would like to elaborate one aspect of what are usually viewed as mundane, daily activities. Although literally hundreds of houses have been excavated in ancient Israel, it is not easy to use the finds unearthed in them to study past spatial activities. While modern excavations allow high resolution reconstructions, due to the costs involved only a limited number of houses are excavated today in their entirety, and the recording of the hundreds of houses excavated before the 1960s was partial and much of the information (e.g., botanical remains, bones, charred material, etc.) was not even collected. Still, some of the older reports carefully recorded the distribution of macro-artifacts, mainly pottery, and a concentration of storage vessels, for example, may indicate that a room served for storage. The products stored, however, cannot usually be determined. In this paper I would like to suggest that funnels' volume and form may indicate whether they funneled dry products, liquids, or precious fluids, and can therefore identify specialized activities even in older reports, when other lines of evidence are lacking.

7D. What's in a Name? Re-assessing the Oriental in the American Schools of Oriental Research (Workshop)

CHAIRS: Danielle Fatkin (Knox College) and Kathleen Bennallack (University of California, San Diego)

In May 2016, the federal government passed a law eliminating all references to "Negros" and "Orientals" in federal laws and official governmental documents, replacing them instead with more accurate and up-to-date descriptors including "African-American" and "Asian-American." It did so because the terms previously used were explicitly racist. Prompted by the change in federal law, this workshop evaluates the challenge posed to ASOR by the word "Oriental" in the organization's name and represents several members' efforts to wrestle with the challenge posed by the racist history of the disciplines that gave rise to our organization. Because of the complex and sensitive nature of this work, participants have pre-circulated papers and will meet as a workshop, allowing for greater nuance of presentation and more time for discussion. Organizers hope that this format will also give rise to a robust discussion of ASOR's name among the membership and invite all interested members to attend the workshop. Papers submitted by Melissa Kutner, Danielle Fatkin, Ian Jones, Kathleen Bennallack, and Michael Homan will be pre-circulated after October 15 via Google Drive: http://bit.ly/ASOR2018Orientalism. During the workshop, they will preside as a panel for a discussion. Susan Ackerman will act as a discussant during the panel and will present information relevant to the recent rebranding of ASOR.

During the general discussion, the panelists will organize breakout groups and ask the attending members to respond to the preceding discussion and also to consider the issues raised by the papers. Topics will include: Should ASOR keep its name? If yes, how do we address the issue of people who view our organization as racist because of our name? If no, what do we do next? Do members have suggestions for another name? What do we do with publications (AASOR, BASOR, etc)? How do we do more to open our discipline to students of color? Should ASOR have a role advocating with the government regarding citizens from the countries in which ASOR works (both currently and historically)?

The workshop organizers invite all ASOR members interested in participating in this discussion about ASOR's name to join us.

7E. History of Archaeology III

CHAIR: Kevin M. McGeough (University of Lethbridge)

Mark Wilson (Asia Minor Research Center), "Alexander Svoboda and his Early Archaeological Photography of the Seven Churches"
Five recent publications have documented the importance of photographs in preserving the archaeological heritage of Turkey and the Ottoman Empire. Without diminishing the significance of other early photographers, another figure must be discussed who was among the first photographers of archaeological sites in Turkey. European interest in biblical sites had encouraged Thomas Allom in 1839 to publish his gravures of the Seven Churches. With the invention of photography, Alexander Svoboda in the 1860s began to photograph the ruins of western Turkey, particularly the Seven Churches. In 1869 he published *The Seven Churches with Twenty Full-Page Photographs, Taken On the Spot, Historical Notes, and Itinerary.* At the conclusion of the volume Svoboda advertised the availability of an additional 62 photographs for sale. The importance of this volume is its inclusion in the *Incunabula of British Photographic Literature* compiled by noted historian of photography, Helmut Gernsheim. Svoboda's importance is likewise signified by his inclusion in a list of 22 photographers on the Getty Research Institute's webpage of Early Photographers in Greece and the Mediterranean. This paper introduces Svoboda, his work, and his legacy of archaeological photography.

Rannfrid Thelle (Wichita State University), "The Babylon Excavation 1899–1917: Early Contribution to Historiography"
This paper examines the immediate impact of the excavation of Babylon on historiography. By the time the German expedition to Babylon was underway, the first histories of ancient Babylonia had already been written. Substantial amounts of cuneiform tablets from Assyria, Nippur, and the Babylon region had been available for some time already as well. By examining some of the first publications to incorporate mention of architectural and material culture remains from Babylon in portrayals of the history of the city of Babylon (e.g. L. W. King's *A History of Babylon from the Foundations of the Monarchy to the Persian Conquest*, 1915; F. Delitzsch's *Mehr Licht:*

Die bedeutsamsten Ergebnisse der babylonisch-assyrischen Grabungen, 1907; and even H. Gunkel's *Israel und Babylonien: Der Einfluss Babyloniens auf die Israelitische Religion*, 1904), I chart the earliest stages of the impact of archaeological study on the discipline of history.

Michael Ellingsen (Independent Scholar), "Two Mid-19th Century Scholarly Squabbles: The Cases of the Eshmunazar Sarcophagus and of Kadesh-on-the-Orontes"
This paper examines mid-19th century episodes of scholarly squabbling amid the developing field of archaeology, tracing the trajectory of archaeological thought by means of two representative case studies: first, the discovery of the Eshmunazar sarcophagus; and second, the lengthy, quirky process of the identification of Kadesh-on-the-Orontes. A unifying thread between the two stories may be found in the lesser-known, Beirut-based scholar and missionary-explorer William McClure Thomson (1806–1894), on whom relatively little work has been done.

The paper offers three major takeaways. First, it argues that these two episodes serve admirably to demonstrate the sort of curiosity, squabbling, and progress that marked the overall advancement of the field (and fieldwork) during the time in question and before much formal excavation occurred. Second, the paper makes a brief case for Thomson's life and work as highly representative of mid-century archaeological interest and development in the burgeoning discipline of archaeology. Finally, the paper alleges that Edward Robinson, of *Biblical Researches* fame, redacted some of Thomson's work when citing it in order to advance his own identification of Tell Nebi Mend over Thomson's. The paper explores some of the ironic implications of this odd twist.

Lisa Cooper (University of British Columbia), "Nameless, Voiceless, yet Indispensable: Excavation Workers on Archaeological Projects in Mesopotamia in the Late Nineteenth and Early Twentieth centuries"
By the late 19th and early 20th centuries, archaeology in Mesopotamia had become a large-scale enterprise. Its massive earth-moving projects sought to uncover large areas of occupation defined by monumental public buildings and striking artifacts that best reflected the ancient cultures of the Sumerians, Babylonians, and Assyrians. The findings of these ambitious projects were often published in lavish excavation reports that provided descriptions, illustrations, plans. and photographs of the ancient remains, as well as showcasing the personalities and expertise of the Western excavators who oversaw the work. What is often missing from these volumes, as well as from other reports of such archaeological ventures, however, are descriptions and acknowledgement of the contributions of the scores or even hundreds of workers who were employed to excavate these Mesopotamian sites. It is only with occasional photographs taken in the midst of excavations that one catches glimpses of these nameless, voiceless workers, and through these images, together with other sources, gains some appreciation for the mammoth labor they undertook to uncover and reconstruct the past. This new project seeks to probe the identity of workers from English and American archaeological projects of the late 19th and early 20th centuries, taking into consideration a variety of issues such as the labor in which they were engaged, training, organization, salaries, their interaction

with the Western archaeologists, and most significantly, their contribution to the production of knowledge about the past.

7F. The Archaeology of the Kurdistan Region of Iraq I

CHAIR: Jason Ur (Harvard University)

Andrea Squitieri (Ludwig-Maximilians-Universität München), Karen Radner (Ludwig-Maximilians-Universität München), and Janoscha Kreppner (Ludwig-Maximilians-Universität München), "The Peshdar Plain Project 2015–2017: Investigating a Major Assyrian Settlement on the Empire's Eastern Frontier (Kurdistan Region of Iraq)"
Since 2015 the Peshdar Plain Project, directed by Karen Radner (Ludwig-Maximilians-Universität München) and conducted under the auspices of the Sulaymaniyah Antiquities Directorate, has completed five excavation campaigns at the "Dinka Settlement Complex," a major Neo-Assyrian site in the Bora Plain (Peshdar district, Kurdistan Region of Iraq). The project was inaugurated after the chance find of a Neo-Assyrian tablet dated to 725 B.C. at Qalat-i Dinka, indicating that the area was part of the Border March of the Palace Herald that was created in the ninth century B.C. to guard access along the Lesser Zab to the empire's heartland (now confirmed by several C14 dates). The results of the geophysical survey, the surface pottery survey, and excavations indicate that the Neo-Assyrian "Dinka Settlement Complex" extended over an area of ca. 60 ha, including the seemingly distinct sites of Gird-i Bazar and Qalat-i Dinka. The ancient *qanat* irrigation system, still partially in use in the Bora Plain, may have been created to provide for this settlement. So far, we have exposed more than 1000 m^2 of buildings, streets, and production areas. Bioarchaeological and material data provide rich new information for many aspects of life on the eastern frontier of the Assyrian empire. The site also provides us with the welcome opportunity to synchronize Assyrian and Western Iranian pottery cultures

Mehrnoush Soroush (Harvard University) and Jason Ur (Harvard University), "Irrigating a Dry-Farmed Plain: The Qanat Landscape of Erbil"
This paper presents the preliminary results of research on the *karez* (*qanat*) infrastructure of the Erbil Plain. This study is defined within the broader framework of Erbil Plain Archaeological Survey (EPAS). The goal is to understand the development of irrigation and land-use during later historical periods. The paper will present the methodology of mapping the *karez* landscape of Erbil and will discuss the characteristics of *karez* technology in Erbil. Unlike the typical *karez* landscapes, the Erbil plain was historically a dry-farming plain. Prior to development of this infrastructure, irrigation agriculture was an imperial endeavor best documented during the Neo-Assyrian period. Moreover, the *karez* infrastructure of Erbil includes both the typical system fed from subterranean water sources and an uncommon system that taps surface water in gullies.

Steve Renette (University of Pennsylvania) and Jessica Giraud (Institut Français du Proche-Orient, Paris), "Bazyan Basin Survey Report: Documenting Threatened Archaeological Heritage in the Zagros Foothills of Iraqi Kurdistan"

With the support of ASOR's Mesopotamian Fellowship, the Kani Shaie Archaeological Project teamed up with Jessica Giraud and the Archaeological Survey of the Sulaimaniyah Governorate to conduct the first systematic archaeological survey of the Bazyan Basin. This small intermontane valley (N 35º 33' 29'', E 45º 10' 35'') covers ca. 350 km^2 and stretches along the major road that connects Kirkuk with Sulaimaniyah, the Shahrizor Plain, and farther east into the Zagros Mountains. The first archaeological exploration of this valley took place during the 1950s when Bruce Howe excavated Epipaleolithic remains at the cave site of Pale Gawra as part of the Oriental Institute's Iraq-Jarmo Project. Since 2013, an international team has been conducting excavations at the Late Chalcolithic to Early Bronze Age site of Kani Shaie located in the central part of the valley. During the course of these excavations, it became clear that the archaeological heritage in the region was under urgent threat from industrial activities (e.g. cement factories), intensive agricultural exploitation (especially greenhouses), and demographic expansion due to economic growth. In response, during June-July 2018, a collaborative survey team aimed to document the rapidly disappearing archaeological heritage of the Bazyan Basin and reconstruct its settlement history from the Neolithic to the late Ottoman period. In this paper, we present preliminary results from this survey project that contextualizes the position of the Bazyan Basin within the history of Iraqi Kurdistan as gleaned from the results of the recent growth in archaeological fieldwork in the region.

Hasan Qasim (Directorate of Antiquities, Dohuk Governorate, Kurdistan Region of Iraq), "A New Neo-Assyrian Palace at Girê Sêmêl: Rescue Excavations in the Dohuk Governorate, Kurdistan Region of Iraq"

Rescue excavations conducted by the Directorate of Antiquities of Dohuk at the site Girê Sêmêl in 2011 have revealed unexpected evidence of the site's important history. Girê Sêmêl is a small mound (3.2 ha) located about 16 km to the west of the city of Dohuk along the modern highway leading to Zakho, and was settled almost continuously from the Halaf period to the Islamic period. During the time of Saddam Hussein's regime, Sêmêl became a military site and on its summit a large communication tower was erected, the foundations of which destroyed part of the mound. Today the expansion of the town is seriously endangering the archaeological site and modern houses already partly cover it. Salvage excavations have partially brought to light the courtyard of a Neo-Assyrian palace paved with baked bricks and large gypsum ("Mosul Marble") flagstones. A reception room with the remains of parallel rails, probably used to move a mobile brazier, opened onto the paved courtyard. An inscribed baked brick mentions a palace built at the site by Shalmaneser III (859–824 B.C.). Several terracotta models and cylinder seals were also found in the building.

7G. Creative Pedagogies for Teaching the Ancient Near East and Egypt I

CHAIRS: Marta Ameri (Colby College) and Helen M. Dixon (Wofford College)

Stephanie M. Langin-Hooper (Southern Methodist University), "Hands-On Projects, Experiential Learning, and High Enrollments: Making the Past Come Alive for 150 Undergrads"

Recent trends in undergraduate teaching seem to be pulling instructors in opposing directions. On the one hand, we are encouraged to think outside the box, not relying on stand-and-deliver lectures but turning instead to dynamic, interactive pedagogy to keep students engaged. Yet, pulling in the opposite direction are the current economic forces at play in so many universities, where humanities departments are encouraged to justify their existence by enrolling large numbers of students.

This paper will give some real-world examples of how I have navigated this delicate balance. Using hands-on multi-sensory projects, such as eating Sumerian cookies, dressing like a Greek statue, and drinking from an Etruscan bowl, I make the past "come to life" in my introductory art history classes, which enroll 150 students. As I share do-it-yourself instructions for some of the projects, I will also reflect on the need to engage a new generation of students to see our disciplines as valuable, in a modern era that does not always take for granted the importance of studying the past.

Lissette Jiménez (San Francisco State University), "Teaching through Objects: Using Museum Collections in Egyptian Art and Museum Studies Courses"

Object-based learning helps to stimulate thought and reflection by allowing students to actively engage with museum collections. These objects, in this case ancient Egyptian artifacts, can inform and motivate students with varying degrees of knowledge and specialization in ancient Egyptian art and archaeology. This paper will present two case studies that exemplify the benefits of using museum collections to create more immersive class experiences. The first case study examines how ancient Egyptian objects in the Phoebe A. Hearst Museum of Anthropology at the University of California, Berkeley were used in an Ancient Egyptian Art course to develop investigative skills among students specializing in ancient studies. The second case study discusses how ancient Egyptian objects in the Global Museum at San Francisco State University were used in a Museum Education course to encourage non-specializing students to construct learning on their own. The outcome of such classroom interactions is the creation of knowledge and meaningful experiences that inspire continued engagement with museums and ancient Egyptian culture. This paper will also address the challenges of teaching with museum collections and alternative experiential methods when museum collections are not available for class use.

Jacob Damm (University of California, Los Angeles) and Nadia Ben-Marzouk (University of California, Los Angeles), "Education as Outreach: Redefining the Role of the Undergraduate Classroom"

Given current higher education trends, almost every seat in the Ancient Near Eastern Studies classroom is occupied by non-major students satisfying general education requirements. These transient students should not be seen as representative of the plight of our discipline, but rather an opportunity for public outreach. For many of them, our course will be their only exposure to humanistic and social scientific study of the ancient world, and as such we must present them with an accessible, dynamic, and engaging

curriculum primed to let them explore the current relevance of the past. The traditional model of instruction, a master narrative of facts delivered by the lecturer-as-sage, is unsuited to the task. That said, a reform-minded instructor will find precious few pedagogical resources within our discipline to redesign class and curriculum—even if they extend their search to sister fields. As such, this paper will first explore classroom-tested methods for the development of a critical and engaged pedagogy that both explores ancient Near Eastern subject matter and uses it as a vehicle to explore broader themes of humanistic relevance. It will then present a discussion on the assignation of a multimodal project at the University of California, Los Angeles—an outward-facing, student-generated podcast series. The assignment was designed to engage students by charging them with the responsibility of educating the public on a topic from the past that has relevance for the present. Thus, the goal of public outreach comes full circle, and the students become active participants in the creation and distribution of knowledge about the ancient Near East.

7H. Archaeology and History of Feasting and Foodways

CHAIRS: Elizabeth Arnold (Grand Valley State University), Deirdre Fulton (Baylor University), and Margaret Cohen (W. F. Albright Institute of Archaeological Research)

Louise Bertini (American Research Center in Egypt), "'Classic' Critters in the Food Economy: Ptolemaic/Roman Faunal Assemblages from Egypt's Western Nile Delta"
With the start of Ptolemaic rule in Egypt and the construction of a new capital city at Alexandria, political and economic changes took place throughout the country, especially in the western Nile Delta region. One of the ways that we can look at these changes is through faunal analysis of archaeological remains of the domestic animals raised in the countryside as a result of the demand for new supporting markets. Three of these newly established cities are Marea, Kom al-Ahmer and Kom Wasit, with occupational evidence beginning in 315 B.C. up through the seventh century A.D. These sites provide a unique opportunity to look at the relative significance of different animals within the food economy of each site and how they compare to faunal assemblages of other sites of a similar time period in the western Delta. The preliminary results of analysis show different patterns of animal exploitation, accounting for part of the economic wealth of the individual site as well as that of the larger, regional economic structure.

Kara Larson (Mississippi State University), Elizabeth Arnold (Grand Valley State University), and James Hardin (Mississippi State University), "Using Stable Isotope Analyses to Examine Foodways at Iron Age II Khirbet Summeily"
Recent excavations at Khirbet Summeily suggest that the site was integrated into an intraregional and international economic and/or political system. Khirbet Summeily is an Iron Age II site located northwest of Tell el-Hesi, and excavations have revealed an administrative structure with an adjoining ritual space. Current interpretations by the excavators suggest that the structure was utilized as an administrative outpost that engaged in regional exchange networks with possible connections as far as Egypt (based on recovered artifacts). Thus far, the faunal remains have been identified and recorded in the site database, but no further analysis has been conducted. This paper will present

preliminary isotopic analysis (carbon, oxygen, and strontium) of the domestic animal teeth (ovicaprines, cattle, and equids) to examine animal diet, mobility, and management patterns. For domestic animals, these are all characteristics that are controlled by those who keep and manage these animals, in this case the administrative center. Here, animal remains are contextualized as indicators of political and economic ties through shared foodways. Given the assessment that Khirbet Summeily is an administrative outpost, this research uses isotopic analysis to consider political and ritual consumption patterns, as well as domestic consumption, during this period

Abra Spiciarich (Tel Aviv University), "Birds in Transition: Bird Exploitation during the Late Bronze Age, Iron Age I, and Iron Age II"
Birds and humans have a long history in the southern Levant from prehistoric food source to sacrificial offerings. Avian remains have been identified at many sites throughout the southern Levant during the Late Bronze Age, Iron Age I, and Iron Age II, allowing for a diachronic investigation to be conducted. This paper tracks the presence and frequency of major avian species, specifically geese, ducks, chicken, pigeons, and doves, in light of the changes that occurred in the geopolitical landscape, cultural diffusion, climate, trade, and cultic influences in the southern Levant during these periods. Birds and the exploitation of birds by humans during these periods are rarely discussed at length, and, while the frequency of avian remains does not rival that of domestic livestock, this does not render birds insignificant in the overall animal economies of Levantine sites. Four primary conclusions of this investigation will be addressed: 1) geese and the effects of cultural and elite emulation; 2) the role of pigeons and doves as sacrificial offerings; 3) frequency of waterfowl in relation to climate; and 4) differences between local niche exploitation and trade importing of birds.

Jonathan Gardner (Trinity Evangelical Divinity School), "Attendance is Required: David's Absence from the New Moon Feast as a Test of Loyalty and Kinship"
The story of the New Moon Feast in 1 Samuel 20 forms a crucial juncture in the David narrative as it is here that David makes his final break with Saul, heading into his exile until Saul's death. While most commentaries and articles written on this story acknowledge its significance and rightly note that the focus of the story is on the relationship between David and Jonathan, virtually all have missed the key role feasting plays in the narrative. In looking at ethnographic, archaeological, and textual evidence, it will be shown that the description of the New Moon Feast was charged with political and familial meaning. David's refusal to attend sent the message that he was rejecting Saul's kinship and kingship over him. Therefore, Saul's reaction is only natural and expected. Since Saul could not help but see this move by David as a statement of rebellion, it is clear David's purpose in his absence was not to test Saul, but rather to test Jonathan. In publicly rejecting Saul, David first facilitated the inevitable break between himself and the imbalanced king on his own terms. But secondly and perhaps more importantly, by publicly rejecting the king, he forced Jonathan to chose between David and Saul, with the conclusion of the story being Jonathan's choosing David over the king.

Alice Hunt (University of Georgia), "Conspicuous Consumption: Imperial Ideology and Social Identity"

This paper explores the ideological and political function of excess and conspicuous consumption across the Neo-Assyriam imperial landscape as a means of negotiating, establishing, and reinforcing political and social identity.

7I. Religious Interactions in the Medieval Near East

CHAIRS: Debra Foran (Wilfrid Laurier University) and Elizabeth Macaulay-Lewis (The Graduate Center of the City University of New York)

Sean Leatherbury (Bowling Green State University), "Pilgrim Graffiti and the Sacred Economy of Pilgrimage in Late Antique Syro-Palestine"
Pilgrimage in the ancient world is a hot topic among historians, archaeologists, and art historians, with recent work focused on issues such as the pragmatics and lived experience of travel, the role of gender in shaping pilgrims' encounters with the holy, and the visual and material cultures of pilgrimage. For the late antique period, this last field of inquiry has been concentrated on the architecture of pilgrim churches and the wider built environment that surrounded them (e.g. monasteries, hostels), as well as the objects—especially clay, glass, or bronze vessels filled with holy water, oil, or other substances, referred to as "blessings" (*eulogiae*)—that pilgrims brought back with them. However, the material traces they left behind at the shrines they visited have been underexplored. This paper will examine an important set of these traces, carved and painted texts sometimes grouped together under the rubric of "graffiti," from two sites frequented by pilgrims of different faiths in late antique Syro-Palestine, Elijah's Cave on Mount Carmel and the Hammat Gader baths near the Sea of Galilee. These inscriptions were made by different groups at sites of varied character. However, by considering their verbal formulae, visual presence (especially their frames and arrangements), production (by pilgrims or "professionals"), and role in the ritual lives of their sites, we may get a glimpse of the inner workings of the sacred economies of pilgrim destinations, one that makes visible the often similar ways that pagans, Jews, and Christians interacted with the physical environments of pilgrimage.

Marlena Whiting (University of Amsterdam), "Gender, Archaeology, and Pilgrimage in the Late Antique Near East"
Archaeology is increasingly used to understand pilgrimage in the ancient world. The work of Joy McCorriston (2011; 2017) examines pilgrimage in Near Eastern cultures as a "cultural metastructure"—a phenomenon of enduring popularity and cross-cultural relevance—which has bearing on the development of Jewish and aspects of Christian pilgrimage. Archaeology can shed light on gendered spaces and practices in the ancient world, and can thus be related to women as pilgrims. The textual sources demonstrate that pilgrimage was popular among Christian women of Late Antiquity, both those in the religious life or members of the laity. Furthermore, the separation of the sexes was observed on pilgrimage, particularly at shrines that were under the guardianship of monasteries, or where monasteries provided accommodation. However, archaeological evidence has yet to be used to illuminate or challenge the state of affairs that the texts present.

This paper outlines potential methodological avenues for how the presence of women at pilgrimage sites might be detected archaeologically, through the gendering of the built environment (e.g., shrines of the stylite saints at Qal'at Sim'ān or Samandağ, or smaller monasteries like the Monastery of Martyrius). I will also briefly discuss the importance of considering evidence from burials and evidence from graffiti, as at the Monastery of Theoktistos in the Judean Desert, as physical testimony of women's presence at sites of Christian pilgrimage in Late Antiquity, and as part of a broader cultural milieu of pilgrimage in the Near East in the early medieval period.

Walter Ward (University of Alabama at Birmingham), "Christian and Muslim Encounters at Mount Sinai in the Seventh and Eighth Centuries C.E."
In the late fourth century, Christians came to the Sinai Peninsula in search of solitude and spiritual encounters at the locations of the biblical Exodus. By the mid-sixth century, a large monastic community had developed in the southern Sinai.

The early Islamic conquests in the early seventh century did not directly impact the monastic communities of the Sinai; however, over the next 200 years, Muslims are mentioned often in the Christian literature of the Sinai. This can be seen in the writings of Anastasius of Sinai. Two of his works, the *Tales of the Sinai Fathers* (ca. 660s) and the *Edifying Tales* (ca. 690s), demonstrate that there were numerous encounters between Christians and Muslims in the Sinai. In the first of these writings, the Muslims are portrayed as nuisances who could cause problems for the monks yet were not exceedingly dangerous. In the second, the Muslims are described as oppressors who, with the help of demons, tormented the Christian monks. One of these tales describes how the Muslims forced the local nomadic tribes to convert to Islam or be executed.

Despite this negative portrayal of Muslims by Anastasius, other evidence suggests that intellectual life in the Sinai continued without interference and that Muslim and Christian pilgrims continued to visit the Sinai from all over the Near East and Mediterranean.

Ethel Wolper (University of New Hampshire), "Ecumenical Practice and the Power of the Dead: Saint and Prophet Shrines in Medieval Mosul and Its Environs"
Up until the protracted attacks by the so-called Islamic State on Mosul and neighboring regions, this area was long described as one of the most diverse in the world. Mosul was a place where Muslims of different sects, Christians, and other religious minorities had long co-existed. Medieval and early modern shrines formed one of the greatest tangible proofs of that co-existence; the style, location, and audiences for many of these shrines were as mixed as the population of Mosul. The shrines of Mosul were woven into a history of place that tied the city to well-known biblical events. The association of Mosul with the prophet Jonah was particularly noted by medieval Muslims. Although their historical validity is sometimes questioned, there were shrines associated with Nahum, Jonah, Seth, and Daniel. In addition, and probably related, there were a large number of saint's shrines. These shrines, whether Muslim, Christian, Yazidi, or Jewish, existed as places where local communities re-enacted their connection to their surroundings through ritual and communal celebrations. There were also saint shrines of shifting associations

that were continually rebuilt through the medieval period. Given the large number of these now mostly destroyed buildings, information about their use and location provides an important view of a now lost sacred topography. This paper examines the saint and prophet shrines of Mosul to analyze their appeal to ecumenical audiences and to address the periods of time when mixed audiences flocked to these buildings.

8A. Ambiguity in the Ancient Near East: In-Between Spaces and Otherworldly Encounters II

CHAIRS: Lauren K. McCormick (Syracuse University) and Elizabeth A. Knott (New York University)

Monica Louise Phillips (University of Chicago), "Sumerian Temple Names and the Creation of Divine Liminal Space"

It has long been recognized that names in Mesopotamia were more than markers of identity. Rather, they were often vessels of meaning that both signified and made tangible the essence of the bearer. Not only did names provide crucial insight into the characteristics and nature of their referents, but they were also manifestations of power that substantiated Mesopotamian conceptions of reality in both the physical and illusory world, establishing reality as it was both perceived and desired to be. The Collection of Sumerian Temple Hymns is a text made up almost entirely of names and epithets. These names both capture and exude the quintessential nature of each temple, its patron deity, its character, and its purpose in the landscape on the border between the mortal and divine realms. More than that, as these names and epithets were invoked, the essential liminal nature of the temple space itself was established and maintained. That is, the invocation of these temple names within ritual contexts behaved as performative speech acts, changing the nature of the temple space to one that unified heaven and earth.

Amy Balogh (University of Denver), "The Ambiguity of Idol Worlds"

In ancient Mesopotamia, there are three interrelated practices that imbue an idol with the necessary status by which s/he becomes capable of mediating between human and divine realms: ritual induction via the *Mis Pi* ("Washing/Purification of the Mouth") ceremony, the installation of an "emblem of divinity" (e.g., crown, light, horns) upon the idol's head, and the proper enactment of the idol's day-to-day life. These practices, most of which are carried out by specialized *ašipu*-priests, all share the common goal of erasing any ambiguity as to the divine nature of the handcrafted deity, despite the fact that it is to human activity that the deity owes its existence.

Yet paradoxically, any action or language designed to erase the ambiguous nature of an idol simultaneously highlights that very ambiguity. What, then, is the purpose of ambiguity in the case of Mesopotamian idols, i.e., hand-made gods? Drawing especially from primary texts regarding the lives of idols, including *Mis Pi* ritual and incantation texts, and letters between kings and priests, this paper argues that the purpose of the ambiguity that accompanies the idol's mediator status is two-fold: to allow the idol to cross the boundary between divinity and humanity, and to give physical form to that boundary. This boundary crossing is made possible only through the idol's identification

with the deity it embodies and its acceptance into the divine community, thus bringing us full-circle to the idol's ritual induction via the *Mis Pi*.

Anne Porter (University of Toronto), "Liminality in Image, Ideology, and Everyday Life of Greater Mesopotamia"

Both image and text in greater Mesopotamia contain characters that are able to cross from one plane of existence to another, from one state of being to another. From cylinder seals to stories of more-than-human but less-than-divine figures, from the duties of the king to the presence of the dead on public and private occasions, what do these iterations of the permeability of boundaries mean for perceptions of everyday human life? There are several answers. One, ritual practices are understood—and therefore intended—to cross such boundaries. Two, divisions between the urban/human/civilized world and the wild/natural/animal world are dissolved over and over again. Three, instead of the segregated, class-bound, and sedentary world predicated by archaeological and historical reconstructions alike, ancient people imagined, and enacted, a far more distributed and fluid world.

M. Willis Monroe (University of British Columbia), "Ambiguity in Babylonian Astrology"

All forms of divination rely on and are hindered by various forms of ambiguity. The observation of signs and their interpreted meaning offer a rich soil in which ambiguous forking paths can spread their roots. The practitioner relies on this to both tailor a message as well as absolve mistakes, yet ambiguity must have eaten away at their own confidence in their craft. By modern standards many forms of divination rely on the occurrence of seemingly random events or procedures deliberately manipulated by a practitioner. Astrological observation differs in this regard because the objects of observation follow definite patterns. The Babylonian scribes of the first millennium B.C.E. excelled at the complex astronomical methods needed to anticipate the appearance and movement of celestial bodies. So, what does it mean for the observations of predictable events to still be ambiguous?

This paper will investigate the various forms of ambiguity in the astrological corpus from the later periods of cuneiform scholarship. There is of course ambiguity related to the actual recording of astrological knowledge: damaged texts and incomplete sections all introduce a material level of ambiguity. Closely related to this is scribes' playing with writing and meaning through commentaries on the text itself. More of interest for this paper is what it means for an astrological observation to be ambiguous: is it a lack of atmospheric clarity or a rather a fuzziness in how or where the sign is situated in the semantically rich backdrop of the night sky?

Gina Konstantopoulos (University of Helsinki), "'Well, I Will Say It to Her': Women and the Interpretation of Dreams in Mesopotamia"

Divination in Mesopotamia took many forms. The future could be determined through oracular pronouncements or events; through the highly learned observation and interpretation of astral phenomena; or by extispicy, the examination of the viscera of a sheep. Less-practiced methods of divination included augury by the flight of birds, or oil

and smoke divination. Among this host of methods, we may also place dream divination: the referenced practice of receiving divinely inspired dreams that then, in turn, had to be told to a male (*šā'ilu*) or female (*šā'iltu*) diviner or dream interpreter, who was also connected to the practice of necromancy. These dreams could be encouraged, often by sleeping in a temple, but they were ultimately the dominion of the divine. In Sumerian and Akkadian texts, such as the *Cylinders of Gudea* and the *Epic of Gilgamesh*, among others, the interpretation of dreams is routinely done by women, particularly women closely connected or related to the text's protagonist. Without her wisdom, the dream's meaning would remain hidden. In this talk, I consider the connection between dream interpretation and women in Mesopotamia, particularly as represented in literary texts, and examine the pattern of how and why familial female figures were most often utilized as dream interpreters. I furthermore examine the inherent ambiguity in dreams and dream divination, and consider the association between dream divination and necromancy. In doing so both dream divination and necromancy may be analyzed within the wider context of divination in Mesopotamia.

Kerry Sonia (Bowdoin College), "Ghosts who Chirp and Mutter: Biblical Necromancy and the Status of the Dead"
This paper explores the nature of necromancy in the Hebrew Bible, including the ambiguities of necromantic ritual and its evaluation by biblical writers. I focus on utterances of the dead, including the content of that speech, its expression, and its characterization by different biblical texts.

Some biblical accounts of necromantic speech depict it as garbled and ineffective, sometimes using the imagery of bird-like chirping. For instance, Isa 8:19–20 refers to the futility of seeking the counsel of "ghosts that chirp and mutter." Isa 29:4 similarly refers to a ghost "chirping" from the earth. Some scholars have argued that Isa 28:7–22 also reports the utterances of the dead using repetitive sounds that are meant to be onomatopoeic of birdcalls. The use of this imagery in biblical texts emphasizes the unintelligibility and ambiguity of the utterances of the dead, thus undermining the efficacy of necromancy.

In stark contrast to the Isaiah texts, the speech of the dead prophet Samuel in the famous Necromancer of Endor narrative (1 Samuel 28) is an articulate, accurate prediction of the future and communicates the will of YHWH. In no way does it denigrate Samuel or suggest his powerlessness. Despite the widespread biblical polemic asserting that necromancy is ineffective and that the dead are weak, this paper critically examines what this rhetoric is reacting against, namely a pervasive belief in the efficacy of this mode of divination.

8B. Archaeology of Cyprus III

CHAIR: Nancy Serwint (Arizona State University)

Nancy Serwint (Arizona State University), "The Terracotta Corpus from Marion/Arsinoe: How a Coroplast Thinks"

It is a truism in the artistic corpus of ancient Cyprus that clay was the ubiquitous medium for votive sculpture in most places on the island. Although many sites support this assertion, the cities of Marion and Arsinoe, situated on the northwest coast, evidence the most extensive presence of terracotta sculpture for any one locale. Excavation begun by Princeton University in 1983 produced over 30,000 fragments of terracotta sculpture, and the corpus provides an extraordinary opportunity for the study of the coroplastic arts. Since the conclusion of excavation activities, the Princeton team has embarked on an aggressive investigation of the material remains, and the terracotta sculpture has received particular attention. With a chronological breadth of over 600 years and a range in scale from miniature to over-lifesize, the material is ideal for consideration of how production techniques and manufacturing strategies were practiced over time. Recent study of the material has involved modern replication of the ancient forms, which not only has allowed researchers to reproduce several types of objects but also has invited consideration, in a most immediate way, of how ancient artisans handled their material and developed expedient work strategies. This paper will offer commentary on the latest phase of the study of the Marion/Arsinoe terracotta coroplastic assemblage, focusing on the techniques employed for small and large-scale works in clay.

R. Scott Moore (Indiana University of Pennsylvania) and William Caraher (University of North Dakota), "A Small Production Site at Polis"

The environs of Polis Chrysochous (ancient Marion and Arsinoe) is the location of a significant settlement on Cyprus from the Iron Age to the Medieval period. During the Hellenistic and Roman periods, Arsinoe was a thriving regional center situated in a fertile river valley in northwestern Cyprus. Beginning in 1984 and continuing for over twenty years, Princeton University excavated several areas of the site. The area designated as EF1 was excavated in 1988 and 1989 and is located approximately 100 m to the northeast of a Late Roman/Early Byzantine basilica and 75 m southwest of a building complex that was in use from the Hellenistic to Byzantine periods. While the excavated area is relatively small, consisting of a single room bisected by a wall and flanked by a hallway, the analysis of the artifacts from this site is significant for several reasons. First, it was excavated to bedrock and provides a unique window into the long-term history of the occupation and use of the site. Secondly, the site appears to share many of the occupational characteristics with the nearby site of the south basilica, including a relatively well defined Roman horizon associated with at least one wall, a significant assemblage of Late Roman material, and an abandonment and destruction dating to the Late Roman period with sparse, but visible, evidence for Medieval activity at the site. Finally, the diverse assemblage of Late Roman material from this site, unlike the neighboring excavated sites, suggests domestic activity and hints at industrial production.

Lucas Grimsley (Southwestern Theological Seminary), Laura Swantek (Arizona State University), Thomas Davis (Southwestern Theological Seminary), Christopher Davey (University of Melbourne), and William Weir (University of Cincinnati), "Kourion Urban Space Project: 2018 Season Preliminary Results"

This paper will present the preliminary results of the Kourion Urban Space Project's (KUSP) sixth season of excavation and geospatial survey on Cyprus. The goal of KUSP is to better understand the cultural and socio-economic changes that took place during the fourth-sixth centuries A.D. within cities on Cyprus, specifically through the excavation of Kourion. Kourion, located on the south coast of the island, was abandoned following a devastating series of earthquakes in the late fourth century and was later rebuilt on the original foundations, clearly marking the transition from the Late Roman to the Early Christian period on the island. The 2018 excavation will see the continuation of KUSP's excavations at the city of Kourion with a primary focus on a large, two-story structure that was partially destroyed during the earthquake storm of the late fourth century. While it was adjacent to a non-elite housing structure, the finds from this building suggest it functioned very differently, as an elite household or administrative center. This season's report will compare these two structures to discuss how socio-economic changes affected and were affected by elites and non-elites within this Cypriot city. We will also report on our latest findings concerning reconstructing the life of ancient buildings affected by earthquakes, including the moment of partial destruction and subsequent slow and eventual decay, and discerning the difference between these two processes in the archaeological record. Additionally, we will discuss the use of non-invasive techniques for exploring the Kourion water system and its digital documentation through remote photogrammetry.

Ann-Marie Knoblauch (Virginia Tech), "Cypriot Antiquities, Cesnola, and American Cultural Identity in 1880s New York"
In the 1880s, Luigi Palma di Cesnola was under fire for the questionable methods he used in restoring certain Cypriot antiquities in the Metropolitan Museum of Art. In many cases, the criticisms were aimed at his alleged piecing together of body parts originating from different statues to create a whole. Tongue-in-cheek contemporary references to this practice, both in newspapers and humor magazines, defend Cesnola's practices by claiming Americans (unlike Europeans who are satisfied with broken and musty things) "like our antiquities…fresh, clean and nice looking" (*Puck*, March 23, 1881). By poking fun at Cesnola's restorations, commentators were, by extension, critiquing contemporary American (and more specifically New York) cultural values (or lack thereof). American cultural philistinism can also be seen in the evolving and capricious public reaction to the Metropolitan Museum of Art's purchase of Cesnola's Cypriot collections—at first smug, expressing self-satisfaction at having acquired the Cesnola antiquities for America in spite of competing offers from a number of European museums. Later, once the restoration scandal had captured public attention, the same commenters declared disdain for the objects, suggesting they deserved to be dumped in New York Harbor, or could be used to fill the base of the newly arrived Statue of Liberty. This paper seeks to unpack both the restoration scandal and the challenge to the authenticity and value of the Cypriot antiquities by framing the scandal in the context of American cultural identity and exceptionalism in the Gilded Age.

8C. The Megiddo Excavations: New Studies Reflecting on the Archaeology and History of Ancient Israel and Beyond

CHAIR: Matthew J. Adams (W. F. Albright Institute of Archaeological Research)

Matthew J. Adams (W. F. Albright Institute of Archaeological Research) and Erin Hall (Tel Aviv University), "Middle Bronze and 'Solomonic' Gates at Megiddo"
In their Area AA, the Oriental Institute of the University of Chicago excavated a sequence of at least eight city-gates from the MB II to the Iron Age III. The Tel Aviv University Megiddo Expedition undertook soundings in the LB II gate as Area G in 1992 (see *Megiddo III*), and returned to the area in 2012 and 2018 to reinvestigate the MB gate system as Area S. Excavations in Area S have resulted in a revised understanding of the stratigraphy of the gates from the beginning of the Middle Bronze Age through the Late Bronze Age. New evidence demonstrates that the Stratum XIII "gate" as presented by the OI is, in fact, a conflation of multiple stratigraphic elements, including at least two separate gates. Further work in Area S seeks to investigate the Early Bronze-Intermediate Bronze-Middle Bronze Age transitions at the site. In 2018, the Expedition revisited the Stratum IVa "Solomonic Gate" to assess evidence for earlier Iron Age gates beneath its foundations. The authors present the current understanding of the Middle Bronze Age and Iron Age gates at Megiddo based on the renewed excavations.

Melissa Cradic (University of California, Berkeley), Israel Finkelstein (Tel Aviv University), and Matthew J. Adams (W. F. Albright Institute of Archaeological Research), "An Undisturbed Royal(?) MB III Tomb at Megiddo"
During the 2016 excavation season at Tel Megiddo, a monumental masonry-constructed chamber tomb ("Tomb 50") was uncovered near the late Middle Bronze Age palace. This exceptional mortuary context contained at least nine individuals of high status who were buried alongside a rich assemblage of vessels and decorated bone inlays. The tomb also contained gold, silver, and bronze jewelry found in situ, adorning the bodies of three individuals who were interred at the same time: a child, an adult female, and an adult male. The excavation of Tomb 50 was documented in unparalleled spatial resolution using 3D photogrammetry, and the finds are under comprehensive study by an interdisciplinary team of researchers. The high-resolution data from in and around this tomb indicate that the tomb was used over at least two phases, terminating with the burial of the three final individuals. From burial taphonomy to material sciences, analyses of this remarkable context contribute to ongoing research about funerary activities at Megiddo during this period and provide detailed insights into the life and death of a high-status population at the end of the Middle Bronze Age. The palatial context, burial assemblage, and monumental architecture of Tomb 50 points to an elite—if not royal—funerary complex in the northern palace precinct during the MB III.

Vanessa Linares (Tel Aviv University), "Long Distance Trade: Vanillin as a Mortuary Offering in Middle Bronze Age Megiddo"
Organic residue analysis was conducted on four small containers (juglets) placed as offerings in an elite MB III (ca. 1650–1550 B.C.E.) masonry tomb uncovered at Tel Megiddo, Israel. Compounds vanillin and 4-hydroxybenzaldehyde were identified in three out of the four juglets examined. These compounds are the major compounds found in natural vanilla extract. Until now it has been commonly accepted that vanilla was

domesticated in the New World and subsequently spread to other parts of the globe. Once all possibilities of contamination were ruled out, a post-organic residue analysis investigation of various species within the plant kingdom from which these principle compounds could have been exploited was conducted.

The source of vanillin from the juglets examined stem from the vanilla orchid. This is based on the profuse quantity of vanillin found in the juglets that could have only derived from the abundant amount of vanillin yield from the vanilla orchid pods. This conjecture is supported by the presence of compound 4-hydroxybenzaldehyde that is also a major component of natural vanilla extract. After a close study of vanilla orchid plants, three different species were identified as possible sources for vanilla exploitation in antiquity: *V. polylepsis Summerh* (central east Africa), *V. albidia Blume* (India), and *V. abundiflora J.J. Sm.* (southeast Asia). These results shed new light on the first known exploitation of vanilla, local uses, significance in mortuary practices, and possible long-distance trade networks in the ancient Near East during the second millennium B.C.E.

Israel Finkelstein (Tel Aviv University), Mario A. S. Martin (Tel Aviv University), and Eliezer Piasetzky (Tel Aviv University), "Second Millennium 14C Chronology with Emphasis on the Middle Bronze/Late Bronze Age and Late Bronze Age/Iron Age I Transitions"
Megiddo has a well-established, full stratigraphic sequence with rich pottery assemblages for the late Middle Bronze Age, Late Bronze Age, and Iron Age I sequence. A full updated radiocarbon model for these periods will be presented. The main questions to be dealt with are the Middle Bronze/Late Bronze Age and Late Bronze Age/Iron Age I transitions. The main archaeological and historical implications will be discussed.

Eythan Levy (Tel Aviv University) and Israel Finkelstein (Tel Aviv University), "Computational Chronology: The First Appearance of Philistine Bichrome at Megiddo"
This paper presents a new approach for computer-assisted chronological computation and hypothesis testing based on algorithmic principles. A software prototype will be presented, one that enables the user to encode detailed chronological networks featuring chronological sequences (dynastic, stratigraphic, ceramic), duration estimates, termini post and ante quem, and diverse types of synchronisms. These models can then be queried in order to detect chronological inconsistencies, and to obtain optimal estimates for the start date, end date, and duration of each period. We apply this approach to the question of the first appearance of Philistine Bichrome pottery at Megiddo. This question was recently addressed by Finkelstein et al. (2017) using new Philistine sherds and radiocarbon results from Areas K and H. We use our computational approach to build a large model that combines these data with Egyptian synchronisms and fine stratigraphic correlations between the Megiddo areas. This model is then queried in order to obtain precise computer-generated estimates for the date of appearance of Bichrome pottery in Megiddo under diverse hypotheses, with or without carbon dating, and with diverse possible correlations between the Megiddo strata and specific Egyptian kings. This methodology provides a tool for a more formal and rigorous approach to chronological

debates and enables researchers to tackle chronological networks that are otherwise too complex to be treated manually.

Assaf Kleiman (Tel Aviv University) and Israel Finkelstein (Tel Aviv University), "Megiddo in the Iron Age IIA and the Early History of the Northern Kingdom: Ceramic Sequences, Radiocarbon-Based Chronology, and Monumental Architecture"
Recent excavations conducted in the southeastern sector of Megiddo revealed a dense stratigraphic sequence with three well-defined phases dating to the Iron Age IIA. The remains include public and domestic structures, local ceramic assemblages, and imported ceramics from Greece and Cyprus. Radiocarbon samples from secure contexts anchor these phases to narrow time-slots. In this lecture, we present the new data and suggest a nuanced high-resolution chronology for the urban development of Megiddo in the Iron Age IIA. Our data illuminate several important issues with implications for other sites in the Northern Kingdom and beyond: 1) the transition between the early and late phases of the Iron Age IIA; 2) the earliest evidence for Cypriote Black-on-Red imports; and 3) the construction date of the ashlar-built Palace 1723 and its relation to the residential quarter found below it. The Megiddo evidence sheds light on the early history of the Northern Kingdom, including its territorial expansion to the Jezreel Valley.

Lily Agranat-Tamir (The Hebrew University of Jerusalem), <u>Liran Carmel</u> (The Hebrew University of Jerusalem), and David Reich (Harvard Medical School), "The Genetics of the Bronze and Iron Age Levant"
Little is known about the genetic origin of the indigenous populations of the southern Levant during the second millennium B.C. Even less is known about their impact on the genomes of modern Levantine populations. To study these questions, we sequenced DNA from 10 individuals excavated at Tel Megiddo, and from another sample excavated at Abel Beth Maacah, all dated to the Bronze and Iron Ages. We analysed these ancient genomes using a variety of statistical tools. We found that the Bronze and Iron Age Levantine populations can be modeled as a mixture of earlier Levantines with populations related to the region of modern Iran. We also show that the latter component might have arrived in the Levant by way of the Caucasus. Our samples reveal that the Iranian/Caucasus component entered the southern Levant in a continuous, or at least *not* episodic, process. We also quantified the heritage of the Bronze and Iron Age populations in modern Levantine populations. We found that all modern populations we have tested show similar Bronze Age Levantine ancestry of around 50-70% but differ in the genetic makeup of the remaining 30-50%.

8D. Power and Memory: The Transformation of Communities in the Roman Near East from Classical to Late Antiquity (Essays Honoring Kenneth G. Holum)

CHAIRS: Jennifer Ramsay (The College at Brockport, State University of New York) and Andrew Smith II (The George Washington University)

PRESENTERS:

Jodi Magness (University of North Carolina at Chapel Hill), "Herod the Great in Light of His Tomb at Herodium"
This paper examines Herod the Great's self-representation through his recently-discovered tomb at Herodium. Although Josephus provides a great deal of information about Herod (derived mostly from Nicolaus of Damascus's lost biography), Herod's preparation of Herodium as his final resting place and everlasting memorial is arguably the most direct statement we have about him. A consideration of Herodium in its broader Mediterranean context reveals that Herod sought to position himself within Hellenistic dynastic traditions by establishing connections to Alexander the Great. At the same, Herod drew on his own family's heritage and local traditions by situating Herodium on the border of Idumaea, his father's homeland, and overlooking Bethlehem in Judea, a site potent with Jewish messianic expectations.

Kathryn Gleason (Cornell University), "Urban Nature: The Promontory Palace of Caesarea as a Vermatid Reef"
Herod, as Josephus says in regard to the harbor and city of Caesarea, asserted his ambitions through extraordinary demonstrations of his control of nature. This great urban project was clearly visible from the promontory to the south of the city, where Herod built his palace and where Ken Holum and his team walked each morning en route to the harbor excavations. Over the years, he would stop by to visit as the Hebrew University/University of Pennsylvania excavations revealed the details of the maritime villa jutting into the sea, the waves lapping against its walls as they had in antiquity. Other maritime villas of antiquity are long lost to the dynamic Mediterranean, either sunken in dramatic tectonic shifts of the ocean floor, as at Baiae, or eroded away by the sea. Although few walls remain, the full plan of the promontory palace, its upper and lower wings, remains intact in the soft sandstone (kurkar) bedrock. How did this building survive centuries in the surf?

The ruins of the palace are situated on a living vermetid reef. This paper analyzes the phasing of the architecture in relationship to the evidence for the reef's formation, based on the work of Uriel Safriel, who has noted the capacity of the reef's ecology to protect the building. If the reef predated the palace, it is another remarkable example of how skilfully Herod integrated his buildings into the most dramatic but challenging of environments, as he did at Masada, Herodium, and Jericho.

Andrew M. Smith II (The George Washington University), "The Classical City of Petra in Late Antiquity: Survival and Transformation"
In the Roman Near East, the Mediterranean-style, classical city (polis) was one of several social organisms with which individuals identified, beyond that of immediate family and other kinship groups. And the city itself included the built-up urban center as well as the surrounding territory, where there were villages, hamlets, and farms that multiplied the overall population. Socially and economically, city and territory were integrated. Within the cities, hierarchies prevailed, and status-driven pursuits in public venues were commonplace and expected (individualism was not highly regarded). Those who mattered most, the more socially visible, were the local elite of propertied landowners,

the bouleutic or curial order. Collectively, they administered their cities and settled civic issues. As benefactors, their activities shaped the classical city. In turn, the city honored them for their benefactions.

In this world of Mediterranean-style cities, Petra was no exception. In the second century, Ptolemy refers to Petra as a polis, about the same time that the bouleutai of the city first appear on record. Their collective efforts helped to elevate Petra's status over time. Documents from the sixth century, for example, preserve the memory of Petra's transitions from polis to metropolis to colonia—such status updates secured the regional preeminence of the Petraeans over other aspiring communities. This preserved memory also reveals continuity with the past in the face of ongoing transformations that reconfigured Petra and its territory. This paper explores the status of the classical city of Petra in Late Antiquity by highlighting elements of survival and transformation.

Jennifer Ramsay (The College at Brockport, State University of New York), "Seeds of Change: How Plant Remains Reflect the Transformation of Communities in the Roman Near East"
Plant remains are not the first thing one thinks of when looking for evidence of the transformation of communities, but plants are incredibly reflective of cultural preference. The analysis of botanical remains can help elucidate changes in subsistence, as well as evidence of agricultural trade and environmental fluctuations. Using plant remains from Caesarea Maritima dating from the Classical through Late Antique period, I developed a model using a World-Systems Analysis approach to predict if a settlement is a core, semi-periphery, or periphery during different periods of occupation. Criteria used were that core areas should contain high taxon diversity, high concentrations of luxury food items, and small amounts of agricultural by-products and unprocessed agricultural goods. A semi-periphery community should contain high taxon diversity of crop species with some taxa not produced locally. Periphery areas should contain less diversity of preserved taxa, limited luxury food items, and intensity of specialized agricultural production as indicated by agricultural by-products or unprocessed agricultural goods. Using these criteria, analysis of the plant remains shows transformation of the site of Caesarea and supports interpreting it as a core center during the Byzantine period, a semi-periphery in the Islamic period, and, although Caesarea may be expected to be a periphery area during the Crusader period, a semi-periphery in that period as well. As this study demonstrates, the analysis of plant material from archaeological sites can add a line of evidence in support of cultural transformation.

8E. Application of Geoarchaeological Research Methods to Near Eastern Archaeology (Workshop)

CHAIR: Howard Cyr (University of Tennessee, Knoxville)

Howard Cyr (University of Tennessee, Knoxville), "Integrating Geoarchaeological Methods and Techniques into Near Eastern Archaeological Research Programs:

How Can We as Geoarchaeologists (and Other Archaeological Specialists) Better Engage with the Broader Near Eastern Archaeological Community?"
With continued interest in environmental reconstruction, landscape analysis, environmental archaeology, and political ecology, the methods and techniques of geoarchaeology have much to offer Near Eastern archaeological research programs. This workshop discusses ways we can make geoarchaeology more accessible to the Near Eastern archaeological community.

Kevin Fisher (University of British Columbia), "Geoarchaeological Research at Kalavasos-*Ayios Dhimitrios*, Cyprus"
This presentation discusses the results of initial geoarchaeological work at the Late Bronze Age city of Kalavasos-*Ayios Dhimitrios* in south-central Cyprus. This work includes the micromorphological analysis of deposits from both new excavations by the Kalavasos and Maroni Built Environments (KAMBE) Project and those conducted by a previous team from 1979–1998 in an effort to obtain high-resolution data on the use of space and site formation processes. A particular focus is on the analysis of various types of plaster surfaces in and around monumental buildings, as a means of understanding both the technological aspects of their construction and the implications for social status.

Erin Darby (University of Tennessee, Knoxville), "Incorporating Geoarchaeology in Research Design and Field School Training"
This presentation will focus on the ways in which excavation directors and field school directors can collaborate with geoarchaeologists in research design and field school training, noting both the barriers and positive outcomes.

Shawn Bubel (University of Lethbridge), "Geoarchaeological Research at Tell Sites in the Near East"
Methods and techniques borrowed from the earth sciences have long been fundamental components of excavation projects conducted at ancient Near Eastern sites. Over the past several decades, geoarchaeology has evolved from basic stratigraphic and site formation studies into a sub-discipline of specialists, many of whom apply elements of geology, geomorphology, pedology, chemistry, physics, and engineering to their research. Current geoarchaeological investigations at Near Eastern sites vary widely, as they depend on the nature of the matrix, the cultural remains, and the hypotheses being tested. Examples of geoarchaeological research being done at Tel Beth-Shemesh in Israel include tying particle analyses to site formation processes, matrix signatures of mud bricks, wall construction and collapse, phytolith identification, humic matter and organic preservation in matrix levels, trace element geochemistry, plaster composition and production, and phosphate spectrophotometry. The results of these studies significantly increase our understanding of the cultural activities that took place at the site between 1800 and 635 B.C.E., as well as the natural formation processes that have affected the site from its earliest occupation phase to the present.

8F. The Archaeology of the Kurdistan Region of Iraq II

Jason Ur (Harvard University), "Settlement Patterns on the Erbil Plain, Kurdistan Region of Iraq"
Since 2012, the Erbil Plain Archaeological Survey (EPAS) has been recording sites and landscape features within a 3200 sq. km survey region, with Erbil at its center. The project focuses on settlement patterns and land use under the Assyrian empire, but it has recovered over 500 sites from the last 8000 years. This presentation will discuss the current state of research on the imperial settlement of the Assyrian core, but will consider its Late Chalcolithic and Bronze Age antecedents, drawing on the landscape data recovered by the Erbil Plain Archaeological Survey between 2012 and 2018.

Mitra Panahipour (University of Arkansas), "Intensification, Water Management, and Sociopolitical Structure during the Sasanian Period in Eastern Iraq and Western Iran"
Studies of Sasanian landscapes have long been focused on political and economic core areas and have emphasized the role of centralized authority in landscape transformations. However, land use and landholding patterns in other regions have still remained unidentified. Additionally, zones between the conventionally divided irrigated lowlands and rainfed highlands have not been fully addressed in the archaeological literature. This paper explores land use expansion, agricultural intensification, and water management strategies in eastern Iraq and western Iran. This study area, which encompasses the alluvial plains of the Sirwan/Diyala and Alwand rivers and the foothills of the Zagros Mountains, provides data to evaluate varying degrees of centralization, autonomy, and local-scale managements. Influenced by its geopolitical location, this case study demonstrates the role of peripheries and the importance of microenvironmental diversity in human-environment interactions. I apply remote sensing techniques and geospatial analysis, such as satellite images for reconstructing traditional land use practices, in conjunction with field survey, to identify intensification and its relation to environmental characteristics and sociopolitical complexity. Integration of both irrigation and rainfed techniques, as well as an agro-pastoral subsistence strategy, are further investigated to offer an alternative model of late antique intensification. Moreover, as accessibility and type of water resources are key factors shaping land use decision and centralization patterning, hydrological modeling and paleoclimatic proxy records are used to reconstruct past conditions. Further, I discuss the potential contributions of this research to perceptions of settlement histories in the broader Zagros Mountains region.

Kathleen Downey (The Ohio State University), "Anthropological and Funerary Analyses of the Human Remains at Gird-i Bazar"
The Peshdar Plain Project was initiated to explore a site that could yield more information about the Border March of the Palace Herald, which was mentioned in a fragmentary cuneiform text found at the site of Qalat-i Dinka (Sulaymaniyah Governorate, Kurdistan Region of Iraq). Karen Radner, the project director, decided to start excavations at the shallow mound of Gird-i Bazar, which was close to the Dinka site, and is thought to represent part of the extensive lower town. Since excavations began in 2015, graves have been uncovered at the site of Gird-i Bazar. During the 2017 season,

it become apparent that a significant cemetery is present at the site, cutting into the single phase Neo-Assyrian remains below. This cemetery was radiocarbon-dated to the Sasanian period. It displays an atypical burial pattern for the region during this time period. It gives researchers an excellent window into life and death in this area during the Sasanian period through such an extensive cemetery. Also during the 2017 excavations, an unexpected collection of human remains was discovered in the well of one of the western trenches, which to that date had not contained anything later than the Neo-Assyrian occupation. By the end of the excavation, skeletal elements belonging to three separate individuals were identified from this feature. Results of the continued excavation of all human remains from Gird-i Bazar contained both in the Sasanian cemetery and the well feature will be presented along with the anthropological and funerary analyses.

Jesse Casana (Dartmouth College) and Claudia Glatz (University of Glasgow), "A Bronze Age City in the Mesopotamian-Zagros Borderlands: Archaeological Investigations at Khani Masi and Regional Survey in the Upper Diyala/Sirwan River Valley"
The Upper Sirwan (Arabic Diyala) River Valley forms a critical communication and transportation corridor connecting lowland Mesopotamia with the Zagros highlands, and features prominently as a contested political space in the historical record from at least the mid-third millennium B.C., but until recently little was known of the region's archaeology. Since 2013, the Sirwan Regional Project has explored the area using regional archaeological survey and a variety of remote sensing methods, documenting hundreds of previously unknown ancient settlements dating back to the Pre-Pottery Neolithic, nested within a complex cultural landscape containing remains of irrigation canals, roadways, and other features. In 2016, we began an excavation project at one newly discovered site now known as Khani Masi, a sprawling series of low mounds covering more than 50 ha that was occupied primarily in the Middle and Late Bronze Ages (ca. 1700–1150 B.C.) and where material culture shows strong connections to Kassite Mesopotamia. This paper presents results of large-scale excavations at Khani Masi that, alongside results of soundings at other sites in the region and analysis of regional settlement data, offer new insights into the settlement history, land use practices, foodways, and economic relationships of the communities who once occupied the Mesopotamian-Zagros borderlands.

8G. Creative Pedagogies for Teaching the Ancient Near East and Egypt II

CHAIRS: Marta Ameri (Colby College) and Helen M. Dixon (Wofford College)

Sarah J. Scott (Wagner College), "Feast or Famine? Undergraduates, Interdisciplinary Pedagogy, and Ancient Near Eastern Art History"
Teaching topics in ancient Near Eastern art history are attractively diverse to an engaged audience, but how do we as scholars and educators find such an audience in today's competitive undergraduate college curriculum? Wagner College, a small undergraduate institution in New York, like many of its peers, emphasizes liberal learning as its mission, as well as a practical education that will prepare graduates for a competitive job

market. One way that like-minded institutions have combined liberal and practical course offerings is though creating "learning communities" where two faculty members from different disciplines co-teach, and students complete a practical project. This paper will present the challenges and successes of such an endeavor. "Feasting: Food and Drink in the Old World and the New" was a course I taught (as an art historian) with an Anthropology colleague, culminating in a gallery exhibit on Wagner's campus. Students engaged with archaeological, visual, and textual evidence to explore the roles of feasting in social life, including creating and paying debts, displaying wealth, building allies and influence, negotiating war and peace, communicating with the gods and honoring the dead through cultural and political development of empires both in the Near East and the Andes. The paper will highlight successful student learning outcomes, present strategies for integrating interdisciplinary scholarship and pedagogy and application of student learning to practical projects, while also address challenges that are common among such endeavors.

Marta Ameri (Colby College), "Sharing Space: Theory and Practice of Seal Studies at Colby College"
In the ancient world, stamp and cylinder seals were one of the primary tools of administration and played a significant role as markers of social and individual identity. At the same time, however, most seals were also extraordinary examples of art in miniature, carved with everything from the seal owner's name and position to entire mythological scenes featuring numerous gods and goddesses. In a course taught at Colby College in the Spring of 2016, students explored the artistic and administrative roles that seals played in antiquity through a number of hands-on activities, from studying seals from the collection of the Semitic Museum at Harvard University, to making their own cylinder seals and sealing containers with them, that allowed them to become intimately familiar with this ancient technology. The course, taught in the Art Department, required collaboration between Art History and Studio faculty, who worked to design parallel units for students creating seals in the Art History course and students creating containers in the Studio class. The final outcome of the class combined art historical practice, experimental archeology, and studio practice to give students a glimpse into the complexities involved in the administrative technologies of the past. This paper discusses the creation of the course and as well as the challenges and rewards involved in co-teaching a course of this sort.

Gemma Lee (University of Melbourne), "Object-Based Learning: Utilizing Bab adh-Dhra' Artefacts to Engage Students in Near Eastern Archaeology"
Active, student-centered teaching and learning approaches, such as object-based learning (OBL), are gaining attention as an alternative form of pedagogy in tertiary education. OBL is a teaching practice proven to give rise to deeper engagement by providing multi-sensory learning experiences. Previous research has shown that physical interaction with authentic artifacts, as opposed to purely text-based study, promotes a significant shift in learning retention and understanding of the past. For university students, OBL has the potential to provide highly immersive opportunities; however, the use and selection of the types of objects involved in curricula of Near Eastern studies has largely gone unscrutinized.

This paper discusses a pilot project conducted to examine and evaluate OBL experiences of students studying Near Eastern archaeology at the University of Melbourne. The objects selected for this initiative focus on the Early Bronze Age pottery from the Jordanian site of Bab adh-Dhraʿ. The University of Melbourne's Classics and Archaeology Collection contains a complete Bab adh-Dhraʿ tomb group (Tomb A72S) that was acquired in 1978. The Bab adh-Dhraʿ objects offer multiple levels for interpretation and consideration, ranging from issues covering the archaeology of death and mortuary practices to the looting and subsequent excavation and post-excavation management of the site's artefact assemblage. Following the OBL sessions utilizing the Bab adh-Dhraʿ objects, participating students completed a qualitative survey. In this presentation, preliminary findings from the study are analyzed which indicate favorable student responses verifying the efficacy of OBL in teaching and learning outcomes and engaging students in Near Eastern archaeology.

Flora Anthony (Kennesaw State University) "Using Experiential Teaching Techniques in Ancient Egyptian and Ancient Near Eastern Art History Courses"
This paper explores several experiential techniques that I have successfully used to teach topics in ancient Egyptian and Near Eastern art history and related fields. I will outline three of these techniques as follows: 1) making ancient Egyptian magic wands with historically accurate apotropaic spells; 2) leading workshops on "making faience" for classroom and public audiences; and 3) writing from "within" history; e.g. in a piece that places the reader in the sandals of a foreign visitor to an Egyptian palace (published in *Ancient Near East Today* vol. 5, no. 8). These rather unusual endeavors are particularly effective in engaging students in class, especially when the topic presented is conceptually difficult and chronologically distant. Finally, while it is personally rewarding to embark on creative experiential projects in the classroom, and the students enjoy these aspects of my courses the most, the implications of expending energy on these kinds of activities before getting tenure will be examined.

8H. Materializing Emotion in Mesopotamia

CHAIRS: Jay Crisostomo (University of Michigan) and Karen Sonik (Auburn University)

Karen Sonik (Auburn University), "Emotion and the Mesopotamian Arts"
This paper examines the methodology and source material for the study of emotion in Mesopotamia, with particular emphasis on the visual and literary arts. In the visual arts, it considers both the emotional "content" of and the emotions evoked by artworks, and looks at the possibilities afforded for emotional expression by both the face and the body, touching on points such as posture, gesture, and body action, as well as bodily emissions. It then goes on to consider the ways in which artworks might evoke emotion in the viewer, taking Ashurbanipal's lion hunt reliefs as case study. In the literary arts, it focuses on the Standard Babylonian *Gilgamesh Epic*, examining the material and bodily

manifestations of emotions as expressed there, the means by which they are produced or evoked, their boundaries, and their entanglements with other emotional states of being.

Greta Van Buylaere (University of Würzburg), "Depression at Esarhaddon and Assurbanipal's Royal Courts"
While the concept of depression as a clinical diagnosis is unknown in Mesopotamia, descriptions of the symptoms of depression in cuneiform medical records demonstrate that Assyrians and Babylonians were familiar with the phenomenon. These medical descriptions are remarkably objective: subjective feelings and thoughts are absent in Mesopotamian descriptions of mental illness. Such subjective feelings and thoughts of a depressive nature are, however, found in letters and literary sources. For this paper, I will focus on certain emotionally depressed men living at the royal courts of Esarhaddon and Assurbanipal. The kings themselves are known to have suffered from bouts of depression and several scholars like Adad-šumu-uṣur and his son Urdu-Gula wrote of their unhappiness and despair in letters to the kings. I will look into possible triggers for their depression (illness, grief, stress, job loss, social pressure, etc.) and the reactions of the kings and their scholars to their correspondent's sorrow. The primary sources for this article will be the correspondence of these kings with their scholars along with royal inscriptions.

Ulrike Steinert (Freie Universität Berlin), "The Body and Emotional Expression in Mesopotamia"
This paper examines the materialization and embodiment of emotion in Mesopotamia. Recognizing that emotion in this context cannot be understood without an understanding of its bodily or physiological manifestations or expressions, it focuses especially on emotions such as fear, anger, grief, and joy, and how these are described in the extant textual sources as embodied experiences. It delineates the manner in which body parts, including inner organs, signs, and substances or emissions are associated with, materializations of, or potentially capable of evoking these and other emotional states of being.

Felipe Rojas (Brown University), "Landscape Monuments and the Emotional Life of Rock in Ancient Anatolia"
This paper uses both archaeological and textual evidence to probe and critique the possibilities of studying ancient emotions at the site of ancient Anatolian landscape monuments. Rather than focusing on the people who commissioned the monuments or those who performed activities by them, I concentrate on the mountains or rocks on which the monuments were carved. It has long been noted that during the Bronze and Iron Ages, and arguably through the Roman period, many people in Anatolia understood rivers, springs, lakes, and also rocks and mountains to be animated and sentient. Mountains were literally fed; some were said to have musical taste, others to be the forefathers of kings and entire peoples. Connections between men, gods, and mountains were intimate and intense. I explore evidence that sheds light on interactions among these various beings, paying particular attention to the emotions of stone and other non-human agents.

9A. Cultural Heritage Management: Methods, Practices, and Case Studies I

CHAIR: Glenn Corbett (Council of American Overseas Research Centers)

Susan Penacho (ASOR Cultural Heritage Initiatives) and Gwendolyn Kristy (ASOR Cultural Heritage Initiatives), "Results from the ASOR Cultural Heritage Initiatives: Analyzing Conflict Damage on Cultural Heritage in Syria, Iraq, and Libya"
Since ASOR Cultural Heritage Initiatives (CHI) was formed in August 2014, the project has produced over 2000 individual reports of cultural heritage damage in Syria, Iraq, and Libya. ASOR CHI implements cultural property protection by documenting damage, promoting global awareness, and planning emergency and post-war responses. With an inventory of over 15,000 historic locations including archaeological, religious, historic, and culturally significant site types, ASOR CHI has monitored damage to cultural sites through media reports, in-country documentation, and concurrent satellite-based assessments. Utilizing the data collected by ASOR CHI, this paper analyzes the patterns and scale of damage to cultural heritage in Syria, Iraq, and Libya over the course of the project at both regional and country-wide levels. When incidents are viewed individually, certain damage types can stand out, such as intentional destructions by extremist groups, or airstrikes from military groups. However, from a regional perspective, different damage trends become apparent, such as agricultural disturbances to archaeological sites. This emphasizes the importance of approaching our data from a variety of perspectives in order to achieve a thorough understanding of trends and the devastating effect of armed conflict on cultural heritage.

William Raynolds (ASOR Cultural Heritage Initiatives), Susan Penacho (ASOR Cultural Heritage Initiatives), and Gwendolyn Kristy (ASOR Cultural Heritage Initiatives), "Post-Conflict Damage Assessment in the Old City of Benghazi"
During the latter half of 2017, the Libyan National Army cleared the Old City of Benghazi of insurgent fighters following nearly four years of war. ASOR Cultural Heritage Initiatives (CHI) performed a remote damage assessment using satellite imagery, supplemented by preliminary photographs and base map data provided by colleagues at the Libyan Department of Antiquities (DoA) in Benghazi. In collaboration with DoA, ASOR CHI developed and refined a protocol for a rapid field damage assessment of the Old City. DoA colleagues completed the field damage assessment, and this paper presents the cumulative results, identifying priority heritage sites for stabilization and conservation, as well as priorities for salvage excavation on the periphery of the archaeological site of Berenice.

Allison Cuneo (Cultural Property Consultants, LLC), "Results from the ASOR Cultural Heritage Initiatives: Post-Conflict Cultural Heritage Initiatives in Iraq"
The ASOR Cultural Heritage Initiatives has reported extensively on the impact the war against the so-called Islamic State has had on the urban landscapes of Mosul, Anbar, and Fallujah as well as the archaeological landscapes of Nimrud, Khorsabad, and Hatra. Iraq once again finds itself in a state of recovery. Victory over the Islamic State was declared in December 2017, and both domestic and foreign stakeholders are eager to rebuild

regions most severely affected by armed conflict. This paper will discuss current in-country initiatives in former Islamic State-held areas of northern Iraq, including a digital preservation initiative funded by the Whiting Foundation, and explore the successes and challenges of reporting on heritage damage in Iraq and implementing post-conflict stabilization projects.

Darren P. Ashby (American Schools of Oriental Research) and Michael Mail (Foundation for Jewish Heritage), "Results from the ASOR Cultural Heritage Initiatives: The Documentation of Jewish Cultural Heritage in Iraq and Syria"
In 2017, ASOR Cultural Heritage Initiatives and the Foundation for Jewish Heritage established the Jewish Cultural Heritage Initiative for Iraq and Syria (JCHI) to identify, document, and assess Jewish cultural heritage sites, in order to set priorities for future protection and preservation efforts. Using desk-based, ground-based, and remote assessments, JCHI has generated a site inventory and produced an initial series of site reports on the most significant Jewish heritage sites in the two countries. This paper presents the methodology and results of the project and also discusses site-specific recommendations for risk mitigation, preservation, and conservation.

Marina Gabriel (ASOR Cultural Heritage Initiatives) and Amr al-Azm (The Day After—Heritage Protection Initiative; ASOR Cultural Heritage Initiatives) "Results from the ASOR Cultural Heritage Initiatives: Mitigation Efforts in Syria—Challenges and Successes"
As the Syrian conflict enters its seventh year, aerial bombardment and armed clashes have continued to threaten the lives of Syrian civilians, damage vital infrastructure, and threaten the existence of Syria's heritage. The presence of multiple armed actors in the conflict contributes to an ever-growing security vacuum. It is in this context that The Day After—Heritage Protection Initiative (TDA-HPI) and ASOR Cultural Heritage Initiatives (CHI) have partnered to implement emergency and short-term mitigation efforts. Mitigation efforts face extreme challenges in Syria, including a severe lack of funding and security risks to heritage staff and volunteers. On at least one occasion, a heritage site in Syria was hit by an airstrike not long after a TDA-HPI and ASOR CHI mitigation project was completed there. This paper presents the successes and challenges of implementing heritage mitigation projects in Syria. Examples of mitigation projects include Bosra al-Sham, Al Ma'ara Museum, and the Raqqa Museum.

9B. Change and Continuity in the Seventh Century C.E. Near East

CHAIRS: Ian Randall (Providence College) and Stephen Humphreys (Durham University)

Charles Stewart (University of St. Thomas), "Architectural Change in the Seventh and Eighth Centuries"
Architecture manifests ideologies, economic capacities, and technologies of society; thereby, change in society can be charted by understanding modification in material construction, style, and design. During the seventh and eighth centuries C.E., cities in the

eastern Mediterranean began to shift from vast open (unwalled) settlements, centered on the forum, to smaller fortified towns, often based around a church. In the countryside, the large farming estates, such as the sprawling villa, seem to have disappeared and been replaced by an agricultural system based on "village communities" (*komi*), of which very little is known; nevertheless, as in the cities, it seems that the small churches and the monastic abbeys formed the nucleus of agricultural settlements. Churches—the best preserved and numerious of all architecture during this period—were dramatically redesigned. They became smaller in volume, shorter in height, with thicker walls and less fenestration, compared to the earlier buildings they replaced. These modifications were based on the transition from wood roofs to vaulting, which can be explained by a variety of factors, such as need for seismic- and fire-resistence and for greater security.

Ian Randall (Providence College), "Collapse and Crisis, Dining and Decadence: Ceramic Responses to Intense Social Stress in Late Antique Cyprus"
This project examines the ceramic evidence for dining practices and amphorae consumption at two periods of transition for Cyprus, the fourth and the seventh centuries C.E. Utilizing ceramics from the Kourion Urban Space Project, I will be comparing the imported amphorae with the concomitant dining wares from fourth-century abandonment, following a disastrous earthquake, and the rehabitation of the site in the fifth century, with those from several seventh- and eighth-century abandonments on Cyprus. It will be shown that the local responses to disaster and collapse mirror one another in these two instances in several ways, and also match other anthropological cases of social adjustments to ideas about community, dining, and identity following intense social stress. This then will be used to interrogate approaches to ceramics and dining culture in the eastern Mediterranean towards the end of Late Antiquity, and to suggest strategies for moving forward in examining this oft overlooked and misunderstood period of collapse in trade, ceramic production, and urban consumption.

Marica Cassis (Memorial University of Newfoundland), "Messy and Misunderstood: Material Culture in Medieval Anatolia"
Understanding the development of medieval Anatolia during the transformative period of the seventh and eighth centuries C.E. is a daunting task. The material culture for the period has traditionally been poorly or incompletely excavated, and there is still no universal agreement over precisely how the Late Roman world shifted to one more medieval in scope. In part the problem has been exacerbated by the long-held narrative of the so-called Dark Ages, which, although now largely debunked, has left us with a little explored lacuna in the archaeological record. However, more recent work at a number of early Byzantine sites in Anatolia shows that it is possible to capture the material from this period through very careful excavation, and that there was an important and definable change in material practice as people adjusted to smaller communities and increased isolation. Excavations at Çadır Höyük, for example, illustrate continuous occupation throughout these difficult years in a settlement characterized by local production and a more vernacular architecture. The change is significant, as it marks the move to a more rural, more local economy—one that would become further developed in the subsequent Middle Byzantine period. It is in these small changes that we are can begin to identify the

shift from the Late Roman world to the medieval one, and these changes bear further exploration if we are to understand the complete story of Byzantine Anatolia.

Stephen Humphreys (Durham University), "Eating in Church: Ovens as Indicators of Social Change in Seventh Century C.E. Cyprus"
This paper will attempt to reevaluate the social context of six bread ovens located within the church complexes of Cyprus, all of which date to the seventh century C.E. Based in part on a restricted view of the range of activities permitted within active ecclesiastical contexts, these bread ovens have previously been dismissed as belonging to the final occupational phases of their sites. Their construction has been attributed to hungry bands of leaderless, degenerate Christians, the sudden growth of a monastic community, or "deconstruction crews" as in the case of Kourion. However, the revised paradigm of seventh-century Cyprus allows for the continuation of significant ecclesiastical influence and authority. Rather than citing the invasions of 649 and 653 C.E. as defining elements in the construction of these installations, this reassessment recognizes the instability afflicting the region throughout the seventh century as a probable catalyst for changing social trends. Ceramic evidence from these and other Near Eastern sites indicates that food was not only stored, but also increasingly prepared and consumed, within ecclesiastical structures during this period. This paper will argue that, based upon the size of the ovens in question, the associated ceramic assemblages, and the indications of continuing ecclesiastical authority, these ovens should be interpreted as an intensification of this trend toward increased communal activity within the ecclesiastical sphere of influence rather than as an indicator of societal decline.

9C. The Tenth Century B.C.E. Borderlands of the Greater Hesi Region: Implications

CHAIR: Jeffrey A. Blakely (University of Wisconsin–Madison)

Jeffrey A. Blakely (University of Wisconsin–Madison), "Introduction to the Greater Hesi Region in the Tenth Century B.C.E.: The Archaeological Background"
Archaeological research in the greater Hesi region began with the excavations of Petrie and Bliss on behalf the Palestine Exploration Fund in 1890, continued with the Joint Archaeological Expedition starting in 1970, and now continues with the Hesi Regional Project through both survey and excavation. Each project encountered the tenth century B.C.E. in one or more ways. This paper will present a wide-ranging overview of the archaeological record of the greater Hesi region as it relates to the tenth century B.C.E. The goal is to provide a sufficient background that can be utilized by the other papers in the session and allow them to focus on their more narrowly defined subject matter.

About 1130 B.C.E. Egyptian presence in the greater Hesi region ended with destruction and abandonment. No discernible occupation has been found from that point until about 1000 B.C.E. other than a few random sherds that might suggest only a transient population. About 1000, Khirbet Summeily, a governmental outpost, was built, as was

Tell el-Hesi, seemingly a Judahite military site. At about the same time a few farmsteads, or hazerim, were built. Each of these sites went through various phases and some accompanying destructions before all were destroyed or abandoned in the final quarter of the 10th century B.C.E. Of these sites, only Tell el-Hesi was rebuilt immediately but it was conceived of as something entirely different, a fort.

Geoffrey Ludvik (University of Wisconsin–Madison), "The Art of War on Judah's Periphery: The Archaeology of Military Strategy in the Tell el-Hesi Region during the 11th to 9th centuries B.C.E."
War has been an inescapable reality in the Levant for millennia, not one reserved to the distant past. As in modern societies, I argue that the ancient inhabitants of Judah developed responses to the threats of battle and invasion, organized manpower and resources for offensive and defensive campaigns, and maintained crucial social and built infrastructure necessary for information flow and the establishment of military installations. This paper investigates specific archaeological evidence for warfare in the Tell el-Hesi region during the 11th through 9th centuries B.C.E. To do so, I identify material analogues associated with military strategies today and argue for their presence in the Hesi region by analogy, an approach pioneered by J. Betlyon (2003) for the Assyrian, Neo-Babylonian, and Persian periods.

My central aim is a reconstruction of military strategy in the region and its relationship to governmental/social complexity. I survey evidence for military-related activities from sites in the region, namely Tell el-Hesi, Tel Nagila, and Khirbet Summeily. The role of tripartite pillared buildings in border maintenance, the possibilities for foreign campaigns in the immediate area like that historically ascribed to Shoshenq, as well as possible evidence for cavalry training facilities are all considered. Based on these case studies, it is argued that, in addition to active warfare, other indirect military activities in the region were taking place, both at such a level and in such a pattern as to suggest that they represent the coordinated efforts of a centralized state in the area of Judah.

Christopher Rollston (The George Washington University), "Scribes and Scribalism in the Hinterlands: Hesi in Context"
The presence of writing and writing systems in the Levant has been the subject of intense discussion for decades, especially during recent years. This presentation will put much of the totality of this evidence in the foreground, especially that which hails from Hesi and the surrounding regions.

James Hardin (Mississippi State University), "Understanding Land Use and Increasing Integration and Political Complexity in the Hesi Region during the Iron Ages I and II"
The Iron Age settlements of Khirbet Summeily and Tell el-Hesi in southern Israel both provide evidence for administrative activity, probably associated with trade, during the late Iron Age I and early Iron Age II. And when taken with other sites in the broader area, they provide a better understanding of changes in political complexity in the broader temporal and spatial region. The Late Bronze Age was a time of competitive networked city-states, identified from a world-systems perspective as semi-peripheral cores adjunct

to older, larger central core states (Parkinson and Galaty 2010). The following period of staggered collapse affected most regions of the eastern Mediterranean and Aegean. This collapse negatively affected some but undoubtedly led to opportunity for others and, in the region of the southern Levant, resulted in demographic shifts and changing political and social systems during the Iron Age I that evolved into a network of territorial states dominated by capitals in the Iron Age II. The processes whereby these Iron Age II states formed are not well known and are debated much in recent scholarship. How did certain lineages or groups obtain power; how were territories and people integrated and what was the nature of their interaction with others, whether peer groups identified as "other" or more powerful core states farther away? What were the roles played by trade/exchange, competition, networking, belligerence, and other factors? These questions are addressed through a closer look at the greater Hesi region.

9D. Archaeology of Arabia I

CHAIR: Steven Karacic (Florida State University)

Jonathan Mark Kenoyer (University of Wisconsin–Madison), Maurizio Cattani (University of Bologna), and Dennys Frenez (University of Bologna), "Technology and Trade between the Indus Valley and Southeastern Arabia: Recent Insights from Excavations at HD-1, Ras Al-Hadd, Sultanate of Oman, 2016–2018"
Renewed excavations at HD-1, Ras Al-Hadd, Sultanate of Oman were carried out in 2016/2017 and 2017/2018 under the auspices of the Ministry of Heritage and Culture, Sultanate of Oman as a joint project directed by M. Cattani, University of Bologna and J. M. Kenoyer, University of Wisconsin–Madison along with D. Frenez and other team members. The coastal site of HD-1 is situated in a unique location that has access to a protected harbor in a lagoon to the south as well as the open ocean of the Arabian Sea to the north. The 2.4 m high mound is made up of sequential layers of occupational debris from hearths, food processing, and tool manufacturing activities interspersed with sandy lenses. A thin layer of Early Islamic period occupation is found at the top of the mound along with some burials. One major goal of the project was to better understand the size and layout of the site, and a more precise chronology based on radiocarbon dating. Other objectives included the collection and analysis of pottery, tools, ornaments, and other objects that could help to clarify the nature of interaction between individual traders and communities of the Indus Civilization and the Umm an-Nar cultural tradition in the southeastern Arabian Peninsula. This paper will present the preliminary results of analyses that compare the technological traditions of bead production, copper working, and ceramics from each region. The role of the site in terms of trade and exchange will also be discussed.

Gregg Jamison (University of Wisconsin–Waukesha) and Jonathan Mark Kenoyer (University of Wisconsin–Madison), "Lithic Technology at HD-1, Ras Al-Hadd, Sultanate of Oman, 2016–2018: Preliminary Typological and Use-Wear Analysis"
The lithic technologies of the fourth to third millennia in southeastern Arabia have been the focus of long-term research by many scholars. Multiple analytical methods have been

applied to address research topics including typologies, production technologies, raw materials, context, function, and use. Of special note at coastal sites is the importance of stone tools for shell ring and shell hook production. However, a large variety of utilized flakes and retouched tools that appear to have been used for other types of tasks have recently been excavated at the coastal site of HD-1, Ras Al-Hadd, in 2016/2017 and 2017/2018. This excavation was carried out under the auspices of the Ministry of Heritage and Culture, Sultanate of Oman and selected samples were studied to better understand the nature of the lithic industry. Preliminary studies of tool edges and microwear indicate that, in addition to shell working, these tools appear to have been used for a wide range of other functions. Comparisons with experimental tools used on wood, pottery, bone, leather, and hide working have been used to help narrow down the possible types of tool use at this site. The comparative results of this study will be presented and initial results suggest that, although there are technological and morphological similarities with lithic assemblages from other contemporary sites, people living at HD-1 were engaged in a much wider range of activities using stone tools than previously reported.

William Belcher (University of Hawai'i-West O'ahu), "Fish Remains and Technology at HD-1, Ras Al-Hadd, Sultanate of Oman, 2016–2018: A Preliminary Assessment and Comparison to Third Millennium B.C. Sites of the Indus Valley Civilization"
Fish remains within the Gulf of Oman/Arabian Gulf context have been sporadically examined, particularly in reference to environmental exploitation, technology, and climatic reconstruction. Recent excavations at the coastal site of HD-1, Ras Al-Hadd in 2016/2017 and 2017/2018 have provided a large collection of fish remains, including smaller fish taxa that have not been previously identified due to collection strategies. This excavation was carried out under the auspices of the Ministry of Heritage and Culture, Sultanate of Oman and a preliminary assessment of representative species is used to understand the exploitation patterns. Additionally, preliminary observations related to modern fishing near Ras Al-Hadd were conducted to establish an ethnographic baseline for interpretation. These remains are compared to third and fourth millennium B.C. sites on the northern Gulf of Arabia associated with the Indus Valley civilization and its precursors in the Baluchistan/Sindh region, which, while using the same basic aquatic environments, appear to have a significantly different exploitation strategy.

Charlotte Cable (University of New England), Kristina Franke (University of New England), James Roberts (University of New England), Mark Moore (University of New England), Steve Karacic (Florida State University), Claire Newton (Université du Québec à Rimouski), Iona McRae (University of Sydney), Hélène David-Cuny (Independent Illustrator), Ivan Stepanov (University of New England), Yaaqoub Youssef Al Aali (Dubai Municipality), Mansour Boraik Radwan (Dubai Municipality), Hassan Zein (Dubai Municipality), and Lloyd Weeks (University of New England), "The Wadi Suq Period, as Seen at Saruq al-Hadid, Dubai"
The Wadi Suq period (ca. 2000–1600 B.C.E.) in southeastern Arabia has traditionally been considered something of a "dark age." More recent understandings suggest that people of the Wadi Suq may have developed lifeways that were strikingly different from

the ones that had existed for the preceding 1000 years without necessarily abandoning the places previously occupied. This paper looks in-depth at the site of Saruq al-Hadid to provide insight into the poorly understood Wadi Suq period. Wadi Suq deposits, excavated between 2015 and 2017 by the Saruq al-Hadid Archaeological Research Project (SHARP) under the auspices of the Dubai Municipality, consisted of a thick concentration of animal remains within a sand matrix. The presence of numerous hearths and ash pits dated to the Wadi Suq period provide the chronometric basis for the assessment, which is corroborated by stylistic analysis of Wadi Suq ceramics. This paper presents the deposits in detail, then considers how they add to our understanding of the Wadi Suq period of southeastern Arabia more broadly. Saruq al-Hadid's Wadi Suq deposits represent a strong microlithic tool industry; heavy exploitation of marine and terrestrial animal resources; little use of copper-based material; a preponderance of hand-made ceramics; and a striking number of pounders and groundstone tools. Evidence points to a strong integration of the coastal, desert, and piedmont zones; a local environment of low dunes stabilized by vegetation; and an intensification in use of the site during the Wadi Suq period.

9E. Environmental Archaeology of the Ancient Near East

CHAIRS: Madelynn von Baeyer (Harvard University) and Melissa Rosenzweig (Northwestern University)

Phillip J. Silvia (Trinity Southwest University), A. Victor Adedeji (Elizabeth City State University), Ted E. Bunch (Northern Arizona University), T. David Burleigh (New Mexico Tech), Robert Hermes (Los Alamos National Laboratory), George Howard (Restoration Systems), Malcolm A. LeCompte (Comet Research Group), Charles Mooney (NC State University), E. Clay Swindel (Comet Research Group), Allen West (Comet Research Group), Tim Witwer (Comet Research Group), James H. Wittke (Northern Arizona University), Wendy S. Wolback (DePaul University), and Dale Batchelor (EAG Laboratories), "The 3.7kaBP Middle Ghor Event: Catastrophic Termination of a Bronze Age Civilization"
This paper surveys the multiple lines of evidence that collectively suggest a Tunguska-like, cosmic airburst event that obliterated civilization—including the Middle Bronze Age city-state anchored by Tall el-Hammam—in the Middle Ghor (the 25 km diameter circular plain immediately north of the Dead Sea) ca. 1700 B.C.E., or 3700 years before present (3.7kaBP). Analyses of samples taken over twelve seasons of the Tall el-Hammam Excavation Project have been and are being performed by a team of scientists from New Mexico Tech, Northern Arizona University, NC State University, Elizabeth City (NC) State University, DePaul University, Trinity Southwest University, the Comet Research Group, and Los Alamos National Laboratories, with remarkable results. Commensurate with these results are the archaeological data collected from across the entire occupational footprint (36 ha) of Tall el-Hammam, demonstrating a directionality pattern for the high-heat, explosive 3.7kaBP Middle Ghor Event that, in an instant, devastated approximately 500 km^2 immediately north of the Dead Sea, not only wiping out 100% of the Middle Bronze Age cities and towns, but also stripping agricultural soils

from once-fertile fields and covering the eastern Middle Ghor with a super-heated brine of Dead Sea anhydride salts pushed over the landscape by the Event's frontal shockwaves. Based upon the archaeological evidence, it took at least 600 years to recover sufficiently from the soil destruction and contamination before civilization could again become established in the eastern Middle Ghor.

Brita Lorentzen (Cornell University), Sturt Manning (Cornell University), and Nikolas Bakirtzis (The Cyprus Institute), "Out of the Woods: Extracting Environmental History from Medieval and Post-Byzantine Monuments in Cyprus"
The foundation of numerous monasteries and richly decorated chapels on the forested slopes and ravines of the Troodos Massif in Cyprus during the 11th–16th centuries A.D. mirrors the expansion of human habitation in the mountainous region, which had important environmental ramifications for the island. However, the exact construction dates and histories of these buildings are only approximately known, based on subjective stylistic and typological criteria and a few inscriptions that are not always directly related to the building or its associated artwork.

Dendrochronology (tree-ring dating) permits precise dating to the year when trees were cut, offering invaluable information on historical wood materials used by builders and artists. Tree-ring records can further be used to source where timbers were cut, and to produce long-term data on past climate and environment, thereby providing information on long-term changes in timber acquisition, wood economy, and anthropogenic impact on the Cypriot landscape. This paper will provide preliminary results from a dendrochronological survey, conducted by the Cornell Tree-Ring Laboratory and the Cyprus Institute with the support of the Cyprus Department of Antiquities, of selected Byzantine and post-Byzantine monuments in Cyprus. The survey included sampling and analysis of painted timbers and wooden icons, using a new minimally destructive scanning technique we developed in the field. Results thus far show great promise in using dendrochronology to date the island's wooden cultural heritage. It further reveals extensive use of local timber resources until the mid-20th century, and specialized selection of wood used for religious artwork and decoration.

Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute) and Justin S. E. Lev-Tov (Independent Scholar), "Large-Scale, Interoperable Zooarchaeological Data: The Biometrical Database of Near East and Eastern Mediterranean Fauna"
Zooarchaeologists have two great advantages when it comes to data analyses. The first is that faunal remains are often recovered in large quantities in excavations, providing us with an abundance of information to document. The second advantage is that zooarchaeologists tend to collect more "standardized" data than other areas of archaeology, particularly for descriptions of taxonomy and anatomy, but also age characteristics and osteometrics. These advantages have helped zooarchaeology lead the way in data integration, as demonstrated by several recent studies. How is this kind of large-scale data integration achieved? And how do we know we can trust data collected by others? In this paper, we discuss the Biometrical Database of Near East and Eastern Mediterranean Fauna project, an effort to build a massive body of free and open access zooarchaeological specimen data to facilitate and improve research and instruction. The

project involves collaboration of many colleagues working to publish and aggregate large and interoperable datasets. We discuss the status of the project and describe the methods used to document and contextualize data, integrate data for aggregation and analysis, and link data to other relevant collections and information resources curated across the Web.

John M. Marston (Boston University), <u>Kali R. Wade</u> (Boston University), and Melissa Cradic (University of California, Berkeley), "Microbotanical and Macrobotanical Remains from Middle Bronze Age Tomb 50, Tel Megiddo"
In 2016, a monumental masonry-constructed chamber tomb dating to the MB III period (ca. 1600–1550 B.C.E.) was excavated at Tel Megiddo, in the Jezreel Valley of northern Israel. This tomb, dubbed Tomb 50, stands out from the hundreds of other burials previously excavated at the site due to its context, excellent preservation, and unique in situ finds, including an elaborate assemblage of high-status grave goods. Although the tomb was re-opened during its use phase to deposit secondary inhumations, it has remained undisturbed by human activity since being sealed in antiquity. Detailed excavation methods, including the pioneering use of digital recording techniques previously presented at ASOR Annual Meetings, allowed comprehensive recovery of all artifacts, osteological remains, and also botanical remains from this mortuary context. Here we present the results of integrated microbotanical (phytolith) and macrobotanical (seed and wood) analysis from this tomb in order to assess the role of plants and plant-derived artifacts in the mortuary customs practiced in high-status mortuary rituals of the Middle Bronze Age at Megiddo. Several botanical samples come from open platters placed as grave offerings, which also contained faunal remains and evidence of charring, suggestive of mortuary ritual. We associate these remains with the minimum of nine individuals interred, where possible, especially the three individuals found as primary inhumations, and integrate botanical data with other lines of evidence from these burials to gain further insights into how and why specific plants were chosen for inclusion in these mortuary contexts.

Kathleen M. Forste (Boston University) "Archaeobotanical Evidence of Orchard Production at Early Islamic Ashkelon"
The study of agricultural economy in Palestine during the Early Islamic period has gained momentum among archaeologists in recent years, with an increasing number of studies grounding interpretations of agricultural production in direct archaeobotanical evidence (seeds, fruits, plant parts, and wood charcoal). Using archaeobotanical remains recovered from Early Islamic deposits at Ashkelon, an ancient city on the Mediterranean coast of modern-day Israel, I will investigate the role that orchards played in the city's agricultural economy. The long history of olive production in Palestine points to a deep tradition of keeping orchards, which, over time, expanded to include dates, plums, and other fruits. Previous analysis of Early Islamic archaeobotanical remains from Ashkelon demonstrates an abundance of olive, date, fig, Christ's thorn (*Ziziphus spina-christi*), and plum-type (*Prunus* sp.) fruits. These remains are interpreted as evidence of food consumption and fuel use, but it has yet to be investigated whether orchards provided additional resources to the city. Wood cuttings would have been created through routine maintenance and trimming of tree limbs, and may have been readily-available sources of fuel or construction materials that would preserve as wood charcoal. By analyzing fruit

remains and wood charcoal together, I will investigate the type, origin, and potential alternative uses of orchard products. Local production would be suggested if a fruit is represented by both seed and wood remains, and alternative explanations such as use outside of the city and taphonomy will be considered.

David Ilan (Hebrew Union College-Jewish Institute of Religion) and Yorke Rowan (University of Chicago) "The Wild and the Tame: The Perception and Image of Animals in the Chalcolithic of the Southern Levant"
In this paper we will look at the corpus of animal imagery in the Chalcolithic period of the southern Levant—figurines, applied reliefs, engraved depictions, and paintings. We will tabulate and graph the images by species, material, breakage patterns, and find-context, and ask the following questions: What were the roles of animal portrayals? How did Chalcolithic people view the animal world? How did they relate to wild versus domesticated species? We will engage with the interpretive frameworks proposed by Ucko, Bailey, Lesure, Marcus, Keel, and Talalay, among others, and propose some new ways of evaluating zoomorphic imagery.

9F. Archaeology of the Near East and Video Games

CHAIR: Tine Rassalle (University of North Carolina at Chapel Hill)

Vincent Gonzalez (ReligiousGames.org), "Formless and Void: the Emergence of Biblical Lands in the Video Games of the 1980s"
Between 1982 and 1990, approximately 40 new video games were created for Christian and Jewish players. Whether through blocky graphics or on-screen text, the majority of these games took it upon themselves to recreate biblical lands in some sense. Because these first experiments in religious gaming had limited memory and graphical capacity, they could not present visual realism, but they nonetheless strove to create visions of Egypt, Jerusalem, and Jericho that would resonate with pious players. This paper explores the aesthetic, historical, technological, and theological decisions that developers made in creating these early religious video games, and asks to what extent do they establish patterns that continue to orient religious video game creation.

Nathan Light (University of Tennessee) and Erin Darby (University of Tennessee), "Gaming the System? Video Games, Research Methods, and the Iron Age Levant "
Copious research over the past several years has demonstrated the potential in educational simulation and role-playing games; however, Near Eastern archaeology has been slow to adopt gaming applications in educational settings. Simulation games in the entertainment sector and those created within the context of theological education incorporate Iron Age materials from the Levant but do not focus on cultivating research skills or evaluating the reliability of textual and archaeological sources.

Because these games lack space for critical reflection on how the game content was generated, especially as pertains to the visual materiality of the game environment, they may actually confuse participants about the true process of research in these areas and

spread misinformation about the ancient Near East and the biblical text. Even within higher education, digital history-centered simulations provide fewer opportunities for players to incorporate and reflect upon research methods.

This paper will address the various benefits and concerns associated with digital role-playing games that include Iron Age material culture, with a particular eye to the combination of archaeology and biblical texts. In so doing, the paper will discuss whether the digital and/or role-playing formats of games are able to develop critical self-reflection, which would otherwise enable the player to analyze the facticity of the game world. The paper will also discuss the unique problems arising from game narratives and will take into account the psychological impacts of digital and role-playing formats and their effects on learning.

Christian Casey (Brown University), "Tombs, Temples, and Blood—Assassin's Creed Origins as a Digital and Pedagogical Tool"
Assassin's Creed Origins is the second last title in the long-running Assassin's Creed series of video games. The story of the main character is fictional, but it takes place within the places and historical events of Ptolemaic and Roman Egypt. The French software company Ubisoft undoubtedly created the game to appeal to fans of the series, most of whom are experienced gamers, but the game's creators also went to great lengths to recreate the setting as accurately as possible. As a result, the game is a rich and delightful experience for any Egyptologist, even for those with little interest in videogames.

In this paper, I will consider the value of Assassin's Creed Origins to the field of Egyptology. What can Egyptologists learn by playing it? How will it influence future generations of students, for whom this game may be their first introduction to the field? And finally, how can educators utilize this game as a pedagogical tool in an academic setting? In order to answer these questions, I will evaluate the success of Ubisoft's attempt to build a playable game within a virtual recreation of ancient Egypt.

This paper will compare Origins' reconstructions to the known facts of Egyptian architecture, landscape, and language. I will also use this opportunity to explore broader questions about the value of reconstruction and its shortcomings, with a particular view to the unique limitations faced by any attempt to reconstruct the Egyptian language. Finally, I will describe Ubisoft's latest project: The Hieroglyphics Initiative.

Terhi Nurmikko-Fuller (Australian National University), "Cuneiform and Dovahzul: Assessing the Relationship between an Ancient Script and the Dragon Tongue in Elder Scrolls V: Skyrim"
In this paper, the fictional universe of Tamriel—the setting for Bethesda's Elder Scrolls V: Skyrim—is described and commented on from the combined perspectives of philology, linguistic analysis, and narrative deconstruction. The primary focus of the paper rests not in the analysis of the in-game characters and their interactions, but on what will be shown to be superficial similarities between the constructed language Dovahzul (Dragon Tongue) and ancient Mesopotamian cuneiform scripts. This

comparative, morphological analysis touches on the visual appearances of the two writing styles, the grammatical similarities between the languages (with the latter focusing exclusively on ancient Sumerian), and the lack of overlap in terms of capturing semantics.

9G. Senses and Sensibility in the Near East

CHAIR: Kiersten Neumann (Oriental Institute, University of Chicago)

Kiersten Neumann (Oriental Institute, University of Chicago), "From Raw to Ritualized: Following the Trail of Incense of the Assyrian Temple"
From the moment a temple's foundations were laid to the daily offerings presented to the gods, incense played a fundamental role in marking the sensory landscape of the Assyrian temple of the first millennium B.C.E. Fumigation offered a way to purify the land prior to laying foundations, the smell of timber characterized construction and renovation, while incense burners and oil stands emitted potent aromas as nourishment for the gods. Exploring the ways in which aromatics were employed within ritualized practice demonstrates their ability to transpose activities and materials into a realm beyond the earthly, into the domain of the divine and otherworldly. The means by and contexts within which these aromatic materials were acquired speak to the cultural value and meaning associated with these resources and their effect on people's senses. Visual and textual sources provide commentary, for example, on the regions from which cedar was obtained, exposing a long-standing conception of such landscapes as distant, wild, exotic, and otherworldly. Comparable associations logically extend to the olfactory components of cedar in the context of ritualized practice, the smell of burning cedar transplanting a person beyond their earthly surroundings. We might extend this train of thought further to the social context of both the acquisition and use of such olfactory substances, the raw materials being obtained during royal military campaigns, as tribute given to the king— an intermediary between gods and men—and by way of elite exchange, while temple practice was staged within the similarly elite context of the royal court.

Dora Goldsmith (Freie Universität Berlin), "Smellscapes in Ancient Egypt"
The ancient Egyptians imagined the world naturally as a chaotic, dangerous, unjust, and evil-smelling environment. The world in its natural state smelled bad. *Isfet*, the world of chaos and evil, reeked of fish and fowl. The ancient Egyptians believed that it was their civilization that brought order, justice, cities, and sweet smells to the world. In the ideal world of *ma'at*, the world of order and justice, the sweet aroma of unguents and flowers filled the air. The ideology of *ma'at* and *isfet* incorporated not only sensory representatives, in the form of olfactory prototypes, but also spatial representatives. The idea of the stench of the faraway land, the foul odor of uncivilized life, was represented by the swamps of the Nile Delta. The concept of the sweet, familiar smell of home was embodied by cities, the fragrance of civilized life. Within the human-made, ancient Egyptian urban environment, each area and establishment had its own special smell, defined by the time of year and the activities that took place within them. The written sources elaborate on the sweet scent of the streets imbued with incense and myrrh during festivals, the perfume of the queen that fills the halls of the palace, the smell of ritual

offerings getting mixed in the cult chamber of the temple, and the aroma of incense burnt in simple houses. Nevertheless, the texts do not fail to describe the stench of industrial areas, drunkards whirling around in pleasure in the streets, and the unpleasant smell of the sick.

Dan Belnap (Brigham Young University), "Whence Is That Goodly Fragrance? The Ritual Manipulation of Scent in the Ancient Israelite Cultic System"
Catherine Bell has suggested that ritual changes the bodily experience by creating an intelligible cosmos which the body can now interact with in ways that it could not before. For such transformation to be effective, the surrounding environment is manipulated so that the body can recognize the new, or highlighted, aspects of the cosmos, thereby interacting with the cosmos in a more effective manner. While the environment can be manipulated in a variety of ways to bring about an effective ritual event (e.g., architecture, timing of the discrete rites, geography, weather, etc.), the manipulation is ultimately manifested in the perception through the individual's senses. Thus as the ritual event creates or revises the physical environment it also affects the sensory perceptions, thus creating new paradigms or reinforcing established ones in which the ritualized body can now interact.

Scent appears to have played such a role in ordering the cosmos, the manipulation of scent signifying movement from one state of existence to another. Much has been written concerning the ancient Israelite cultic system, particularly its relationship to the Israelite definition and formation of the cosmos. As most scholarship has noted, the building proper and its accoutrements represent the divine world and thus the communal and individual experience reflect the process by which Israel transcended the mortal realm entering into the presence of God. Similarly, the ritual components, specifically scent manipulation, were meant to facilitate the individual's movement, physically and symbolically, from one realm to the other as represented in the sancta.

Neville McFerrin (Sweet Briar College), "Constructed Ideologies: Proprioception, Bodily Experience, and the Space of Kingship at Persepolis"
The reliefs that enliven the structures of Persepolis invite the viewer to consider his or her relationship to the world of depiction, conflating the experiences of the visitor with the imaginal space of the depicted through multi-sensorial interplays that, through encapsulating the intersections of sensation, perception, and experience, allow the visitor to constitute his or her role in the imperial process. While reciprocal systems of sensorial interaction such as touch are explicitly referenced in reliefs throughout the site, the Takht itself, and the structures upon it, also engage the viewer, activating sensory modes beyond the Aristotelian five. This paper focuses on proprioception—the awareness of space and surface, both the space of the body itself, and of exterior spaces and surfaces—as a tool through which to explore the experience of space and scale in the constructed environment of Persepolis, suggesting that much as sight, sound, taste, and smell depend on touch, so too is touch underscored by senses of space and spatial interaction. The construction of space on the site is itself a form of communication, one that, by engaging and transfiguring the visitor's sense of proprioception, provides an experiential demonstration of the ideology of Achaemenid kingship. This structural argumentation

encourages the visitor to internalize the power differentials implied by the use of scale in the depiction of figures, and through this intertwined process of embodied interaction and individual conceptualization, to accept the imperial policies that structures and architectural adornments alike espouse throughout the site.

Robert Smith (Mid-Atlantic Christian University), "Water and Water Features in Creating the Hierotopy of the Abila Pilgrimage Complex in *Palaestina Secunda/Jund al-Urdunn*"
Water played a central role in creating a powerful sensory and religious experience in Abila's Byzantine/Umayyad pilgrimage complex. The site, located in an arid region, overlooked a verdant valley associated with memories of the biblical past. The venue, in the heart of the city, began as a Roman bathhouse supplied by an aqueduct from Ain Quwaylibah a kilometer away. The Christian community transformed that public facility in the fifth century into a three-aisled basilica and later expanded it to a five-aisled transept church surrounded by a pilgrimage complex. Worshippers attracted by perceived spiritual benefits and the multisensory experience sustained the complex through religious and seismic upheavals until 749 C.E.

This presentation describes and interprets the architectural features, preserved artifacts, and physical sensations of the complex. Together these items created meaning-rich sensations for believers as they moved through mosaic and *opus sectile* floored passages, participated in rituals, and collected *eulogia*. In the complex, the clergy directed waters from the aqueduct to splash down a 3 m waterfall, to wash over a large carved relief icon, and to sacralize objects. The precious water disappeared into pipes and drains to burble up in a fountain and fill deep cisterns. The water quenched thirst and with it pilgrims washed away both physical and spiritual contamination. The sights, sounds, smells, taste, wetness, and cooling of water created a hierotopy appreciated by pilgrims, some of whom left prayers inscribed in Kufic.

10A. Cultural Heritage Management: Methods, Practices, and Case Studies II

CHAIR: Suzanne Davis (Kelsey Museum of Archaeology, University of Michigan)

Glenn Corbett (Council of American Overseas Research Centers), "The ACOR Photo Archive: A New Platform for Studying Jordan's Cultural Heritage"
The American Center of Oriental Research (ACOR) in Amman recently launched a new web-based photo archive that now features more than 10,000 high-resolution digital images of cultural heritage sites from Jordan and the surrounding region. The online archive, being developed with a grant through the U.S. Department of Education, includes spectacular aerial photographs of hundreds of sites in Jordan, Syria, Yemen, and Saudi Arabia taken by renowned author and photographer Jane Taylor, as well as a growing collection of Jordan photography by famed journalist (and archaeological enthusiast) Rami Khouri. In the coming years, the archive will continue to grow as new collections from ACOR's rich archival holdings are digitized and made available. In addition to showcasing the archive and how these collections provide new perspectives

on threatened and at-risk heritage landscapes across the Middle East, this paper will discuss the practicalities and challenges of establishing a new archival preservation project according to industry standards, as well as how ACOR plans to grow its archival program for the future.

Federico Buccellati (International Institute for Mesopotamian Area Studies), "Research, Communication, and Identity in Times of Crisis: The Example of Tell Mozan"

The crisis which has engulfed Syria in these last seven years has, in addition to its terrible toll in human life, also negatively impacted archaeological projects. Tell Mozan is the only foreign project which has maintained a continuous presence throughout the period in such a way as to deeply involve local communities, and as such has not only become a model for archaeological projects but also shown how such projects can be a beacon of culture in times of conflict. While it is impossible for foreign staff members to visit the site, local staff members have been able to provide uninterrupted monitoring of the site, perform maintenance on the architectural structures, carry out pottery analysis, and welcome visiting groups from nearby communities. This was not a "bare minimum" intervention, as protective structures were rebuilt and a planned eco-archaeological park was realized. Foreign staff members have continued their research on aspects of the finds but have also worked on several exhibits showcasing both the archaeological finds from the site as well as the strategies that have enabled the project to remain active. These exhibits, which subsequently traveled to Syria within the territory surrounding Tell Mozan, communicated the importance of protecting cultural heritage and the shared pride in the archaeological results for which Tell Mozan is known on an international level.

Leticia R. Rodriguez (Santa Clara University), "'Repatriating' and Replicating Ancient Identity in Cyprus"

In June 2017, a new open-air museum was inaugurated in the village of Akdeniz near the northern shores of Cyprus. Supported with EU funding, the permanent exhibition commemorates the ancient terracotta sculptures unearthed nearby at the sanctuary site of Agia Eirini between 1927 and 1931. Notably, none of the over 2,000 original clay figurines—today divided between the Cyprus Museum in Nicosia and the Medelhavsmuseet in Stockholm—were on site for the event; rather, the opening celebrated the installation of a collection comprised entirely of replicas. These reproductions constitute the first phase in a series of ambitious new cultural heritage initiatives on the island, with goals ranging from heritage education to the hopeful repatriation of the Nicosia and Stockholm terracottas to their "land of origin."

In this paper I examine the Akdeniz replica project as symptomatic of larger practices of reproduction and repatriation emerging in Cyprus. I argue that, in addition to reproducing physical artifacts as a means to the recovery of their originals, these initiatives also reproduce a burgeoning demand for repatriation recently witnessed in the region, particularly in Turkey. Ultimately, through a comparison of specific Cypriot and Turkish cultural heritage management practices, I consider how these Cypriot initiatives at times participate in—and at other times work against—an "Ottomanist" museological discourse

that dates back to the foundations of the Imperial Museum in Istanbul, whereby acts of repatriation are tantamount to the restoration of both cultural property and a shared territorial identity.

Douglas Clark (La Sierra University), Suzanne Richard (Gannon University), Andrea Polcaro (University of Perugia), Marta D'Andrea (Sapienza University of Rome), and Basem Mahamid (Department of Antiquities of Jordan), "The Madaba Regional Archaeological Museum Project: Community Archaeology in Its Third Season (May 2018)"
The Madaba Regional Archaeological Museum Project (MRAMP) represents an international American-Italian-Jordanian initiative dedicated to establishing a new regional archaeological museum in the city of Madaba, Jordan. The museum will showcase the material culture from over a dozen archaeological projects in the region. Since 2015, MRAMP has launched three field seasons in the quest to clear a part of the Madaba Archaeological Park West occupied by a late Ottoman-period settlement, which will become the ground floor of the new museum. As part of the 2018 season, nearly two dozen team members continued clearing the area of the settlement, excavated soundings beneath the floor in one of the later buildings, mounted probes in proposed locations for superstructure pillars, and began exploring an area once inaccessible because of a small, make-shift, modern building. Integrated within this initiative during and between seasons, MRAMP has benefited from engagement with wide segments of local, regional, national, and international stakeholder communities who have contributed to MRAMP's quest to provide a complete and comprehensive narrative of the Madaba region's illustrious past, while creating numerous positive impacts on the community and its economy. The project has been educating and training the local community in a wide range of employable areas and disciplines, such as consolidation, preservation, construction, architectural skills, and a plethora of archaeological, museum, and management skills, all in order to ensure the development, continued growth, and sustainability of this new museum endeavor.

Jenna Morton (PAX Foundation) and Bert deVries (Calvin College), "Why Cultural Heritage Management: A Community Perspective in Umm el-Jimal, Jordan"
Working from the premise that "archaeology of inclusion" is the emergent standard methodology in the field of archaeology, the Umm el-Jimal Project engaged in a community survey to understand the relationship between the community members, whose village encircles the antiquities at Umm el-Jimal, and the site itself, in an effort to ascertain effective strategies for cultural heritage management and preservation. The survey assesses the modern community's interest in engaging with the archaeological site as a heritage, water, and employment resource. The survey also measures change in opinion before and after the installation of site presentation facilities, and the implementation of training, awareness, and other on-site programs. The intent is to gauge how conservation and presentation of the Umm el-Jimal archaeological site can best enhance community heritage identity and improve the community heritage economy. Presumably, survey outcomes will enable: 1) local community engagement in site planning and development; 2) local community empowerment, culturally and

economically, by inclusion in the execution of jointly-made plans; 3) project sustainability; and 4) enhanced potential for long-term site preservation.

10B. Rural Pasts: Complexity and Variation Beyond the City
CHAIRS: Catherine Kearns (University of Chicago) and Georgia M. Andreou (Brown University)

Georgia M. Andreou (Brown University), "Socioeconomics of Agrarian Production: Rural Cooperatives in the Archaeology of the Eastern Mediterranean"
This paper reconsiders traditional perceptions of rural life in the archaeology of the eastern Mediterranean. It examines the archaeological and geographical criteria, as well as ethnographic paradigms used to write the history of rural communities. It argues that broader interpretations, which rely on settlement patterns along with—often reductionist—GIS models of ancient land-use, must consider alternative views that also highlight agency and entrepreneurship in agrarian production.

This paper combines anthropological research with archaeological evidence to examine the socioeconomic dimensions of rural cooperatives, and subsequently attends to their often formative (as opposed to subsidiary) role in regional and interregional economies. The second part of the paper expounds the evidence for rural cooperatives and highlights their input on a more nuanced rural history, using the case of the island of Cyprus in the second millennium B.C.E.

John M. Marston (Boston University), "Rural Agricultural Strategies in the Roman Eastern Mediterranean"
The Roman Empire controlled a vast array of people, settlements, and landscapes among the eastern provinces, ranging from developed urban economies of the Aegean coast to the sparsely settled Caucasian highlands and Arabian desert. In all of these areas, however, rural economies dedicated to agricultural production formed the backbone of the imperial taxation system needed to feed urban populations and provision military units across the Empire. Despite the importance of both farming and animal husbandry to the Roman political economy, few empirical studies from the Roman east include quantitative reporting of the primary products of agriculture—botanical and faunal remains—rendering details of how these rural economies were structured uncertain and reliant on generalizations based on scattered textual sources rather than primary evidence.

In this paper, I review and integrate all botanical and faunal studies from Roman sites in Anatolia and the Levant published to date in order to consider the structure of rural agropastoral economies, in light of what is known about taxation systems and political economy from other lines of archaeological and textual evidence. I argue for the importance of considering local environmental factors, as well as differences in local governance structures, in interpreting the archaeological remnants of agriculture, and caution against blanket generalizations of "the Roman agricultural economy" on a macroregional scale.

J. P. Dessel (University of Tennessee, Knoxville), "Acting Locally: Rethinking the Late Bronze Age and Iron Age I from a Village Perspective"
This paper will explore the long-neglected nature of rural complexity in the southern Levant. Much of what is known about the second millennium B.C.E. in the Levant is derived from the excavation of urban settlements and from ancient archives as well as the Hebrew Bible. Based on these data, the Late Bronze Age is traditionally portrayed as a period of sophisticated internationalism, Egyptian domination, and a hierarchical city-state organization. The prosaics of rural food production upon which this internationalism was founded are taken for granted. So too are the rural politics which are, most usually, ignored.

Missing from these interpretations is a consideration of long-lived or multi-period village sites. Recent excavation has confirmed the existence of such villages, providing a sorely-needed corrective to the urban bias in current archaeological interpretations. This "bottom up" approach recognizes that many forms of social, political, and economic vibrancy occur at the rural level. Based on these data, Late Bronze Age-Iron Age I villages suggest the existence of a real rural diversity and complexity. By focusing attention on long-lived villages, we will be forced to rethink the very nature of second-millennium urbanism, suggesting a more limited political and economic role of the city against a backdrop of an extensive and dynamic rural heartland. Simplifying or ignoring such evidence prevents us from fully understanding the historical transformation from thriving imperial systems and their dissolutions to the development of smaller polities based on ethnic/social identities.

Claudia Glatz (University of Glasgow), "Commensality, Ritual, and the Making of Borderland Communities in the Zagros-Mesopotamian Interface"
Over the course of the third and second millennia B.C.E., the Diyala region and adjacent Zagros valleys underwent a series of dramatic and at times counterposing transformations in settlement practice. In the early third and the late second millennia, for instance, lowland agricultural settlements were thriving while cemeteries dominate the archaeological record of the highland valleys, pointing to a more mobile lifestyle focused on pastoralism in higher altitudes. At other times, such as in the early part of the second millennium, settlement records are more comparable across different altitudes and ecological zones. Cultural traditions vary both within and between the lowland and highland valleys, pointing to oscillating phases of connectivity and distancing that interpolate different settlement and subsistence practices on the one hand and political geographies on the other. This suggests the existence of community ties that straddled this topographically and environmentally heterogeneous borderland zone. In this paper, I examine the formation and transformation of a series of such highland-lowland borderland communities from the perspective of commensality and ritual, two central and connected arenas of social and political production and identity negotiation.

Grace Erny (Stanford University), "Re-evaluating the Rise of the Polis in Spatial Terms: The Case of the Rural Sanctuary"
In this paper, I explore the links between social power and rural sanctuaries in mainland Greece during the rise of the polis in the eighth century B.C.E. I approach this problem through the lens of a single case study: the Late Geometric polis of Argos and the

sanctuary of Hera at Prosymna in the Argive Plain (the Argive Heraion). My argument falls into three parts. First, I synthesize and critique the dominant accounts of the eighth-century rise of the polis, focusing in particular on how these narratives describe the development and elaboration of sanctuaries outside the city center. Next, I argue that the theoretical stances of Henri Lefebvre and David Harvey, who maintain that space is socially produced and that it both reflects and constitutes power relations in society, provide a useful framework with which to approach aspects of polis formation that have previously been neglected. Finally, I review the evidence for Argos and the Argive Heraion in the late eighth and early seventh centuries, focusing on two main developments: the massive early construction efforts at the Argive Heraion and the evidence for increased spatial zoning and social differentiation within the settlement of Argos itself. I conclude that the Late Geometric Argive Heraion can be understood as a Lefebvrian "dominated" space, where unequal power relations were displayed and reinforced in a rural context during the development of the polis of Argos.

10C. GIS and Remote Sensing in Archaeology

CHAIRS: Tiffany Earley-Spadoni (University of Central Florida) and Ioana A. Dumitru (Johns Hopkins University)

Dominique Langis-Barsetti (University of Toronto), Scott Branting (University of Central Florida), Joseph Lehner (University of Central Florida), Sevil Baltalı Tırpan (Istanbul Technical University), Tuna Kalaycı (FORTH Institute of Mediterranean Studies), Yasemin Özarslan (Koç University), Paige Paulsen (Johns Hopkins University), and Samuel Martin (University of Central Florida), "3D Scanning, Simulation, and Modeling at Kerkenes (Turkey)"
The use of cutting-edge digital techniques has been a hallmark of the Kerkenes Project (kerkenesproject.org) since its inception in 1993. Such technologies are essential to integrative research at this large and complex late Iron Age city. Over the past 26 years a wide variety of new and emerging techniques have been developed and applied at this important site in Turkey. This report details the latest developments at Kerkenes in this intersection of archaeology and digital humanities.

Ioana A. Dumitru (Johns Hopkins University) and Michael J. Harrower (Johns Hopkins University), "Mapping and Modeling Obsidian Trade Networks in Northern Ethiopia"
This paper reports results of research on socioeconomic networks of obsidian exploitation and trade, undertaken in the Tigray Province of northern Ethiopia, as part of the Southern Red Sea Archaeological Histories (SRSAH) Project. Methodologically, this study combines hyperspectral satellite imagery to detect and map obsidian sources, X-ray fluorescence to geochemically characterize obsidian, and social network analysis to model human-environment interactions and to examine the connectivity of socioeconomic networks of obsidian exploitation and trade. To integrate regional and local dynamics, this study employs a multi-scalar approach, charting the development of socioeconomic networks at the micro-scale of individual archaeological sites, the meso-

scale represented by the SRSAH systematic survey area (which covers 100 km^2 of mountainous terrain), and the macro-scale comprised of the wider network that developed in northern Ethiopia and the Red Sea region. The study also traces the development of socioeconomic networks diachronically, including aspects of the networks that remained consistent through time, thereby potentially being related to natural obsidian availability, as well as aspects that changed over time, potentially as a result of changing socioeconomic and culture-historical circumstances.

Howard Cyr (University of Tennessee), Robert Darby (University of Tennessee), and Bradley Erickson (University of North Carolina, Chapel Hill), "Location! Location! Location! Investigating the Influence of Local Geomorphology on Site Selection at the Late Roman Fort of 'Ayn Gharandal, Southern Jordan"
Flanked by the Negev Highlands to the west and the imposing Sandstone and Crystalline Mountains of the Shera'a on the east, the Late Roman fort at 'Ayn Gharandal (Arieldela) sits between these two rugged and unforgiving landscapes in the harsh desert environs of the Wadi Arabah. The location of the Roman fort at 'Ayn Gharandal, which stands near the mouth of Wadi Gharandal, would seem an ill-advised choice for a fort and bath house complex. However, a broad-scale geomorphological analysis using satellite imagery and aerial photographs suggests that Roman builders may have specifically chosen the location because of its unique geomorphological and hydrological conditions. This paper presents a multi-disciplinary approach that blends geoarchaeological, geophysical, and archaeo-spatial datasets to develop a Roman-era landscape reconstruction of 'Ayn Gharandal. Using this model, we discuss the influence of local and regional environmental conditions on site selection. This research not only investigates the specific role the wadi environment played in construction design of the fort and bathhouse but speculates on how unforeseen changes in environmental conditions may have dramatically affected Roman occupation at 'Ayn Gharandal.

Yalda Razmahang (Université de Lyon), Tobin Hartnell (American University of Iraq, Sulaimani), and Ricardo Cambral (University of Coimbra), "Archaeology at Risk: Documenting the ISIS Destruction of Ashur"
Since Abadi's declaration of victory over ISIS, it has become possible to directly access important heritage sites in northern Iraq for the first time since 2014. While ISIS conducted a program of deliberate destruction at Nineveh and Nimrud, starting possibly as early as October 2014, the first unconfirmed report of destruction at Ashur appeared in May 2015 when the *International Business Times* reported an explosion at the Ashur Citadel. The site was liberated from ISIS control in mid-December 2016 and was the subject of an immediate damage assessment from the State Board of Antiquities. This paper will compare the immediate damage assessment with our subsequent follow-up visit and documentation of the site using a remote-piloted multicopter. The paper will conclude with a discussion of the potential for aerial survey to document previously undetected sub-surface features at the site.

10D. Archaeology of Arabia II

CHAIR: J. Mark Kenoyer (University of Wisconsin–Madison)

Steven Karacic (Florida State University), "Settlement Organization in Iron Age II Southeastern Arabia"
The Iron Age II (ca. 1100–600 B.C.E.) witnessed an explosion of evidence for settlements in southeastern Arabia that is inseparable from two changes in subsistence practices: the domestication of the dromedary camel and the development of *falaj*/*qanat* irrigation. Excavations over the past 30 years have identified a number of settlements from this period and the emerging archaeological evidence has made it possible to gain insight into the internal organization of these sites. A columned hall, distinguished from other buildings by a large central room with columns, has been found at several sites. These columned halls have been the subject of a number of studies, and it is generally believed that they played a central role in the economic and social practices of the settlements in which they were found. The aim of this paper is to consider the placement of these buildings in relation to other structures within Iron Age II settlements. In particular, I will explore access to the columned halls and how this might reflect broader social and economic practices within the region.

Yiliang Li (University of Haifa) and Michal Artzy (University of Haifa) "Routes and Transshipping in the 9th–14th Centuries C.E.: The 'Maritime Silk Road'"
This study deals with maritime routes, transshipment, and ports. Specifically, it looks at temporal and spatial variation in the "Maritime Silk Road" in the 9th to 14th centuries C.E., the pre-Portuguese presence in the Indian Ocean and South China Sea, as viewed in written sources and archaeological evidence. Due to the extended routes, transshipping should be assumed once the vessels capable of plying segments of the routes are considered. The crews were familiar with different sailing conditions, the routes, and the navigation in a given geographical area. Anchorages and harbors provided supplements to the merchants, such as shelters in rough weather and monsoons. Actual transshipping could take place in an entrepôt or harbor, located in the exchange point and an area suitable for awaiting favorable trade winds. The regular trading occurred in the transshipping harbor, and in addition, exchange could be conducted among the sailors, as "sailors' trade." The requirements for a transshipping port included availability of water and food, repair capabilities for the vessels, cultic facilities, and potential residence for a possible lengthy sojourn, at times years for the merchants. Local authorities managed the fees and taxations and laws, whether local or regional. While studies abound, the topics of transshipping, changes of routes, and ports in tandem with geo-political circumstances in this long-distance maritime trade have not received as much of the attention they deserve.

Mark Gradoni (University of Maryland; Hood College), "Plague, Resistance, and the End of Antiquity: Endemic Disease, Demographic Resilience, and How the Arabs Emerged as a Great Power in Late Antiquity"
Recent research demonstrates how climate change and pandemic disease drastically altered the demography of western Eurasia in Late Antiquity. This paper explores the presence of *Yersinia pestis* in proximity to the Arabian Peninsula and its role in the demographic resilience of populations in Arabia to the repeated outbreaks of bubonic

plague that decimated surrounding regions from the sixth to eighth centuries C.E. Using zooarchaeological, palaeoclimatological, genomic, demographic, and textual evidence, this paper argues that the presence of the bacterium within a zoonotic reservoir of indigenous rodent species in the Middle East and North Africa directly contributed to the resistance displayed by the population of the peninsula to pandemic incidents of bubonic plague, helped protect against the associated collapse of populations and economic systems that destabilized region after the outbreak of the disease, and thereby positioned the Arabian polities advantageously for the outward expansion that inaugurated a new era of world history. Kyle Harper's recent work *The Fate of Rome: Climate, Disease, and the End of an Empire* represents an authoritative, accessible synthesis of recent trends in paleoclimatology and pathogen genomics, drawing attention to the roles that late Holocene climate variation and pathogenesis played in the transition from Late Antiquity to the Medieval period. However, in adhering to models of the spread of the Plague of Justinian emphasizing dispersion from a Central Asian origin, Harper overlooks zooarchaeological data indicating the presence of pathogenic *Yersinia pestis* in northeastern Africa as early as the Bronze Age. This paper offers an alternative theoretical model.

10E. Antioch—A Legacy Excavation and Its Aftermath

CHAIRS: Andrea U. De Giorgi (Florida State University) and Alan Stahl (Princeton University)

Jacob Lauinger (Johns Hopkins University), "Nebuchadnezzar II at Antioch? A Cuneiform Inscription from the Antioch Excavations"
In May 1937, Antioch excavators working in a Hellenistic level found a small stone fragment bearing a cuneiform inscription. As the inscription remains unpublished, the aims of this paper are fourfold: to present a transliteration and translation of the inscription's text; to argue for its attribution to the Neo-Babylonian king Nebuchadnezzar II; to consider some of the reasons this Neo-Babylonian inscription may have been found in a Hellenistic level at Antioch; and, finally, to explore the larger implications of the fragment and its find spot for our understanding of both the Neo-Babylonian imperial presence in the west as well as the history of the city of Antioch.

Tasha Vorderstrasse (University of Chicago), "Coinage and Accounts in Late Roman Antioch"
In the late spring/summer in the early fourth century, an Egyptian named Theophanes journeyed from Hermopolis in Egypt to Antioch in Syria. Theophanes left extensive records of his journey and these include the costs that were incurred while he was in Antioch, which provides us a rare glimpse into prices in Late Roman period Syria. The prices recorded in Theophanes's account can be compared to the patterns of coin circulation in and around Antioch in this period and give us an insight into the economy in Antioch and its countryside.

Alan Stahl (Princeton University) and Joe Glynias (Princeton University), "The Transition from Byzantine to Islamic Coinage in Antioch and Its Implication for the History of Settlement in the City"

The few literary sources that cover the sixth and seventh centuries in Antioch suggest a significant rupture in the wake of the earthquakes of the early sixth century and political changes of the seventh, most notably the Sasanian and Arab conquests. An examination of the coin finds from the Princeton-led excavations of the 1930s, however, presents a different picture. New attributions and analyses of the numismatic evidence suggest a continuity of settlement within the area of the classical city, especially in the vicinity of its famous porticoed main thoroughfare. This paper will examine in depth the finds of late sixth-century Byzantine and Ummayad coins from the commercial-industrial complexes of sector 17-O and present preliminary findings on the higher-status complex known as "Bath F" from sector 13-R to argue for significant continuity of urban activity across the transition period.

Trudy Jacoby (Princeton University), "Antioch—The Expedition and the Documentation"

In December 1931, the Committee for the Excavation of Antioch-on-the-Orontes was formed. Members included the Worcester Art Museum, the Baltimore Museum of Art, the Musées Nationaux de France, and Princeton University, which assumed direction of the expedition and responsibility for the publication of its results. Fieldwork began in 1932 and continued until 1939. The documentation includes photographs, inventories, fieldbooks, diaries, trench reports, drawings, and other ancillary records. In addition, we have an early movie of the expedition. The photographic documentation has been cataloged and digitized in order to preserve this material and improve access for researchers. Additional documentation includes color photography as well as other written records.

Providing online access to the archive has been a primary aim. The first step in Spring 2012 was to make the black and white images available to assist researchers. We are updating our Omeka site with additional images including some in color. Next steps to improve access will be the addition of other documentation such as find cards, field books, and some drawings so that researchers can have access to this documentation. An updated inventory of the collection was done, giving a detailed understanding of the materials and how they relate to each other. We envision the development of an interactive web site linking our documentation with the museum and the numismatics collections.

10F. Developing Isotopic Investigations in the Ancient Near East and Caucasus

CHAIRS: G. Bike Yazıcıoğlu-Santamaria (University of Chicago) and Maureen E. Marshall (University of Illinois at Urbana-Champaign)

Suzanne Pilaar Birch (University of Georgia), "An Isotopic Approach to Regional Dynamics of Neolithization in Western Anatolia and the Aegean"

Understanding the dynamics of the spread of agriculture into Europe during the Neolithic has been the focus of much archaeological research over the past several decades. Increasingly more sophisticated analytical techniques such as stable isotope analysis have allowed for better understanding of the complex interactions that occurred amongst humans, animals, and their environments during this transition. Archaeological sites in western Anatolia and the Aegean Islands are critically situated both for reconstructing the spread of domesticated animals into Europe as well as for investigating mainland-island and inland-coastal dynamics. This paper will bring together stable isotope data from bone collagen and tooth enamel of sheep, goat, deer, pig, and cow to develop a fine-resolution picture of ancient diet, environment, and mobility in the Neolithic in this region.

Estelle Herrscher (Aix Marseille University; French National Center for Scientific Research [CNRS]), Roman Hovsepyan (Institute of Archaeology and Ethnography, National Academy of Sciences of the Republic of Armenia), Adrian Balasescu (National History Museum of Romania), Alexia Decaix (French National Center for Scientific Research [CNRS]; Muséum National d'Histoire Naturelle), Remi Berthon (French National Center for Scientific Research [CNRS]; Muséum National d'Histoire Naturelle), Caroline Hamon (Trajectoires, French National Center for Scientific Research [CNRS]; Maison Archéologie & Ethnologie, René-Ginouvès), Modwene Poulmarc'h (ArchéOrient; French National Center for Scientific Research [CNRS]), and Guy André (Aix Marseille University; French National Center for Scientific Research [CNRS]), "Impact of Environment on Animal and Botanical Stable Isotope Ratios in the Neolithic Southern Caucasus and Implications for Investigation of Human Palaeodietary Behavior"

The southern part of the Caucasus, situated between the Black and Caspian Seas at the crossroads of Europe, between the Middle East and Central Asia, presents several high mountain chains and valleys providing different climatic and biogeographic systems and hosting an exceptional biodiversity with numerous endemic plant and animal species. In order to improve the reconstruction of past human dietary practices based on carbon and nitrogen stable isotope ratios, our research aims at documenting the isotopic variability of animal and botanical archaeological material from three Neolithic sites located in Armenia, Azerbaijan, and Georgia. Bioarchaeological samples consist of 163 wild and domestic terrestrial animals, 70 wild and domesticated seeds, and 38 humans. In addition, 17 modern seeds were also analyzed for stable isotope measurements. Cereal isotopic variability suggests different management of crops involving water management and the use of natural fertilizers. High carbon values for wild animals indicate a variable but significant consumption of C_4 plants, suggesting the presence of both C3 and C4 plants along the Kura and Araxes Rivers. Domestic animal high carbon stable isotope values confirm the presence of wild C4 plants in the surrounding environment. Different positions of domestic animals in the food chain suggest different herding management strategies linked to the environment. Human Neolithic isotope values suggest a heterogeneity of dietary practices with differential consumption of wild animals and freshwater, questioning the impact of environmental and cultural factors on variability of dietary practices. This research was funded by the National Agency for Research (ANR13-JSH3-0003-01).

Elizabeth Arnold (Grand Valley State University), Haskel J. Greenfield (University of Manitoba), Tina L. Greenfield (University of Saskatchewan), and Aren M. Maeir (Bar-Ilan University), "Isotopic Analyses of Donkey Burials under the EB III House Floors in the Early Bronze Age City of Tell es-Safi"

Four young adult female asses have been recovered under the floor of two EB III houses at the site of Tell es-Safi/Gath, Israel. These animals were located within a commoner domestic neighborhood at the edge of the city. This urban space represents the homes and work spaces of traders who relied upon asses as beasts of burden and were involved in trade and exchange across the region during the Early Bronze Age. This interpretation has been supported by the presence of exotic trade material, such as ivory and the stable isotope analyses of the first recovered sacrificial ass, which indicated direct trade connections with Egypt in the EB III. Additional trade connections are assessed through further stable isotope analyses by examining the mobility and life history of the recovered ass with a detailed reconstruction of diet, mobility, seasonality, and management practices obtained through sequential intra-tooth sampling and carbon, oxygen, and strontium isotope analyses.

Philipp Stockhammer (Ludwig-Maximilians-Universität München; Max Planck Institute for the Science of Human History), Dominic Anders (Ludwig-Maximilians-Universität München), Julia Kretzinger (Ludwig-Maximilians-Universität München), Michal Artzy (University of Haifa), Israel Finkelstein (Tel Aviv University), Marina Faerman (The Hebrew University of Jerusalem), Meirav Meiri (Tel Aviv University), Aren M. Maeir (Bar-Ilan University), Gisela Grupe (Ludwig-Maximilians-Universität München), Joseph Maran (Heidelberg University), and Marina Vohberger (Ludwig-Maximilians-Universität München), "New Isotopic Perspectives on Human and Animal Mobility and Nutrition in the Second Millennium B.C. Southern Levant"

This presentation is based on a comprehensive study of strontium and oxygen isotope ratios of 61 human individuals, 57 pigs, and additional soil and animal samples from Middle and Late Bronze Age and Early Iron Age key sites in the southern Levant. This is the largest corpus of strontium and oxygen isotope data that has been produced for the southern Levant so far. By comparing our results from the urban centers of Megiddo and Tell es-Safi/Gath with those of the harbor site of Tel Nami and by comparing the data with previously published material from Tel Dothan, we are able to trace individual mobility in this region to a completely new extent. Moreover, the isotopic results for the pigs suggest specialized herding practices at Megiddo and Tell es-Safi/Gath in contrast to Tel Nami, which also allows us new insights to the access and use of land for pig herding in the second millennium B.C.

Megan Perry (East Carolina University), Mallory Provan (East Carolina University), and Robert Tykot (University of South Florida), "Stable Isotope Analysis of Childhood Diet at First Century B.C./First Century A.D. Petra, Jordan"

Isotopic investigations of diet can provide unique perspectives into food acquisition in addition to dietary choices and shifts through the human life course. Here we examine childhood diet at first century B.C. and first century A.D. Petra through carbon and oxygen isotope ratios ($\delta^{13}C$ and $\delta^{18}O$) in dental enamel apatite. Isotope values from the

first molars (n=31), first premolars (n=20), and second molars (n=29) were compared to identify when dietary and trophic level changes associated with weaning occurred in infancy and to characterize the weaning and post-weaning diets of Petraean children. This weaning-related shift should be marked by a decrease in mean $\delta^{18}O$ values and a shift toward the adult bone apatite $\delta^{13}C$ values across the M1, PM1, and M2 tooth classes. In this case, the differences between tooth classes did not follow the expected pattern. A slight decrease in $\delta^{13}C$ mean values occurs between M1 and PM1, followed by no difference in M2 values. All tooth classes differed from the adult bone value mean. The $\delta^{18}O$ values show a similar pattern, with an initial decrease between PM1 and M1 means followed by an increase in M2 mean values. Thus, the expected shifts as children become less reliant on breastmilk and transition to solid foods do not appear in this sample. Immigrant children, with slightly divergent diets and water sources within the sample, could present a confounding factor.

Philipp Stockhammer (Ludwig-Maximilians-Universität München; Max Planck Institute for the Science of Human History), Stefanie Eisenmann (Max Planck Institute for the Science of Human History), <u>Tara Ingman</u> (Koç University), and Aslıhan Yener (University of Chicago), "The Scale of Human Mobility at Tell Atchana (Hatay Province, Turkey) during the Middle and Late Bronze Ages"
The Late Bronze Age in the eastern Mediterranean is characterized by large-scale mobility of people and exchange of goods. However, the moving individual itself, despite being well-represented in ancient texts, seems to escape the archaeologist's eye. Grave contexts at best give hints, suggesting that the buried individual might be of foreign descent, but can never achieve unequivocal certainty. The application of strontium and oxygen isotope analyses has proven to be an especially powerful method in the direct investigation of past migrations. In an extensive case study of individuals from the extramural cemetery at Tell Atchana (Alalakh), where in recent years over 130 burials have been brought to light, we aim to identify migrants as an empirical basis for the investigation of questions of mobility and cultural identity. Our empirical inquiries include the expected proportion of immigrants at urban sites of this magnitude and the possible detection of characteristic patterns in the burials of migrant groups. The analyses at Tell Atchana are embedded in the wider framework of the Max-Planck – Harvard Research Center for the Archaeoscience of the Ancient Mediterranean (MHAAM). In the coming years, the results will be combined with genetic studies from various sites to provide new insights into the mobility behavior of individuals and groups of people in the Bronze and Early Iron Age world of the eastern Mediterranean. This presentation focuses on preliminary results and analyses that shed light on the life histories of individuals from this first international age.

10G. Art Historical Approaches to the Near East

CHAIRS: Kiersten Neumann (Oriental Institute, University of Chicago) and Allison Thomason (Southern Illinois University Edwardsville)

Pamela Gaber (Lycoming College), "Proto-Aeolic Capitals and the Queen of Heaven"

The enigma of volutes on column capitals has interested scholars of the ancient Near East since the 19th century. Even then it was suggested that the volute capitals "are holy trees and Asherat" derived from the date palm. Since that time numerous scholars have written on the subject, usually when a new example of so-called "Proto-Aeolic" capitals has been uncovered in archaeological investigations. The prevailing theories about their origins up to now have been: 1) the volute capital derived from Bronze Age "tree of life" motifs; 2) it developed from the Egyptian lotus and lily capitals; 3) it developed from Hittite motifs; and 4) it descended from Minoan and Mycenaean motifs. None of these theories goes back far enough. If the time is taken to trace the volutes century by century, and occurrence by occurrence, it becomes clear that the volute capitals are traceable all the way back to the "reed bundles" of Inanna in Sumer. They were distributed all over the ancient Near East, but in two regions in particular they retained their original form. In ancient Israel, where the Queen of Heaven was revered as Asherah, the original motif was preserved into the Iron Age, as on the Taʿanach stand. In Cyprus, where the primary deity was the aniconic Queen of Heaven from early in the Bronze Age, the "reed bundle" motif was preserved even into the Hellenistic period. Those two cultures preserved it probably because they each revered a powerful, female deity. The volute capital descended from these.

Kristen Seaman (University of Oregon), "Near Eastern Art and Architecture in Ancient 'Global History'"

Scholars usually cite ancient Greek and Roman art-historical writing as evidence for only Greek and Roman art and architecture. Yet these texts also include discussions of art and architecture from many other cultures around the Mediterranean and the Near East. In addition, we often see evidence of cultural interaction with the Near East in visual culture that is considered "Greek" and "Roman." Therefore, in this paper, I investigate how Greek and Roman authors address Near Eastern art and architecture. Inspired by the aims and methods of "Global Art History," which considers inclusive histories of art from both "western" and "non-western" contexts in primarily the modern world, I explore the ways in which Greek and Roman art histories, anecdotes, and descriptions incorporate Near Eastern art and architecture within their narratives. I also examine inscriptions that discuss artistic styles in order to determine local perspectives. I discover that conceptions of what we would call cultural style appear in a variety of texts from the Mediterranean and the Near East. I find that such cultural styles are often compared and differentiated. And I determine that, while Graeco-Roman art-historical writing expresses a variety of positive and negative attitudes to specific examples of Near Eastern art and architecture, authors do not associate such opinions with the cultural identities of artists, architects, and patrons.

Kate Justement (Institute for the Study of the Ancient World, New York University), "A Picture of Neo-Assyrian Kingship through the Image of a King: Adad-nirari III, His Magnates, and Their Royal Stelae"

Neo-Assyrian royal stelae traditionally represent an image of a king accompanied by an inscription commemorating military campaigns and building projects. Adad-nirari III

(810–783 B.C.E.) is often characterized as a weak king who allowed strong magnates (Nergal-ereš and Šamši-ilu) to usurp control and power based largely on the five royal stelae commissioned by these two officials and their roles indicated by the texts inscribed on the stelae.

Utilizing Seth Richardson's (2016) research on Assyrian elite cosmopolitanism, I will elaborate on this topic of elites' roles and its relevance for Neo-Assyrian kingship. Particular attention will be paid to the dialectical relationship between text and image to tease out possible details of political discourse during Adad-nirari III's reign. While it might seem that the stelae can be taken as a cohesive group that signifies Adad-nirari III's weakness and the magnates' growing power, I argue that the magnates' presence in these stelae is not necessarily a sign of political or ideological weakness but rather flexibility and adaptability within the institution of kingship.

Serdar Yalcin (Macalester College), "From East to West? A Re-Assessment of the Neo-Hittite Impact on Greek Architectural Sculpture during the 'Orientalizing Period'"
The Near Eastern impact on Greek art during the so-called "Orientalizing Period" has recently been reexamined by the scholars of the ancient eastern Mediterranean. These studies have substantially improved our knowledge of the dynamics of Greek-Near Eastern relations as well as the individual artistic and technological elements at work in this interaction. This paper will address the possible eastern influences on the emergence of architectural sculpture on Greek temples in the late seventh century B.C.E., an underexplored side of the "Orientalizing" phenomenon. While some scholars have identified the Near East in general as a source for this development, it is necessary to look more closely at specific traditions. This paper suggests that specific Neo-Hittite structures in northern Syria and southern Anatolia such as the temple of 'Ain Dara in Afrin or the Karatepe citadel in the Cilician highlands likely inspired the Greek builders of the late seventh century B.C.E. I compare reliefs and sculptural programs on the earliest Greek temples, such as the Prinias temple in Crete, with Neo-Hittite temples and other public structures to reveal their similarities. In this context, a re-evaluation of the archaeological, art historical, and textual material from Greece, Anatolia, and Syria shows how the Neo-Hittite orthostats of the Iron Age functioned as an intermediary connecting the metopes and Ionic friezes of later Greek temples with the Hittite world of the Late Bronze Age.

Amy Gansell (St. John's University), "Neo-Assyrian Goddesses in Art and Myth: Eternal Models for the Mortal Queens of Nimrud"
Neo-Assyrian royal seals show the queen in the presence of a goddess, and texts record the piety of royal women. As divine devotees, queens were proximally, visually, and conceptually associated with goddesses and their divine characteristics. This paper interprets goddesses as personifications of Neo-Assyrian ideals of feminine beauty across categories of age, and, as such, as eternal models for mortal queens. I will examine visual representations and mythological descriptions of goddesses and compare them, as the ancients themselves might have, to Neo-Assyrian royal women as depicted in art and as they were presented physically, in life and death, in palace and tomb, in their regalia. In

particular, this paper interprets material from Nimrud's Northwest Palace, where headdresses, jewelry, seals, and inscriptions have been excavated from the tombs of royal women. I will also consider how, through visual tropes, not only may queens have emulated goddesses, but the Neo-Assyrian royal couple may also have simulated the mythological partnership of the state god Ashur and his spouse Mulissu.

10H. The Treasure of the Egyptian Queen Ahhotep and International Relations at the Turn of the Middle Bronze Age (1550 B.C.)

CHAIRS: Peter Lacovara (Ancient Egyptian Heritage and Archaeology Fund) and Gianluca Miniaci (University of Pisa)

Gianluca Miniaci (University of Pisa), "The Treasure of Queen Ahhotep in Context: Archaeology, Identity, Politics"
The treasure of Queen Ahhotep is one of the most acclaimed discoveries in the archaeology of the 19th century: a gilded coffin and a trove of magnificent jewels and precious objects belonging to a queen named Ahhotep was discovered in a tomb at Dra Abu el-Naga (Western Thebes—modern Luxor, Egypt) by Auguste Mariette in 1859. However, most of the information concerning this treasure and its owner still remain enigmatic: the archaeological context and the location of the tomb (now lost), the identity of the queen, her political role in the reunification of Egypt during the Hyksos experience, and the influence of Aegeans and Nubians on the rise to power of this woman. This paper aims at providing a more complete and accurate framework for understanding the international relations at the turn of the Middle Bronze Age (1550 B.C.) in Egypt/Nubia and the Mediterranean.

Betsy Bryan (Johns Hopkins University), "Interconnections in the Eastern Mediterranean at the End of the Middle Bronze Age"
Through a review of some of the iconographical materials that have been associated with interconnections between Egypt, the Levant, Asia Minor, and the Aegean at the end of the Middle and the beginning of the Late Bronze Ages, this discussion will identify some patterns that appear in the archaeological record: of materials, of techniques, of motifs, and of manners of cultural elision.

Peter Lacovara (Ancient Egyptian Heritage and Archaeology Fund), "The Treasure of Ahhotep and Contemporary Egyptian and Nubian Material Culture"
The burial of Ahhotep was replete with objects reflecting remarkably cosmopolitan influences as well as material typical of the Nile Valley in the Second Intermediate Period. The latter includes objects known not only from Egypt but also from the neighboring cultures of Nubia, particularly the Kerma Culture. The treasure of Ahhotep illustrates the importance of Nubian cultural influence at the outset of the New Kingdom and is paralleled by other finds such as the Qurna burial group now in the National Museums of Scotland. The purely Egyptian objects in the burial are also paralleled not only by contemporary burials but also by votive deposits, indicating the rather unique importance placed on Ahhotep as evidenced by this extraordinary treasure.

Sarah Murray (University of Toronto) and Sara E. Cole (J. Paul Getty Museum), "The Aegean and Egypt at the Turn of the Middle Bronze Age: Economic Exchange, Diplomatic Interaction, and the Movement of Ideas"
This paper reviews the Aegean(izing) elements present in Ahhotep's tomb in view of (a) the Mediterranean context of cultural and economic interaction and (b) contemporary patterns of Egyptian elite consumption and display. We begin by analyzing the deposition of Egyptian artifacts in Aegean contexts roughly contemporary to the Ahhotep Treasure. The nature of these contexts suggests that Egyptian objects were often used in the Aegean for purposes consistent with their function in Egyptian society, suggesting that the movement of people and ideas, not only objects, contributed to the development of shared motifs and styles in the Bronze Age Aegean. Then we place the Aegean(izing) objects from Ahhotep's tomb within the localized framework of Egyptian elite consumption of foreign objects and iconography during the transition from the Second Intermediate Period to the New Kingdom in order to demonstrate that they belong to an established strategy of appropriation. In concluding, we bring the two strands of analysis together in considering the symbolic significance of Aegean(izing) objects in the tomb of an Egyptian queen. Overall, Ahhotep's funerary goods suggest that she was not only a consumer of such objects, but also a cosmopolitan individual in meaningful ways encompassing belief, action, and systems of understanding the world.

Beth Ann Judas (Independent Scholar), "The Aegeanizing Elements from the Tomb Group of Ahhotep"
This paper will explore the Bronze Age Aegean artistic influences found on various items from the tomb of Queen Ahhotep, and will focus on two of the weapons placed in the tomb as grave goods. The most famous pieces that demonstrate Aegean artistic influence are the axe of Ahmose and the inlaid dagger, dating from the late Second Intermediate Period to the very early 18th Dynasty. These items also bridge the dates of Bronze Age Aegean goods that have been excavated at Middle Kingdom and New Kingdom Egyptian sites and are key examples for the study of interconnections between Egypt and her Aegean neighbors.

Shelley Wachsmann (Texas A&M University), "Ahhotep's Silver Ship Model Reconsidered"
The tomb of Ahhotep contained two metal ship models, one of gold, the other of silver, found together with a single four-wheeled carriage. These models are anomalous in three ways: 1) Egypt did not have a tradition of metal ship models—Ahhotep's models are unique in this regard; 2) these are the only ship models known from the entire Second Intermediate Period; and 3) the models are intended for display on a wheeled wagon—the only other Egyptian example of this phenomenon is the foreign-inspired Gurob ship-cart model. The gold model represents a typical papyriform Nile vessel type. Ahhotep's silver ship model, however, finds its closest parallels with a contemporaneous Minoan/Cycladic vessel, crewed by ten rowers, exemplified by the rowed ship in the Miniature Frieze from the West House in Akrotiri on Thera. This conclusion is further supported by a demonstrably long tradition of metal ship models in the Aegean. The silver model may be a copy of an actual ship or of a model of a ship. The most probable explanation for the

ship models and the carriage appearing in Ahhotep's tomb is that they represent items of booty captured by either Kamose or Ahmose during their battles against Hyksos Avaris (Tell el-Dab'a) and subsequently interred with their mother. If so, this would indicate a Minoan presence at that site during the 17th Dynasty.

11A. Recent Fieldwork Related to Iron Age II on Jordan's Karak Plateau

CHAIR: Gerald L. Mattingly (Johnson University)

Mark D. Green (Indiana State University), "Khirbat al-Mudaybi' in the Context of Iron Age II Settlement on the Karak Plateau"
Khirbat al-Mudaybi' (KaM) is strategically located on a ridge overlooking the Fajj al-'Usaykir (Fajj) in the Karak Plateau's arid southern region. Today as in the past, the Fajj forms a natural transportation route to the Plateau's fertile northern heartland from the Syrian/Arabian desert. Through the surveys of Miller, Parker, and others, numerous Iron Age II sites in the central and northern Plateau were identified. The recent regional archaeological survey of the Karak Resources Project (KRP) discovered additional Iron Age II sites in the southern Plateau south and east of the KaM. With this new information, this paper looks at KaM in the context of Iron Age II settlement on the Plateau.

Michael G. Van Zant (Mount Vernon Nazarene University), "An Analysis of Fortification Typology of Iron Age IIB: Identifying Context for Khirbat al-Mudaybi'"
The creation of typology and classification of fortifications, whether defined fort, fortress, or fortified enclosure, is an ongoing process as new data arise from excavation results. Recent dating for Khirbat al-Mudaybi' from multiple types of tests place the site date within Iron Age IIB. This paper will evaluate the site's fortification dimensions, shape, wall construction and thickness, towers, and gate structure to establish the fortification typology of Mudaybi' within the Iron Age IIB historical context. Defining the typology of Mudaybi' fortifications within the corpus of existing data identifies similarities and anomalies compared to other sites. These data aid in various other works of analysis in landscape usage and influence, resource planning, and possible design purpose of construction. The attempt to add to the fortification dialogue begins with dating results for KaM, review of pertinent fortifications within approximate Iron Age IIB parameters, consensus of various typologies of previous scholars, and the proposed placement of the site within the classification/typology categories for inclusion to the existing data.

John Mark Wade (Emmanuel Christian Seminary), "Field D of Khirbat al-Mudaybi'"
Field D of Khirbat al-Mudaybi' (KaM) is located in the northwestern corner of the fort. Work in this field occurred during three seasons (2001, 2009, 2011) and one short season (2014). The results of the excavation established that the northwestern corner was part of

the domestic quarters for the fort. This conclusion is supported by the findings of numerous cooking ovens in the complex.

A gate with an elaborate threshold consisting of a single stone divided the complex. Just inside the gate, the bones of a small animal in the final stages of being butchered were found on the basalt bedrock. An iron knife was discovered with the bones. Farther inside the gated part of the complex were two rectangular rooms with cobbled floors. Both cobbled stoned rooms had inner facing walls consisting of pillar and rubble design that were unique within the complex.

The final room in the complex was within the casemate wall and had three stair steps leading up and down into the room, a small oven just inside the door, and a raised platform at one end of the room with a headrest that presumably was used as a bed. No cultic artifacts were associated with this room within the casemate wall. High-quality ceramic material dating to the Iron Age IIB was discovered throughout the complex. Numerous red burnished bowls and painted jars and jugs suggest that those who occupied the inner complex were probably the elite who commanded the fort.

Adam L. Bean (Johns Hopkins University), "Sculpted Stones and Inscribed Sherds: Contextualizing Artifacts from Khirbat al- Mudaybi'"
This paper presents two groups of finds from the Karak Resources Project excavations at Khirbat al-Mudaybi' (KaM): sculpted stone artifacts, including several volute capitals and one sculptural relief fragment, and inscribed ceramics, including potters marks and single-letter inscriptions. Both groups of artifacts are considered within the context of comparable finds from other sites in the region, and their significance for the interpretation of the site of KaM is outlined.

Craig W. Tyson (D'Youville College) and Friedbert Ninow (LaSierra University), "A Basalt Volute Capital Fragment from Khirbat al-Balu'a" (20 min.)
During the 2008 excavation season at Khirbat al-Balu'a, Jordan, a basalt fragment of a volute capital was excavated on the east side of the large fortified building (Qasr) that is at the center of the Iron Age settlement. The fragment preserves one side of the central triangle that is formed by two parallel lines and a double base line. The paper will first present the find, its archaeological context, and features before considering its place within this architectural tradition that is known throughout the southern Levant. Based on its size and features, the Balu'a fragment sits squarely within the variant thus far found at Mudaybi', Ain Sara, and the Amman Citadel. Unlike the closest parallels from KaM and Ain Sara, the Balu'a fragment comes from a large, fortified structure at the center of a site with a large residential population. Future excavations at the site hold out the possibility of clarifying the dates that volutes appeared in Jordan and their possible relation to Assyrian involvement in the southern Levant.

11B. Archaeology of Islamic Society I

CHAIR: Beatrice St. Laurent (Bridgewater State University)

Nicolo Pini (University of Bonn), "Built Environment and Social Structures in the Late Byzantine-Early Islamic Near East"

This paper aims to offer an overview of my dissertation, investigating the inner organization of settlements in former Roman Syria, Arabia, and Palaestina between the Hellenistic and the Early Islamic periods, focussing on the Late Byzantine-Early Islamic transition (fifth-eighth centuries). Eight case studies had been thoroughly and diachronically compared on three different levels (settlement, the quarter/block, house), each seen as potentially reflecting different family groups. Though the influence of such social phenomena on the built environment had often been stated either by archaeologists and anthropologists for different periods, no attempt had been made—especially for Late Antiquity—to address such topic through an interdisciplinary approach, where the archaeological comparison of case studies is interpreted in the light of anthropological and sociological theories.

This so-called "tribal" organization of the built environment is seen here not only as a tangible output of the local material culture, but potentially as an identity and social marker. Similarly, the sedentarization of nomadic groups—which had been often wrongly identified as the only tribal groups in these regions—may have an important role in characterizing settlements, even if its identification and interpretation is extremely problematic.

I conclude that the built environment can also be considered as a possible explanation for the strong continuity in settlements' organizational patterns: it is not stated here that no changes took place, but that the resilience of the local population to the continuously changing historical context can be traced down through the maintenance of constant spatial and architectural processes.

Bethany Walker (University of Bonn), "Pottery for the General Staff: What Was the Function of Mamluk 'Barracks Wares'?"

Among the most readily recognizable pottery of the Mamluk period is a family of sgraffito and slip-painted bowls, chalices, and assorted vessels imitating inlaid brass forms. Usually of monumental scale, they have come to be known as Egyptian "Barracks Ware," because of their militarized decorative program and recovery in large numbers from excavated garrisons in Egypt. Large carinated bowls of glazed relief ware seem to serve the same function in Syrian castles and urban sites, though they have not been as yet a focus of archaeological or art historical research. The relationship between the two wares, and their function in the daily lives of the Mamluk ruling elite, remain unknown.

This paper is a comparative study of the Egyptian and Syrian products using archaeological and textual-historical methods. It problematizes the regionalism of Mamluk ceramic production and consumption, suggesting reasons for the centralized production and rigidly regional distribution of these particular wares. Evidence for local imitation of the Egyptian sgraffito "Barracks Ware" in Transjordan and Palestine is presented, as well as a stratigraphic and site-wide distributional analysis of pottery from Tall Hisban, a small, rural Mamluk garrison site in central Jordan. Read against the

backdrop of ceramic distributions across Bilād al-Shām, the wares can be associated with different kinds of garrisons, administrative centers, and amiral residences and estates. The study also scrutinizes the potential meaning in the decorative program of both wares, looking beyond the political symbolism of the blazons to the administrative, and historically relevant, content of the Arabic inscriptions.

Beatrice St. Laurent (Bridgewater State University), "*Bayt al-Maqdis*—Seventh Century Jerusalem: Sanctuary for the People of the Book—*al-Ahl al-Kitab*"
Jerusalem's sacred precinct was well-established as the Temple Mount for Jews and originally the site of the Solomonic and Herodian temples, and re-sanctified as the sacred precinct or *Bayt al-Maqdis* of the Early Islamic empire when the Muslims arrived in 637 C.E. The vision of Mu'awiya as governor and *Amir al-Mu'minin* (Commander of the Faithful or the *Ahl al-Kitab*, or the People of the Book) was to establish a space sacred to all under the rule of the Umayyad Dynasty. That space was open to all for visitation throughout Mu'awiya's control of Jerusalem as one of the capitals for the Umayyads between 638 and 680 C.E.

Mu'awiya's vision was concretely expressed architecturally by establishing the footprint of the precinct, its entrances, his mosque in the space known in sources as "Solomon's Stables" and in Arabic as *al-masjid al-qadim*—"the old mosque"—as well as the Dome of the Rock and the administrative district to the south. The mosque's entrances were the eastern ceremonial Golden Gate and the rebuilt southern Triple Gate. The Triple Gate and rebuilt Double Gate afforded entrance to the mosque for Muslims and visitation to the upper precinct and the Dome of the Rock for others, including the newly-moved Jewish community and Christians living in the city. The Dome of the Rock was the crown of his globalized vision, a *mihrab*—sanctuary—embodying the architectural traditions and religious beliefs of the Peoples of the Book and the legacy of pre-Islamic Arab kings passed to Umayyad dominion.

Donald Whitcomb (University of Chicago), Tawfiq Da'adli (The Hebrew University of Jerusalem), and <u>Veronica Morriss</u> (University of Chicago), "Early Islamic Discoveries at al-Sinnabra (Khirbet al-Karak)"
New excavations at the Umayyad palace at Sinnabra, also known as Khirbet al-Karak, have concluded at the end of February of this year. The focus of attention was the area north of the basilical palace following the hypothesis that the early Islamic mosque should be located there. Da'adli has written on the historical evidence for Sinnabra in which the site was the winter capital of the Umayyad caliphs, beginning with Mu'awiya ibn Abi Sufyan.

Further research by Whitcomb suggests that the site is more than another *qasr*, or rural estate, but may be modelled on the late classical praetorium and represents an administrative center or Early Islamic *dar al-imara*. The structure closely parallels a basilica complex at nearby Tiberias. Early Islamic urban plans usually place the main mosque immediately north of such a building. Excavations north of the palace wall have revealed a broad prepared surface or plaza and, in the last days of digging, a series of two

rows of large column bases made of stone and mortar concrete. These bases would indicate a hypostyle hall very similar to the earliest-phase mosque of Tiberias.

While it is far too early to claim discovery of the mosque of Muʿawiya, further investigation of this site may potentially add information on this earliest phase of the Islamic city.

11C. Technology in Archaeology: Recent Work in the Archaeological Sciences

CHAIR: Andrew J. Koh (Massachusetts Institute of Technology)

Julia Commander (J. Paul Getty Museum), "Rediscovering a Recumbent Bull: Collaborative Treatment of a Tell al-ʿUbaid Copper Relief"
Archaeological conservation methods from past treatments often require re-intervention to suit present research and exhibition needs. This paper discusses the condition and long-term treatment of a Mesopotamian copper bull relief in the collection of the Penn Museum. The relief (ca. 2600 B.C.E.) is an architectural element from a Tell al-ʿUbaid temple excavated under the direction of Sir Leonard Woolley in the early 1920s. Woolley's groundbreaking methods for recovering fragile material often included the use of wax, bandages, and plaster. This relief is the best preserved example from six comparable objects at the Penn Museum. Due to a unique partnership between the Penn Museum and Winterthur/University of Delaware Program in Art Conservation, the bull relief was treated over a five-year period by graduate fellows studying archaeological conservation methods.

At the time of treatment, the unstable relief was encased in modern materials, including plaster and bandages from previous stabilization campaigns beginning in the field. While offering long-term protection, these materials almost completely obscured original surfaces. Treatment aimed to remove modern materials, develop methods of structural support, and reveal previously hidden details of the relief. Notable strategies included the reduction of plaster with nitrilotriacetic acid (NTA), fragment reattachment with non-obstructive tissue supports, and mountmaking for travel and storage. As treatment progressed, increased access to original surfaces improved opportunities for analysis, resulting in the separation and chemical stabilization of the cast head component. After stabilization, loss compensation, and supporting analysis, a more complete picture of the relief emerged for exhibition in 2018.

Brady Liss (University of California, San Diego), Thomas Levy (University of California, San Diego), and James Day (University of California, San Diego), "Iron in Faynan? Preliminary Results from Isotope Analysis on Iron Chunks and Objects from Iron Age Faynan, Jordan"
The Faynan region of Southern Jordan is one of the largest copper ore deposits in the southern Levant. These ores were exploited throughout history, and during the Iron Age (ca. 1200–800 B.C.E.), copper production in Faynan reached an industrial scale. In addition to copper, excavations at Khirbat en-Nahas (a massive Iron Age smelting center

in Faynan) also discovered iron metal dating to the tenth-ninth centuries B.C.E. in the form of mixed copper-iron chunks and a few iron objects. These iron remains were initially interpreted in two ways: 1) as possible evidence for iron production stemming from the advanced copper smelting technologies of tenth-century Faynan; or 2) as waste materials from failed smelts resulting in unworkable copper (and the iron artifacts as imported; Ben-Yosef 2010). To address this dichotomy, these materials were recently analyzed with mass spectrometry (laser ablation and thermal ionization) to look for isotopic connections between the raw metal chunks and select artifacts. Focusing on osmium and rhenium isotopes, this research determined whether the iron artifacts were possibly produced from the raw metallic chunks in Faynan. This paper will present preliminary results and interpretations from the isotope analysis to understand the presence of iron in Faynan.

Tracy Spurrier (University of Toronto), "Casting Like a King: How to Make a Colossal Bronze Statue in 700 B.C. Nineveh"
Lost-wax casting, *cire perdue*, has been used to create bronze objects all over the world for thousands of years. The same methods are still employed in modern foundries today, with some technological advancements. For decorative art pieces, it is a time-consuming, labor-intensive, and material exhaustive process that requires specialized artisans highly skilled in sculpture carving and metal smelting.

One of the earliest written accounts of *cire perdue* comes from Sennacherib, king of the Assyrian empire 704–681 B.C. He built a new palace in Nineveh, which he decorated with colossal statues: lions, sphinxes, sheep, bulls, and *lamassu*. Some were carved from solid blocks of stone whereas others were cast in bronze. These metal statues would have been hollow, made using the lost-wax method. In texts, Sennacherib boasts of his high intelligence, which allowed him to invent a more technologically advanced and superior lost-wax casting process. He describes using oil, wax, and wool, his creation of clay molds, and his precise mixture of copper and tin. Unfortunately, the details of his manufacturing process were not recorded and no bronze sculptures have been found. Despite the lack of physical evidence, the numbers indicate this was a massive undertaking—Sennacherib cast 30 colossal figures 5 m high using more than 1,200,000 kg of bronze.

This paper will use my own lost-wax casting experimental archaeology projects plus study of modern bronze artists, along with textual and archaeological evidence, to theoretically reconstruct Sennacherib's manufacturing stages, and to better understand the scope of this large-scale production.

Rebecca M. Bartusewich (University of Massachusetts Amherst), "Alternative Politics at Idalion, Cyprus: Investigations of Governance, Economics, and Society through Petrographic Analysis of First Millennium B.C.E. Pottery"
Anyone who studies first millennium B.C.E. Cyprus will be familiar with the term "city-kingdom." If asked to define it, one might respond that it is an autonomous city ruled by a king. If one probed further into questions of economics, social norms, or model of governance, the conversation may not continue with ease. This paper aims to correct that

uneasiness through the presentation of a case study on Idalion, Cyprus in which the results of petrographic analysis of undecorated pottery sherds shed light on politics and economics. Using petrography, or microstructural analysis, I studied the context of craft production. Craft production can represent social, economic, and political culture, as it is the result of the needs of society and the desires of economic elites. In my analysis of Idalion pottery, I found that during at least two periods, the production of certain pottery types is standardized and is the probable result of specialized workshop production. During the Archaic period, one area of the site, the Lower City North, is the likely location of large-scale pottery production coordinated by the local population. This theory is contradictory to the traditional view of an authoritarian monarchy in which a king would control all aspects of the economy as the head of the hierarchy. Therefore, the petrographic analysis supports the "republic" theory of governance elicited by interpretation of the Idalion bronze (ICS 217), during a few hundred years of the Archaic period.

Yazan Abu Alhassan (RWTH Aachen University), "The Use of Sodium Ferrocyanide for the Removal of Salt from Stone, Exemplified for Sandstones from Petra, Jordan" (20 min.)
The present paper addresses the application of salt crystallization inhibitor on the rock-cut monuments in Petra for the improvement of desalination as well as for the reduction of aggressiveness and probable damage of salt weathering. However, to date, the fundamental knowledge with respect to the interaction of such additives with salts in stone and its implications on stone deterioration processes is still lacking. Ferrocyanide decahydrate ($Na_4Fe(CN)_6 \cdot 10H_2O$) was proposed for use as a preventive measure against sodium chloride damage, since this product allows the formation of the harmless efflorescences instead of harmful subflorescences. Intensive research has been conducted in the past in order to assess the salt weathering of a single salt inside stone. However, single salts are rarely present in practice and generally salt mixtures are found in the form of efflorescences, either salt crusts or subflorescences. The highest damage potential is attributed to subflorescences. Therefore, this study will assess the potential application of crystallization inhibitor as preventive measure against both single salts and salt mixtures for the first time. The overall aim of the study is to evaluate the possibility of stone treatment with inhibitor as a method for improved desalination of salt-loaded sandstones composing the famous monuments in the ancient city of Petra. The particular aims are the development of a consistent methodological approach for the identification of parameters controlling the success, reliable quantification, interpretation, and rating of the treatment's success, i.e., trying to assess optimum concentrations of inhibitor that lead to maximum success.

11D. Archaeology of Iran I

CHAIRS: Holly Pittman (University of Pennsylvania) and Mehrnoush Soroush (Harvard University)

Golnaz Hossein Mardi (University of Toronto), "Pottery Production during the Middle Chalcolithic Period at the Site of Seh Gabi"
This paper builds on my paper from last year's Annual Meeting, in which I analyzed the early Middle Chalcolithic pottery at three sites (Seh Gabi, Godin Tepe, and Tepe Siahbid) in the central Zagros of Iran to study the nature of pottery production in different parts of the region during the earliest phase of the Middle Chalcolithic period. In my current paper, I have concentrated on pottery of one site, the site of Seh Gabi in the Kangavar valley in the east-central Zagros, to examine the manufacturing technology of pottery at this site chronologically. That is, I intend to investigate continuity and change in the pottery production from the early Middle Chalcolithic, which is known as the Dalma period, to the mid-Middle Chalcolithic, also known as the Seh Gabi period. I have employed petrography to examine 32 thin sections—16 Dalma period thin sections and 16 Seh Gabi period thin sections. The petrographic analysis allows me to assess different aspects of pottery manufacture, including the selection of raw materials in these periods, to find out if the technology of pottery production changed over time. This research enhances our understanding of the people and the society in which the Middle Chalcolithic pottery was manufactured.

Hamed Vahdati Nasab (Tarbiat Modares University) and Abbas Moghaddam (Iranian Center for Archaeological Research), "Death and Violence during the Fifth-Fourth Millennia B.C., Khuzestan Plain, Southwestern Iran: Tol-e Chega Sofla Cemetery"
The first season of excavation at Tol-e Chega Sofla cemetery, located in the southeastern part of the Khuzestan plain in Iran, took place in spring 2016. Based on the geophysical data and landscape archaeology, nine burials were identified across three areas (A, B, and C) in the southwestern part of the site. The burials all possessed rectangular mud brick structures. Together, 89 persons were identified within the three areas, of which Grave 1 in area B contained the largest accumulation of human bodies (52), mostly in commingled form; among them, five women with cranial deformity are the most significant. The relative chronology of the site was determined using numerous diagnostic vessels and other artifacts. Several criteria were taken in consideration to investigate possible scenarios behind the formation of Grave B1, such as: clear evidence of strikes with sharp heavy tools on some of the skulls; the significant number of women and children in the grave (over 90%); the specific positioning of some of the skeletons; accumulation of skulls in some zones within the grave; and evidence of squashed skulls. Altogether, the results of biological anthropology studies indicate that, at least on one occasion, part of the formation of Grave B1 followed the occurrence of some types of violence. Such violence might have been a consequence of local wars that had taken place outside of the habitation site, with the conquerors carrying out a massacre of those left behind at the site, mostly with women and children. Nonetheless, the cemetery might have been in use prior to or after such event, as some other burials do not represent the indicated pattern.

Hossein Moradi (Independent Researcher), "Site-Size Hierarchy in the Bampur Valley during the Chalcolithic Period: A New Approach for Understanding Complexity in Iranian Baluchistan"

At the 2014 ASOR Annual Meeting, I presented some new findings based on recent archaeological survey work in the Bampur valley, and compared them with adjacent areas in the southeastern region of Iran in order to find the interaction spheres. However, the previous presentation was based on comparison of pottery and did not concentrate on factors such as site size and placement. In this paper, I focus on both the location and dimension of each site in relationship to other contemporary sites for a better understanding of the role of each site in this valley. Some studies have shown that there is a correlation between these two factors. This analysis has led me suggest that during the fifth and fourth millennia, each site played a specific role in this system, and some sites had a more important role in comparison with others.

Nasir Eskandari (University of Jiroft), "The Jiroft Archaeological Project 2017: Excavation at the Site of Varamin, Jiroft Plain, Southeastern Iran"
The Jiroft plain is well known in the archaeology of Southwest Asia. Varamin is an important site located 5km southwest of the site of Konar Sandal South. Varamin is over 80 ha, according to the dispersal of the surface materials. Initial surface reconnaissance suggests that, except for a small part of the north of the site inhabited in the Chalcolithic period, the site is primarily datable to the Bronze Age. Varamin was excavated in March and April 2017 by University of Jiroft with the cooperation of ICHTO and the University of Tübingen. The main purpose of this exploration was to determine the cultural sequence of the site. To reach this goal, two trenches were opened on two mounds of the site. Trench I was opened in northern part of the site on a mound 7 m higher than the surrounding land, and was explored to a depth of 3 m. In this trench, cultural deposits of the fourth (Aliabad Culture) and third millennia B.C. were uncovered. Trench II was opened in the central part of the site, resulting in the discovery of a grave dating to the third millennium B.C. In this grave, 85 burial objects were discovered. Due to the vast expanse of the Varamin site in the third millennium B.C., it can be identified as an important center in the Jiroft plain, which played a significant role in the early urban landscape of the Halil valley, alongside Konar Sandal South.

11E. Talking About: How to Make Fieldwork Safe from Gender-based Violence, Harassment and Discrimination (Workshop)

CHAIR: Beth Alpert Nakhai (University of Arizona)

Daniel Master (Wheaton College), "Gender-Based Safety Practices at Tel Ashkelon and Tel Shimron"
The last few years have seen several changes in the ways that we have adminstered the student experience at Ashkelon and now at Tel Shimron with regard to gender-based safety. Many of these changes have come as a result of the increased enforcement of Clery Act and Title IX provisions on archaeological excavations. We will share our experience in this shifting landscape. Our hope is that these changes will promote an ever-improving educational environment so that all partipants can thrive.

Virginia Herrmann (University of Tübingen) and David Schloen (University of Chicago), "Lessons Learned over 12 Seasons at Zincirli, Turkey"
The Chicago-Tübingen Expedition to Zincirli, Turkey has carried out 12 seasons of excavation and study at the site since 2006. Most seasons have hosted a large staff of 40 to 70 people, with an equal number of local workers. The archaeological staff comprises undergraduates, graduate students, and professional specialists from several different countries, especially the U.S., Germany, and Turkey. In this workshop, the directors of the project will talk about some of the challenges posed by such a large and diverse group living and working together. We will describe efforts thus far to set expectations for behavior in the field and experiences handling gender relations within the project. Finally, we will reflect on what seems to have worked well and where we can find room for improvement in our approach.

Suzanne Richard (Gannon University), "Safeguards in Place Today on the Dig: Khirbat Iskandar and the University"
This brief talk reflects on 13 seasons of excavation at Khirbat Iskandar, noting that the institutionalization of international study abroad administrators and university-wide procedures, documentation, and training was a major factor in raising awareness of the obligations and requirements to provide a safe learning environment for all, as required by law.

Margaret Cohen (W. F. Albright Institute of Archaeological Research), "Be a Better Bystander"
This brief presentation will describe the role of bystanders generally, and comment on how bystanders can deescalate potentially dangerous situations and support people in the moment who are targets of harassing or discriminatory language or actions. I will offer some practical applications, using invented but realistic, dig-specific examples. Finally, I will begin, and hope the discussion session will continue, to explore how we can encourage more civility on site and in the discipline.

Steven Falconer (University of North Carolina at Charlotte) and Patricia Fall (University of North Carolina at Charlotte), "The Evolving Role of ASOR's Committee on Archaeological Policy"
This presentation will discuss the evolving role of the Committee on Archaeological Policy (CAP) in ASOR. In particular, we turn attention to current CAP policy initiatives and the CAP affiliation review process, which are designed to encourage a shared professional climate of non-tolerance of harassment or discrimination among ASOR-affiliated projects.

11F. Encoding Data for Digital Discovery

CHAIRS: Vanessa Bigot Juloux (École Pratique des Hautes Études; Andrews University) and Amy Rebecca Gansell (St. John's University)

Adam Schneider (University of Colorado Boulder), Stephanie Lackner (Princeton University), and Michael Oppenheimer (Princeton University), "A Case Study in the Role of Digital Archaeology Data and Methods in Interdisciplinary Research on the Relationship between Climate Change and Crisis/Collapse"
In October of 2017, researchers from Princeton University and the University of Colorado launched a new collaborative interdisciplinary project to explore the possible role of climatic or environmental change as a recurrent cause of political crisis and/or collapse in the Middle East and Central Asia during the past 5000 years. At the core of this effort is an interdisciplinary approach combining both quantitative and qualitative research techniques. The project also employs a novel theoretical approach to the study of ancient (and modern) crisis and collapse: the "event-based" perspective of historical sociologist William Sewell, which emphasizes the articulation of a multiplicity of causal factors as the key to understanding transformative historical events, rather than a single, "ultimate" cause.

A Sewellian-based investigation of historical crisis/collapse causation necessitates the analysis of a wide variety of data to understand the roles played by various causal factors. A central methodological component of this project is, therefore, the utilization of digital archaeology methods and datasets, which are employed to help reconstruct the social, economic, and political structures and practices of the ancient societies under study. Here, we present the research methodology and preliminary results of our ongoing work and discuss how our research highlights the promise of digital archaeology as a valuable tool in other, similar interdisciplinary projects.

Jana Mynářová (Charles University), "Working with a Data Set: The Amarna Cuneiform Paleography Database"
In this paper, I will investigate if and how a cuneiform paleography can contribute to a broader discussion of both the inner chronology of a closed corpus of texts and more general aspects of cuneiform writing in peripheral areas of the Late Bronze Age. In 2012, a new research project dedicated to the study of the Amarna cuneiform paleography started at Charles University in Prague, focusing on the study of scribal practices attested in the Amarna corpus. Although O. Schroeder's sign list, published in 1915, still represents the most complete tool for the study of the paleography of the Amarna texts, its contribution to other fields of research is rather limited. With over 100,000 entries, covering both epistolary and school texts, in the Amarna Cuneiform Paleography database, the corpus represents an ideal tool to improve our analytical methods for paleographic data. Here I will present two case studies incorporating paleographic evidence to demonstrate some methodological issues pertaining to the connection and interaction between the paleography and scribal practices of the ancient Near East.

Tero Alstola (University of Helsinki), Saana Svärd (University of Helsinki), Shana Zaia (University of Helsinki), Heidi Jauhiainen (University of Helsinki), Aleksi Sahala (University of Helsinki), and Krister Lindén (University of Helsinki), "Language Technological Analysis of Gods in Assyrian and Babylonian Texts"
This paper uses language technological methods to highlight the ways in which gods were perceived in Assyrian and Babylonian texts in the first millennium B.C.E. Language

technology is a quickly advancing field in the digital humanities, developing methods for the computational study of natural language. Although these methods have primarily been developed for living languages, their application to ancient languages promises a better understanding of words and concepts used in textual sources from the ancient Near East. This paper applies two language technological methods, Word2vec and Pointwise Mutual Information (PMI), to a corpus of 5000 texts written in Akkadian and Sumerian. The lemmatized text material was obtained from the Open Richly Annotated Cuneiform Corpus (Oracc). We used Word2vec and PMI to analyze the contexts in which divine beings appear in the text corpus, aiming to highlight the semantic domains in which different gods appear and to compare the pictures emerging from texts written in Assyria and Babylonia. Our analysis supports the established views of the functions of major gods in the Mesopotamian pantheon, and it also provides some new insights into the semantic contexts in which certain gods appear. At the same time, the paper discusses the strengths and limitations of our methods, which primarily relate to the size of the text corpus and text genres attested.

Sanae Ito (Leiden University; Sophia University), "Network Analysis of Scholars and Scribes in the Reigns of Esarhaddon and Ashurbanipal"
The presence of scholars and scribes in the administration of the Assyrian Empire (934–612 B.C.E.) is well documented during the reigns of Esarhaddon (680–669 B.C.E.) and Ashurbanipal (668–ca. 630 B.C.E.). Their disciplines varied from astrology, extispicy, exorcism, medicine, and scribal arts to lamentations. In his 1993 study, Simo Parpola charts the names and careers of the scholars who were employed at the courts of Esarhaddon and Assurbanipal. He points out that 21 scholars were active during the reign of Esarhaddon, and 16 scholars, such as the chief scribe Issār-šumu-ēreš and the royal tutor Balasî, continued to be employed in their professions under Ashurbanipal after Esarhaddon's death. Additional scholars and scribes who worked closely for the kings are also known. In this paper, I combine traditional textual analysis with network analysis to reconstruct how these individuals were interrelated via kinship, professions, origins, and social distance, both chronologically and geographically.

Anne-Caroline Rendu Loisel (University of Strasbourg) and Terhi Nurmikko-Fuller (Australian National University), "How Can 3D Digital Replicas of Cuneiform Tablets Be Useful for Scholars?"
This paper reports on a preliminary project that produced four 3D digital replicas of a sample set of cuneiform tablets housed at the British Museum. We will describe the workflow and highlight the ways in which digital technologies can enable research questions that would not otherwise be possible. For example, 3D digital models can be enlarged, zoomed in on, digitally manipulated, and used to produce larger replicas.

11G. Performance and the Body in the Ancient Near East and Mediterranean

CHAIRS: Carl Walsh (Brown University) and Pınar Durgun (Brown University)

Sarah Berns (Brown University), "Building Miniatures, Building Mastery: 'Miniature Shrines' and Embodied Ritual Knowledge in the Iron Age Southern Levant"

How do humans attain embodied knowledge, develop the implicit skills, perceptions, and senses that form their practical knowing, what Pierre Bourdieu calls their "habitus"? In particular, how does mastery of ritual space, an understanding of the feel, function, and meaning of a cultic environment, develop? This paper takes up the corpus of objects often called "shrine models" or "miniature shrines," excavated from Iron Age contexts in the southern Levant, and argues that they provide an example of these processes in action. I attend to their particular excavation contexts, and especially to their frequent presence in homes, in workshops, and in the vicinity of public ritual spaces. In light of the assemblages in which they were found, I argue that miniatures were used in ritual practices that sensorially evoked larger cultic sites, including the burning of incense and presentation of food offerings. Ziony Zevit has argued that the unique, one-chambered shape of the models represents an especially immanent theology. Alternatively, this shape may reflect the embodied experience of ordinary sub-elite users of tripartite temples, who would have interacted most closely with the buildings' exteriors. Creating using building miniatures, residents of the Iron Age southern Levant re-created the experience, rather than the appearance, of larger shrines. Considered as a type of prop for ritual performance, building miniatures were accessible, portable, and flexible. Engaging with them physically and creatively, actors not only learned an embodied sense of ritual space, but also developed their own habits, conventions, and meanings in relation to shrine buildings.

Allison Thomason (Southern Illinois University Edwardsville), "Bodily Performance and Regulation and the Law Code of Hammurabi"

As one of the earliest lists of legal regulations in the world, Hammurabi's code of laws (ca. 1750 B.C.E.) is an important glimpse into the experience and regulation of Mesopotamian bodies. The nature of this unique list of laws, the function of the stele on which they are found, and the execution of their decrees are constant topics of debate in Mesopotamian legal studies. However, the code has not yet been mined fully for its attention to and regulation of the body and its different performative contexts in Babylonian society. First, this study will interrogate the bodily experience of the stele itself in its native and original context of the courtyard of a temple in the Babylonian city of Sippar. Then, an analysis of the image and text of the stele will explore how Mesopotamian bodies experienced both the instrument used for dissemination of the laws as well as how those laws influenced individual bodies and their movement. Questions considered include: who could be physically present at the stele and how was it experienced? How did the bodily experiences of individuals or social groups "count" differently in Babylonian society? How were bodily performances regulated and movements encouraged or restricted in the text? How does the stele indicate bodily resistance or adherence to royal authority? This paper will offer fresh insights regarding bodily experience in Mesopotamia from a material and sensory perspective.

Laurel Hackley (Brown University), "Memory and the Body in Egyptian Festival Processions"

This paper addresses the body as an object and an actor in Egyptian festival processions. Public festival processions were spectacles made of bodies, as it was the massing and movement of bodies that created the event. Both spectators and participants played an active role in the creation of this event; the event in turn played a role in maintaining a ritual cycle that many different kinds of people could participate in. Embodied and sensory participation in cyclically repeating festival processions would have created personal memories. The particulars of individual bodily experience, locale, and time of year would have connected personal histories to mythological events and other narratives. This would have been reinforced by the performances associated with festival processions, in which mythological episodes were apparently reenacted. A particular focus of this paper is the role of costumed, foreign, or otherwise singular bodies. An additional investigation will be made into the role of dance and gesture in festival processions, and the existence of professionals or specialists who participated in these events. The paper draws on evidence from reliefs, texts, and material culture.

Carl Walsh (Brown University), "Courtly Cabaret! Gestural Performance in Palace G at Ebla"
In this paper I explore the concept of gestural performance in the context of the Early Bronze Age Palace G at Ebla, modern Syria. This palatial building provides a unique context in which to examine court activities and events, due to the remarkable preservation of architecture, material culture, texts, and art, which holistically paint a vivid picture of the colorful pageantry of court life. Thanks to these rich sources, it is possible to examine gestural aspects of court life. Gesture, as a concept, relates to the wide array of bodily actions employed in human communication and behavior. Through a holistic examination of the material culture, art, texts, and particularly architecture of Palace G, this paper reconstructs the gestural vocabularies relating to two interwoven court activities, processions and social reception. It is argued that these activities employed specific bodily techniques relating to movement, sitting, and standing, which were intimately interconnected to the permanent placement of certain architectural features such as doorways, staircases, columns, porticos, and daises, alongside mobile pieces of courtly paraphernalia such as furniture and standards. Through this examination it will be concluded that these body techniques formed key aspects in the construction and design of the architectural and social space, and were essential in the performance and expression of hierarchy and identity at the Ebla court.

11H. Interrogating Cultural Change – Punctuated Equilibria Models in Near Eastern Archaeology and Egyptology I

CHAIR: Miroslav Bárta (Charles University)

Miroslav Bárta (Charles University), "Punctuated Equilibria Theory and Egyptology: Evidence from Old Kingdom Egypt"
To address the dynamics of history requires piecing together as much archaeological, historical, and environmental data as possible. What the contemporary archaeology of historical periods in ancient Egypt seems to confront on a daily basis is a very simple

observation: long periods of stasis and apparently uneventful continuum are broken up by brief periods of rapid and profound changes. During such "punctures," the whole social-political system is exposed to a series of vital changes that influence essentially every component (subsystem) of the society, bringing it to a qualitatively new level of development and attained complexity and texture.

This brief outline of the history of the third millennium B.C. in Egypt will reconsider the mechanism of social and state development in the Early Dynastic and Old Kingdom periods. These cover almost one thousand years of history, from ca. 2900 to 2120 B.C. During this time period, ancient Egypt underwent several major developmental stages, starting with the foundation of the first territorial state in human history, the establishment and proliferation of an elaborate bureaucratic apparatus, the construction of stone-built monumental architecture, and the expansion of manifold religious concepts and ideology coupled with sophisticated material culture.

The evidence provided by different sources, above all written documents and archaeological data, will show that there is every reason to believe that human societies tend to develop in a non-linear, punctuated way.

Nigel Strudwick (University of Cambridge), "Addressing Complex Changes in the New Kingdom"
The New Kingdom (*ca.* 1539–1077 B.C.) is one of the high cultural points of ancient Egypt. From the reunification of Egypt after the fractured Second Intermediate Period by a Theban family from the south, important cultural developments occurred in tomb design, funerary customs, art, and religious thought, both state religion and personal piety. An increasing number of resident foreigners indicates increasing diversity, culminating with the attempted forced entry into Egypt of the "Sea Peoples" several times in the 100 years after 1280 B.C.

The Amarna Age of Akhenaten (ca. 1350–1330 B.C.), with its obvious changes to religious and artistic norms, ushered in a short period of relative instability calmed by the change of ruling family shortly after 1300 B.C. (the 19th Dynasty). The first reigns of that dynasty re-established the focus possibly lost in the previous 50 years, including the move to a new capital. Nonetheless, as had happened earlier after the lengthy rule of Pepy II (ca. 2215–2153 B.C.), the long reign of Ramesses II (ca. 1279–1213 B.C.) was followed by a chaotic period, again calmed by another dynastic change. But after the reign of Ramesses III (ca. 1187–1157 B.C.), the 20th Dynasty petered out with a succession of mostly short reigns of kings. Finally, the government fractured into north and south, with clear economic and political chaos in the south (strikes, tomb robbery, and the rebellion of a renegade general).

This paper will examine the extent to which these successes and failures represent punctuated equilibria.

Anna-Latifa Mourad (Austrian Academy of Sciences), "Exploring Change from the Twelfth to the Fifteenth Dynasty at Tell el-Dab'a"

Social, political, and cultural transformations manifest dynamic processes involving group interactions as well as both internal and external catalysts. The study of the past can offer significant observations regarding the nature of such processes, allowing for detailed analyses on how civilizations develop over either shorter or longer periods of time. Although usually incomplete, the archaeological record also has the potential to demarcate such developments, especially when assessed using multidisciplinary perspectives. This paper explores change at the site of Tell el-Dabʿa in the northeastern Egyptian Delta, the stratigraphy of which incorporates a lengthy period in Egyptian history that witnessed the rise and fall of several dynasties, as well as the critical transition of the Middle Kingdom to the New Kingdom. Not only does the material evidence at the site point to gradual developments leading to the 15th Dynasty, it also suggests specific intervals resulting in noticeable and possibly more rapid change with evidently significant social and political ramifications. The mechanisms of such change are discussed in view of the punctuated equilibria concept, as is their association with other historical and archaeological data, to help enhance our understanding of the events that defined ancient Egypt and the Near East in the first half of the second millennium B.C.

Geoff Emberling (University of Michigan), "Modeling the Rise and Fall and Rise of Kush"
Gould and Eldridge some 46 years ago proposed the notion that biological evolution was not a gradual continuum of change, but rather that short bursts of relatively rapid change interrupted otherwise long periods of relative stasis—punctuated equilibria. Their work has only intermittently been applied to archaeology, but raises interesting and important questions about the "tempo and mode" of socio-political change as well as the fundamental units out of which we construct our archaeological and historical sequences—what is it, exactly, that changes, and what stays the same?

In this paper, I review the trajectory of ancient Kush over a span of nearly 3000 years, from even before its first appearance in the textual record, to its final collapse as a political entity after 300 C.E. I will review available evidence for largest settlement size, for settled area within one well-surveyed zone (the Northern Dongola Reach between the Third and Fourth Cataracts), and for apparent area of political control. The role of distinct historical events in change is clearly evident in this sequence.

Massimiliano Nuzzolo (Charles University), "Solar Cult, Royal Ideology, and Social Changes"
Solar cult is one of the main elements of ancient Egyptian civilization throughout its long evolution. Some Egyptian kings, however, manipulated the solar cult in terms of accentuation of their divine features in the interplay with other strata of the society, including not only the varied plethora of the state officials/bureaucrats but also the more directly involved class of the clergy. As we will see in this paper, this re-negotiation of the solar features of the royal ideology, and the stress put on this or that trait within it, was in most cases aimed at answering precise political needs, set within their historical background, and was thus different from reign to reign. Nevertheless, and regardless of

the precise historical period, this re-negotiation shows constant features that indicate a common process of interaction among all the involved actors.

Despite its apparent failing in the short-term perspective, this common process had the result, in the long-term perspective, of stimulating new religious and ideological changes, finally reflected at all levels of the social reality.

The aim of the current paper is to analyze this fluctuating trend by taking into account three periods that present a wide variety of data: the Fifth Dynasty (especially Userkaf and Niuserre), the Twelve Dynasty (especially Sesostris III) and the Eighteenth Dynasty (especially Amenhotep III and IV). In all cases, the interaction among royalty, elite, and other social components will be considered, in trying to underline continuity and diversity of the analyzed phenomena.

12A. The Life Cycle of Archaeological and Philological Research Data in OCHRE

CHAIR: Miller Prosser (University of Chicago)

Nicholas Schulte (University of California, Los Angeles) and Daniel Master (Wheaton College), "Data Capture Strategies at Tel Shimron during the 2017 Season"
The Tel Shimron archaeological project started by Daniel Master (Wheaton College) and Mario Martin (Tel Aviv University) saw its successful first season in the summer of 2017. Key to the project's success was the implementation of data capture tools including ArcGIS and the OCHRE database system. Four strategies were employed using these programs to maximize efficiency and quality of data capture. First, project GIS data were integrated into OCHRE, creating a nuanced database with geospatial recognition. Second, an offline OCHRE mode allowed for rapid database entry without the need for an internet connection. Third, a table-based editing mode within the database allowed for data to be easily monitored for patterns and inconsistencies. Fourth, hand scanners and premade barcodes allowed for a quick and efficient inventory process in the database during the off-season. The result was higher quality data in less time. Further, a comprehensive database with nuanced data ready for analysis was available and easily accessible at the close of the season.

Andrew M. Wright (University of Chicago) and David Schloen (University of Chicago), "Get the Picture? Integrating Archaeological Data from Tell Keisan in OCHRE"
At the start of the recent University of Chicago archaeological excavations at Tell Keisan, the expedition faced the challenging task of integrating large amounts of decades-old data from previous campaigns with current excavation data. This case study demonstrates how these various types of legacy and contemporary data, including specialist tables, geospatial files, documents, and photographs, to name a few, interact within the OCHRE data environment. A number of advanced features are built into OCHRE that allow data, after they are collected and generated, to become accessible to the researcher and also to become meaningful to each other. Finally, because new tools are continually added to the

archaeologist's digital arsenal, OCHRE is an ongoing and ever-evolving platform, whose use at Tell Keisan has shown that the integration of data is not only possible, but necessary.

Nicole Herzog (University of Tübingen) and Virginia Herrmann (University of Tübingen), "Using OCHRE in the Analysis of Archaeological Data Concerning Food Production and Consumption at Zincirli, Turkey"
In 2006, the University of Chicago revived investigation of the well-known Iron Age city of Zincirli, ancient Sam'al, in Gaziantep Province, Turkey. The Chicago expedition, joined in 2014 by the University of Tübingen, has carried out 12 seasons of excavation and study at the site. The project has used the OCHRE database since the beginning, and data recording and analysis at the site have evolved in tandem with the expanding features of this platform. Using our project on cuisine in Iron Age Sam'al as a case study, this presentation will discuss the tools provided by OCHRE that facilitate the analysis stage of research. Tackling the need to investigate both excavation data and specialist findings across different dig areas and seasons, the OCHRE querying process allows the user to easily adapt search parameters and item variables within our large data set. This database environment does not just provide ways to organize and display the complex data relating to the topic of food, but also the tools to visualize spatial data. By sharing some of our research results, we will demonstrate how these tools have been used to investigate patterns of food preparation and consumption in the different occupational phases and spaces of our site.

Rhyne King (University of Chicago), "The Economics of Late Babylonian Archives: Investigating the Murašû Firm"
This paper will discuss the early life of the project "Economics of Late Babylonian Archives," a collaboration between the University of Chicago and the University of Vienna. This project seeks to collect and analyze Late Babylonian texts in the OCHRE database in order to ask questions of the economy and society of Babylonia from the Neo-Babylonian period (beginning 626 B.C.E.) to the end of cuneiform writing (first century C.E.). As a test case, the project has begun by analyzing the Murašû Archive from fifth-century Nippur. With approximately 800 texts recording the business dealings of the Murašû firm, the Murašû Archive provides an ideal opportunity to ask questions of economic and social network analysis in OCHRE. This presentation will demonstrate how the project separates Murašû texts into distinct units of economic significance and how this process allows researchers to examine broader economic trends across the Murašû Archive.

Miller Prosser (University of Chicago) and Sandra Schloen (University of Chicago), "Turning the Page on Digital Publication"
When thinking about digital publication, we need to start thinking beyond the strictures of the page or article, and certainly beyond the ubiquitous table or spreadsheet format. Properly modeled digital data free us from these limiting modes of publication. But can a digital publication last as long as a printed publication? What does it mean to create linked open data? And are we prepared to archive our data so it can be used by future generations of researchers? We address these questions and more as we consider the

publication and archiving of data from the Ras Shamra Tablet Inventory and other projects using OCHRE. We consider various types of digital publications, such as a digital companion to a print edition, an interactive PDF, and an entire project website published with live data pulled directly from OCHRE.

12B. Archaeology of Islamic Society II

CHAIR: Beatrice St. Laurent (Bridgewater State University)

Raffaella Frascarelli (L'Orientale University of Naples) and Letteria Fassari (Sapienza University of Rome), "The Iranian Legacy of the Sacred between Liberty and Prohibition"

Sogdian Manichaean text M 549 describes rituals involving horse sacrifice, mourning, and self-flagellation. Taking into consideration the ideological transformations that mark the history of the sacred in Persia and in Iran, and that distinguish between authorized and prohibited worship, such rituals, conceivably originated in Central Asia, give the opportunity to examine Mazdaean, Zoroastrian, and Islamic traditions. Giving rise to complex practices, the specialists of the sacred (magu, mowbed, imam) make choices in relation to the transmission and/or revision of a cultural substratum that, despite their determination, survives beyond the official cults. Cultural categories such as Pre-Achaemenid, Pre-Iranic, and Pre-Islamic suggest that hiatus and permanence cohabit, mutually influencing each other: the ritualistic standardization does not prevent the growth of a symbolic apparatus operating within a tenacious unofficial practice. Analyzing the persistence of ceremonies that preserve the sense of magic, revealing the gender role in managing the sacred, and identifying the interconnections among Elam, Persia, Iran, and Central Asia, these observations may allow us to trace the vastness of the Iranian legacy's roots.

Asa Eger (University of North Carolina at Greensboro), "Castle of the Figs: The Final Report of Tupras Field/Hisn al-Tinat, an 8th-12th Century Frontier Site in Turkey"

The survey and excavations of Tüpraş Field/medieval Ḥiṣn al-Tīnāt, conducted intermittently between 2005–2011, revealed an 8th-12th century site in southern Turkey on the Bay of Iskenderun. The site, a coastal fortified waystation, is one of the only Early Islamic founded sites excavated in Turkey. This paper will integrate reports on some of its material culture: amphorae, cooking wares, glazed wares, glass, iron, epigraphy, and plant remains. Known textually as one of the fortresses on the Islamic-Byzantine frontier (*thughūr)*, the excavations complicate the nature of such fortifications, and show, rather, an emphasis on strong local and long-distance commercial ties, as well as local subsistence throughout the Abbasid, Middle Byzantine, and early Crusader periods. Further, the short-lived nature of the site and lack of Byzantine or seventh-century occupation allows for greater understanding and fine-tuning of the assemblages, chronologies, and distributions of certain categories of material culture.

Mitchell Allen (Smithsonian Institution) and William Trousdale (Smithsonian Institution), "Excavating the Saffarid Capital of Sistan, Afghanistan"
Shahr-i Gholghola was a carefully designed and strongly fortified city in the Sar-o-Tar desert 35 km east of the Helmand River in Sistan, Afghanistan. Despite its distance from water, the site extends over 1 km on each side and was the largest urban center in the lower Helmand Valley in the Islamic periods. It was mapped and excavated over a span of 34 weeks in the 1970s by the joint American-Afghan Helmand Sistan Project (HSP) but is as yet unpublished. This presentation will summarize the history, plan, and function of this unique Saffarid administrative and elite center, possibly the ancient city of Tak, from the 9th to 13th centuries C.E. HSP surveyed and selectively excavated a citadel protected by five city walls and three moats, a sumptuous lower palace, mosque, bazaar and other administrative buildings. Its roots as an administrative center in the Saka, Parthian, and Sassanian periods were also discovered by the HSP excavations. Ample evidence exists of destruction of the site during the Mongol invasion of the 13th century as well as its reuse as a military garrison in Timurid times, and its abandonment and envelopment by sand dunes shortly thereafter. HSP also charted the string of large canals that brought water to this otherwise uninhabitable desert and allowed for extensive occupation of the region. The rich, elite culture of the Saffarid occupation over four centuries will be shown by the wealth of objects discovered in and around the site.

Elizabeth Osinga (Independent Scholar), "Towards an Understanding of Middle Islamic Society in Northeastern Jordan: New Research from Umm el-Jimal and Environs"
The Middle Islamic period at Umm el-Jimal in northeastern Jordan has remained largely unremarked upon, in large part because the later hand-made geometric-painted (HMGP) and plain pottery found at the site has been understood as Late Ottoman. New excavations at the House XVII-XVIII complex have revealed striking evidence of significant Middle Islamic period activity, primarily in House XVIII's courtyard and cistern/reservoir, the latter of which was re-plastered at this time. The pottery finds shed new light on the types of Middle Islamic wares present at the site, the majority of which were distinct in ware/fabric from the types of HMGP published from other parts of Jordan.

Subsequent reinvestigation of the "Late Ottoman" contexts at Umm el-Jimal has revealed that most of their contents may all or in part be of Middle Islamic date. However, despite the identification of Middle Islamic pottery/activity at the site, there was no sign of intensive, long-term occupation in any of the excavated areas.

To put Umm el-Jimal in its regional context, Middle Islamic presence and intensity of occupation in nearby settlements were analyzed though survey pottery from Umm es-Surab, Deir al-Kahf, and Khirbet es-Samra. The types and quantities of Middle Islamic pottery found at each site were strikingly different and beg further exploration through excavations. Yet with the current evidence, we can hypothesize a society where possible longer-term settlement is concentrated at Umm es-Surab, but also relies heavily on movement and shorter-term occupation at places like Umm el-Jimal, which necessitated the harnessing of water resources in a region that receives little rainfall.

12C. Technological Interconnectivity in the Ancient Near East

CHAIR: Thaddeus Nelson (Stony Brook University)

Nadia Ben-Marzouk (University of California, Los Angeles) "Overspecializing the Specialist: Reevaluating the Role of Producers in the Study of Technological Interconnectivity"
Technological investigations tend to marginalize discussions of producers, reducing them to the techniques they employed during the production process. By dehumanizing these active agents (e.g., the potter, the weaver, the smith), we are left with one-dimensional characterizations that ignore the other networks within which producers were embedded. When we consider that these dynamic individuals functioned in a variety of roles outside of the production contexts we investigate (e.g., as priests, mercenaries, merchants), and that they often collaborated across trades, we make room for discussions on how advances or alterations in one industry may have instantly affected and infused other industries and areas of society. Ignoring the social context of technological production therefore severely limits our understanding of how both production systems and producers were entangled in systems of dependency, simultaneously overlapping and interacting with, relying on, and influencing one another. It will be argued that, if we are to understand the impacts of technologies, we must begin with a consideration of the complex social, economic, political, and ideological webs within which these active individuals were embedded. This paper will first survey textual records from the second millennium in order to establish the interconnected nature of producers within their broader social environment, and then draw on archaeological data from specific case studies—combining a cross-craft approach with theory on communities of practice—to demonstrate the need to shift toward a more holistic, people-oriented approach to the study of technological interconnectivity.

Danielle Candelora (University of California, Los Angeles) "The Role of the Hyksos in Technological Transmission and Its Influence on New Kingdom Egypt"
The mid-second millennium B.C.E. was a period of unprecedented interconnectedness, characterized by the increasing movement of people in conjunction with the transmission of technologies across the Near East. In the Egyptian context, focus often falls on the first occurrences of these new technologies in the New Kingdom, and several studies have concentrated on warfare as the means of technological transfer, assigning the Hyksos varying roles in this process. Some suggest that they served as a barrier to innovation, while others argue that this transmission was the result of New Kingdom imperial expansion—itself a backlash against Hyksos rule. Instead, employing a new theoretical approach, I will investigate the human networks through which this specialized knowledge might have transferred, suggesting that the interaction between foreign and local military and technological specialists was the locus of this transmission. The Hyksos period was the culmination of several centuries of Levantine immigrants moving into the Eastern Delta, bringing with them their mastery of new production processes and technologies. This period also saw the introduction of Levantine and broader Near

Eastern military ideas, including a corpus of military-related Semitic loan words. Therefore, this paper will propose that the Hyksos, and their mix of Egyptian and Levantine subjects, played a major role in the initial influx of these new technologies into Egypt. I will also explore the significance behind the adoption and maintenance of these foreign technologies, and their apparent impact on New Kingdom Egyptian society and conceptions of kingship.

Lyndon Drake (University of Oxford) "Biblical Economic Texts in the Light of Modern Money Theory"
The central insight of Modern Money Theory is that the nature of money is primarily determined by the requirements of taxation. Because the state can compel payment in whatever form it chooses, the form of taxation becomes a necessary economic product (a lesson some Bitcoin enthusiasts are currently learning). This demand ripples through the rest of society, making the same form of payment a means of exchange and a required form of economic output—and strongly influencing the forms of indebtedness in society.

The novel contribution of this paper is to apply Modern Money Theory to biblical texts. Of course, in the ancient Near East temples also exerted powerful economic influence, with coercive demands akin to those from arising from the state. Hence the economic demands of the institutions of the state and temple determine what constitutes "money."

This insight illuminates a number of biblical texts. For example, Lev 25:23 ("the land is mine") and Hag 2:8 ("the silver and gold are mine") reflect different ideational worlds. In Leviticus 25, there is no demand for state taxation in precious metals, and so the only monetary flow is in kind from agricultural production, while the thought world of Haggai 2 reflects a state demand for payment in precious metals. In these and other biblical texts, the kinds of economic activity which are described and regulated are determined primarily by the nature of money—that is, by the forms of coercive demand for payment from institutions.

Dylan Karges (Mississippi State University) "Iron Age IIB Ceramics: The Unique, Ubiquitous, and the Underappreciated"
Social and economic change are often initiated by technological innovation, but technological systems such as ceramics must also be understood as culturally embedded and responsive to social, economic, and population dynamics of a given context. Webs of interconnection are not limited in scope to the times of innovation. They strengthen, weaken, or dissolve given the particular pressures of the times. The ceramic traditions present in the Iron Age southern Levant demonstrate great variation within a similar technological foundation. A chaîne opératoire approach to ceramic analysis helps identify significant diagnostic features often overlooked in most pottery descriptions and unpacks the methods of production in ways that allow for a quantification of the resources allocated to that production. Examining the functional relationships of the artifacts, the interdependence of the various technologies, and the ceramic chaîne opératoire informs the hierarchy of systems within the household as it relates to the greater cultural context, and provides the foundation to interpret the relative significance of objects and spaces within the household. The Iron Age IIB remains at Tell Halif provide fertile ground for

examining the extensive interconnections between ceramics and various aspects of daily life as well as fodder for ascertaining significance within the artifact assemblage.

Laura Mazow (East Carolina University) "This Is the Way We Wash the Wool, So Early in the Morning: Integrating Texts and Archaeology to Investigate Labor and Material Resource Challenges in the Organization of Wool Production"
Recent studies acknowledge the major role that textiles—their production, consumption, and distribution—played in the ancient economies of many pre-industrial societies. From the earliest states in the Near East and Mediterranean basin, archives evidence textile-based economies, with wool in particular, as a driving force in the urban polity formation. Furthermore, textual and ethnographic records demonstrate that the textile industry consumed more labor hours than food production and demanded enormous quantities of resources.

Archaeological research on textile manufacture, limited as it is to the material remains, has focused primarily on reconstructing spinning and weaving activities. The washing of wool, which can occur along multiple points in the organization of wool production, is a crucial step in textile production. Its proper completion impacts further production activities such as felting, spinning, and dyeing. Wool washing requires enormous quantities of water and demands large areas for waste-water runoff. Furthermore, the delicate balance required to maintain water temperature, agitation, and alkalinity suggests that wool scouring is a specialized craft, yet the scourer's methods and equipment are rarely addressed in reconstructions of textile production or are discussed together with fulling. Fulling, however, which felts the finished textile, falls at the end of the production sequence whereas scouring occurs at the beginning, when felting must be kept to a minimum. This presentation uses an interdisciplinary perspective to analyze Bronze and Iron Age textual evidence for washing and fulling activities in order to reconstruct labor and material resource needs and challenges.

Thaddeus Nelson (Stony Brook University) "The Loom and the Tent: Developments in Textile Production and Nomadism in the Iron Age II Levant"
A dramatic increase in the frequency of loom weights recovered by archaeologists suggests that textile production in the Levant changed in the Iron Age II (ca. 1000–586 B.C.E.). The warp-weighted looms from which these weights once hung were not a new technology in the region, but one that had been in use since the Early Bronze Age (ca. 3300–2000 B.C.E.). Scholars have looked at the increase in weights from the Iron Age as evidence of a new demand for textiles that could be efficiently woven on these looms. Yet, no consensus exists as to the quality, appearance, or function of these fabrics.

This paper suggests a new direction in which to direct research into the use of warp-weighted looms from the Iron Age II. It is in this period that tent nomadism becomes visible in the archaeological and iconographic record. Tent nomadism, which remains iconic of life in the Levant, requires strategies of mobility. This paper argues that one strategy historically exploited by both nomads and urbanites is to develop village-centered textile industries that supply tents. The tentative conclusion is that Iron Age II

tent nomads developed a new approach to live in part through a change in looms at which they never wove.

12D. Archaeology of Iran II

CHAIRS: Holly Pittman (University of Pennsylvania) and Mehrnoush Soroush (Harvard University)

Sepideh Asgari (California State University, East Bay), "Bioarchaeological Analysis of Human Skeletal Remains at Köhne Shahar, an Early Bronze Age Site in Northwestern Iran"
Northwestern Iran is known for the rise and development of the Kura-Araxes culture, one of the most widely dispersed cultures in the Near East during the Bronze Age. While the material culture, settlement patterns, and architecture of the Kura-Araxes culture have been well documented, little is known about the inhabitants of Kura-Araxes communities, their subsistence economy, and the biological conditions facing these inhabitants. This paper addresses some of the fundamental questions about the diet, general health, and quality of life of this community by analyzing skeletal human remains from Köhne Shahar, a newly discovered Kura-Araxes site in northwestern Iran. The bioarchaeological study carried out on this sample (estimated at 13 adults and 2 sub-adults) indicates a mixed diet consistent with a combination of hunter-gatherer-transhumance and agriculture subsistence patterns. In addition, the data indicate the presence of high rates of dental wear, antemortem tooth loss (AMTL), osteoarthritis, and osteoporosis. Also observed within the pathological data are evidence of repeated activity and other pathological lesions, such as osteosarcoma or cancer well as tuberculosis, suggesting a rather harsh life-style for this population.

Narges Bayani (Institute for the Study of the Ancient World, New York University) and Omran Garazhian (University of Neyshabur University), "Some Recently Excavated Seal-Amulets from Tepe Damghani, Sabzevar"
The prehistoric site of Tepe Damghani in Sabzevar sits at the junction of important exchange networks in northeastern Iran. The site has been investigated over the course of three excavations seasons. The last two seasons of excavations (2012 and 2015) resulted in the discovery of a collection of soft-stone stamp seals and amulets, many of which were found in refuse pits and appear to have been intentionally broken. The current paper presents this new corpus of seal-amulets, drawing parallels from contemporary sites in Central Asia and the Indo-Iranian borderlands, and discusses the circumstances of their disposal at Tepe Damghani.

Mostafa Dehpahlavan (University of Tehran), Mehrdad Malekzadeh (Iranian Center for Archaeological Research), and Zabih Allah Chaharrahi (Independent Researcher), "Archaeological Survey of Part of the Great Khorasan Road, the So-Called Pataq Defile or the Median Gate"
One of the main parts of the Great Khorasan Road is the road leading through the Pataq defile. Greater Khorasan and Mesopotamia were the origin and destination of the

travelers who passed through the defile. Archaeological evidence and historic sources highlight the importance of this passage. We combined field surveys with the study of historical sources, including kings' and travelers' logs, in order to document the significance of the defile in specific historical periods. In addition, we examined historic aerial photographs of the region for a better understanding of modern landscape changes. Finally, we used GIS to reconstruct the main passage in the pre-Islamic periods. Material remains found at the defile and in historic sources indicate a similarity between the "Median Gate" (Μηδικὴ πύλη), "Zagros Gate" (Ζάγρου πύλαι), and *Aqabeh-e-Holvan* as terms used by historians. In addition to the study of the feature in the pre-Islamic periods, two routes used after the Safavid period at the Pataq defile were surveyed to establish the relative chronology of each.

Karim Alizadeh (Harvard University), "Collapse of the Late Antique Sasanian Settlements, Mughan Steppe, Iranian Azerbaijan"
Recent research in the borderlands have increased our knowledge of the irrigation systems and urbanization plans of the Sasanian Empire in Late Antiquity. In particular, surveys and excavations in the Mughan Steppe indicate that irrigation canals connected nearly all Sasanian settlements. Evidence suggests that during or slightly after the seventh century A.D. most of the elaborate settlement system was abandoned and its irrigation infrastructure went out of use. While the exact date of this abandonment is unclear, it is possible that the collapse of the irrigation system itself could have brought an end to the Sasanian settlements. In this paper, I will argue that it is possible that the abandonment of Sasanian system in the Mughan Steppe could have happened before the appearance of the Muslim army in the region in the mid-seventh century. I will present evidence of abandonment of irrigation canals that could have caused the abandonment of the entire Sasanian settlements in the plain.

Mohammad Esmaeil Esmaeili Jelodar (University of Tehran) and Mohammad Mortezaei (Iranian Center for Archaeological Research), "Certain Evidence of Glazed Ceramic Manufacturing in Jorjan: An Overview of the Results from the Seventh Season"
The vast remains of ancient Jorjan are located just to the west of the modern town of Gonbad-e Kavous in eastern part of the Gorgan Plain, southeast of the Caspian Sea. The Islamic settlement, a continuation of the previous Sasanid-era settlement, reached its zenith in the fifth to the sixth centuries AH (11th-12th centuries A.D.). Most of the industrial workshops for making glass, ceramics, and metal were located along the main streets. According to written sources the city had several caravanserais, mosques and teaching centers. The ancient remains of the city were first extensively excavated by M. Y. Kiani in the late 1970s. Y. Kosari conducted some soundings around the city in 1985–1986 in order to map the approximate extent of the ancient settlement. From 2001 to 2005, some preliminary test excavations were conducted by M. Mortezaei from the Iranian Center for Archaeological Research. After a decade of hiatus, new excavation units were opened at the site in December 2017 by M. Mortezaei. The excavation is focused on the industrial quarter of the city which is located in the southeast. During these excavations, two ceramic workshops were partly unearthed. The results so far have shown that, contrary to other ceramic workshops from contemporary sites, they are

quadrangular in plan rather than circular. Numerous ceramic plugs and tripods with stains of plain and glazed wares were found. Evidence of all ceramic production stages were identified, and various types of pottery, including the graffiato color-splashed ware, color-splashed ware, black on white ware, early lusterware, cobalt-glazed ceramics, ceramics with painting on and under glaze, etc., were found.

12E. Reports on Current Excavations—Non-ASOR Affiliated

CHAIR: Daniel J. Schindler (Elon University)

Byron R. McCane (Florida Atlantic University), "Excavations at Horvat Kur, Galilee: 2010–2018"

Seven seasons of excavation at Horvat Kur in the Lower Galilee have exposed the remains of a basilical synagogue from the Late Roman and Early Byzantine periods, along with adjacent houses. In its first phase (Late Roman), the building was a rectangular structure, oriented toward Jerusalem, including a mosaic floor with an Aramaic dedicatory inscription and a depiction of a menorah. A low bench ran along the interior walls. In its second phase (Early Byzantine), the synagogue was expanded into a broad-house basilical layout, with a *bemah* at the center of the southern wall, an adjacent room on the north side (likely a *beth midrash*), and a gallery above the eastern aisle, accessed by means of an exterior stairway. In the third phase (Late Byzantine), the adjacent room was closed off and the spaces between the interior columns were filled in with an array of low stones, apparently for additional seating. Two stones were exceptional: one was an ornamented limestone doorpost laid on one of its long sides; and the other a neatly worked basalt stone table, with feet under each corner, geometric designs on three sides, and depictions of vessels for liquids carved into the fourth side. The original use of this "Horvat Kur stone" remains elusive. The Horvat Kur synagogue thus provides an illustrative example of synagogue construction, decoration, and use within the social, economic, and religious setting of a Lower Galilean village of relatively modest circumstances.

Tine Rassalle (University of North Carolina at Chapel Hill), "At the Bottom of the Pit: The Byzantine Cistern of Horvat Kur"

In the summer of 2011, a cistern was discovered next to the Byzantine synagogue of Horvat Kur. The cistern consisted of a 1.5 m deep shaft and an 8 m deep bell-shaped cave going underneath the synagogue; two layers of hydraulic plaster coated its walls. The bottom of the cistern was covered with sediment about 60 cm high, containing heaps of pottery, glass, and organic material. Based on the pottery found in the upper layer of the sediment, the cistern was sealed off sometime in the sixth century and stayed closed off for the next 1400 years. Excavations in the cistern were carried out in the summers between 2012 and 2016 and about 25% of the sediment was removed. The finds have been extraordinary: large amounts of plant and small-animal remains, pieces of oil lamps, several glass vessels, and almost 40 complete jugs and pots (including some types that were previously unknown in the Galilean repertoire). Careful pollen analysis conducted on soil samples has enabled us to reconstruct the paleobotanical environment around

Horvat Kur during the Late Roman-Byzantine period. In this paper, I will give a description of the make-up of the plastered cistern, an explanation of the palynological research conducted, and an overview of the finds discovered. Cisterns tend to be largely overlooked as valuable research loci in Byzantine archaeology in Israel; this paper hopes to overcome the gap by displaying the amount of knowledge that can be deducted from the bottom of a pit.

Mark Hassler (Virginia Beach Theological Seminary), "Military Architecture in the Second Temple Period: The Khirbet el-Maqatir Excavations"
During the 2015 and 2016 excavation seasons, workers uncovered a massive fortification tower at Khirbet el-Maqatir, 16 km north of Jerusalem. The tower, 30 m by 16 m, originally would have stood three to five stories high. Five rooms of the tower and the entrance were excavated. This tower, along with a second tower, reinforced the northern defensive wall of the settlement. Khirbet el-Maqatir, a 2 ha (5 acre) settlement, was strategically located in the central hill country of Judea. Ritually observant Jews occupied the site during the Second Temple period. The settlement and its defensive towers fell to the Roman army in 69 or 70 C.E. during the First Jewish Revolt. This preliminary excavation report examines the military architecture and the relevant artifacts from the site, and it discusses the pertinent archaeological parallels.

David Vila (John Brown University), "Excavating Abila of the Decapolis: The 2018 Season of Excavation"
The 2018 season of excavation at Abila of the Decapolis marks 38 years of discoveries that have yielded important information about the place of Abila in the broader historical and archaeological contexts of northern Jordan. In addition to the excavated materials from the Bronze and Iron ages, significant Byzantine and Early Islamic materials demonstrate that Abila was an important cultural center from early in recorded history up through the middle of the tenth century C.E. and beyond. In this paper I will present an overview of the findings of our 2018 season of excavation. Work during the summer of 2018 will focus on the continued excavation of two of our Byzantine churches (Area E and Area G) and Area B, which appears to be a Byzantine monastic complex. Of special note, work during our last season of excavation in 2016 uncovered what appears to be the east wall of a chapel adjacent to our Area E basilica. The wall, including what appears to be an apse, stands to a height of just over 3 m and gives us a strong indication that the entire structure will be largely intact. Excavations during the summer of 2018 will determine if this is the case and will seek to determine the relationship of this structure to the large Area E basilica.

Nicholaus Pumphrey (Baker University), Ann E. Killebrew (Pennsylvania State University, University of Haifa), and Jane Skinner (The Pennsylvania State University), "Tel Akko, Israel: The 2017–2018 Seasons of Excavation"
The 22 ha maritime harbor settlement of Tel Akko, Israel has dominated the Plain of Akko's ancient landscape for millennia. First inhabited in the Early Bronze Age, Tel Akko served as a major urban center for most of the second and first millennia B.C.E. Current excavations of the Tel Akko Total Archaeology Project, directed by A. E. Killebrew and M. Artzy under the auspices of the University of Haifa and the

Pennsylvania State University, focus on the late Iron Age and Persian period (ca. eighth–early fourth centuries B.C.E.) Phoenician city in Area A at the summit of the tell. Here huge quantities of iron slag and remnants of iron working spanning the seventh–fourth centuries B.C.E. have been uncovered. This mid-first millennium smithy, the only known iron working facility in the Levant dating to the Persian period, provides an unparalleled opportunity to explore iron production at a Phoenician maritime center. This paper presents the preliminary results of this large-scale iron industrial area, including sources of iron ore, modes of production, and remains of possible ritual practices. The significance of iron production at Tel Akko is contextualized in its Phoenician cultural milieu and its role within the Neo-Assyrian and Persian empires.

Randall Price (Liberty University) and Oren Gutfeld (The Hebrew University of Jerusalem), "New Discoveries from the Caves of Qumran"
In January 2017 a new Dead Sea Scroll cave (Cave 53) was discovered in the fault cliffs south of Qumran through excavation. Scroll jars, scroll wrappings, and possible scroll fragments were recovered as well as an Early Bronze Age seal, a Chalcolithic etched stone, and numerous Neolithic arrowheads and pottery. In January 2018 a second cave next to the previous cave (Cave 53B) was excavated and a rare bronze cooking pot (ca. 100–15 B.C.E.) was recovered from a hidden chamber, and an almost intact Hellenistic/Hasmonean oil lamp from the entrance to the cave. Other finds included large amounts of pottery representing store jars, flasks, cups and cooking pots, and fragments of woven textiles, braided ropes and string. The significance of this discovery involves the new evidence it provides that the caves south of Qumran represent sealed loci, despite the attempts by Bedouin to loot these sites. Also significant is the relation of these caves to the Qumran community, and how the scroll cave found in 2017 is associated with the new cave found in 2018.

12F. Study of Violence from the Region of the Ancient Near East and Its Neighbors

CHAIRS: Vanessa Bigot Juloux (École Pratique des Hautes Études; Andrews University) and Leann Pace (Wake Forest University)

Roselyn A. Campbell (University of California, Los Angeles), "Earthly and Eternal: The Performance of Violence in Ancient Egypt"
Violence as a tool of power has been much discussed in recent anthropological literature. However, most definitions of violence focus on harm to the physical body, and thus do not consider any sort of violence that may affect both the physical and the spiritual well-being of an individual. In ancient Egypt, the effects of violence could reach far beyond the physical world and into the spiritual realm. Because the Egyptian king was a representative of the gods, as well as a god himself, all state-sanctioned violence was implicitly violence that also affected the spiritual world, but some methods of lethal violence were meted out to punish the victim immediately or to punish/threaten observers, while other forms of violence were specifically designed to continue the violence into the afterlife. In a culture that placed heavy emphasis on life after death, eternal punishment could be ensured by dismembering or destroying the body of the

deceased in a way that might preclude his or her chances of entering the afterlife at all. These violent performances became a way to reinforce identity and social roles.

This paper discusses two examples of purposeful fragmentation of the physical body in ancient Egypt. Both of these focus on damage to, or dismemberment of, a human body, but seemingly for very different reasons. Through these case studies, I will explore the ways that violence could be used as a tool of power beyond the grave, violence that was intended to have both earthly and eternal consequences.

Albert McClure (University of Denver; Iliff School of Theology), "Decapitation and the Language of Violence in the Ancient Near East"
Post-mortem mutilation is *not* about killing, and therefore, must hold other *significances*. A number of scholars (Lemos 2006; Richardson 2007; Stavrakopoulou 2010; Pace 2015) have recently treated post-mortem mutilation in the Hebrew Bible and the ancient Near East, dealing with numerous aspects of this practice. Even more recently, two scholars have focused on a particular form of post-mortem mutilation, decapitation (Olyan 2016; Dolce 2018). In this essay I will examine decapitation narratives in the books of Samuel (1 Sam 5:3–5; 1 Sam 17:41–54; 1 Sam 31:8–13; 2 Sam 4:1–12; 2 Sam 20:1–22) as well as Mesopotamian sources in order to provide a number of options for the meanings of this practice from a diachronic perspective. I will look at monumental art, legal texts, and prose in order to demonstrate both the ubiquity of this theme and the way that authors and artists used this trope for multiple purposes. Additionally, by tracking decapitation in various chronological and geographical locations, we may gain a sense of the ways in which this practice developed as it relates to imperialism and ethnicity. Further, viewing this practice from both the perspective of those who allied with the mutilated corpse and those who did not may provide further nuance. Finally, broadening our discussion from decapitation to violence in general, we may begin to see how both the artistic and physical enactment of violence became a kind of language in itself in the ancient Near East.

T. M. Lemos (Huron University College, University of Western Ontario), "Genocide in Assyrian Sources? Exploring the Intentions and Practice of Mass Violence in the Neo-Assyrian Period"
This paper will explore the presentation of mass violence in Neo-Assyrian sources to determine whether or not the Assyrian state undertook the practice of genocide against groups in the region. This paper forms part of a larger research project—as coeditor (with Ben Kiernan and Tristan Taylor) of the *Cambridge World History of Genocide*, *Volume 1*, I will author two essays on genocide in the ancient world that continue the research that I began in my recent article entitled "Dispossessing Nations: Population Growth, Scarcity, and Genocide in Ancient Israel and Twentieth-century Rwanda," as well as in several conference papers. Specifically, I am interested in whether the Assyrians can be understood as attempting to eliminate entire ethnic groups and, if so, what the intentions and logic of the Assyrian state were in doing this. The paper will engage with a recent essay by Jacob Wright on urbicide in the ancient Near East to determine whether the punishment of rebellious cities should be considered a form of genocidal violence, and will also engage with major research in the field of genocide studies, building upon

research by Ben Kiernan, Adam Jones, and others, while also applying a critical stance toward certain consensus positions and methodological dispositions in that interdisciplinary field. In sum, the paper will include both a theoretical discussion and detailed examination of historical sources as part of its attempt to disentangle the relationship between Assyrian mass violence and paradigmatic cases of genocidal violence in the historical record.

Niv Allon (Metropolitan Museum of Art; Institute for the Study of the Ancient World, New York University), "Mediated Violence: Royal Violence in Ancient Egyptian Non-Royal Art"
Representations of violence abound in ancient Egyptian art and texts, where the figure of the smiting king is one of its longest enduring images. Through text and image, the king is featured as a victorious conqueror who defeats Egypt's enemies with vigor and violence. Many of these representations belong to the royal sphere; this paper, however, will explore elite tomb art, autobiographical texts, and other objects to consider the image of the violent king among the elite and its own concepts of violence.

In contrast to the wealth of references to the violent king in royal art, the art of the elite only rarely depicts the king smiting. His violent imagery only appears in this corpus as an element within images of the royal throne and of similar objects. In addition, ancient Egyptian texts describe military campaigns and royal victories, but these are most prominently mentioned in the context of captured enemies and looted goods arriving in Egypt and its temples.

In this paper, I will explore this distancing effect of both text and image and the implications of mediated violence. The funerary context of many of these images is of importance, but it hardly explains all features of this phenomenon. Instead, I will suggest, both text and image emphasize a mediated experience of violence: depictions of the violent king act as images within images, and the textual references emphasize an experience mediated through captives and commodities.

12G. Death and Dying in the Ancient Near East

CHAIRS: Pınar Durgun (Brown University) and Stephanie Selover (University of Washington)

Pınar Durgun (Brown University): "Body as an Object and Subject: Bodily Performances and Sensorial Rituals in Anatolian Cemeteries"
From living bodies interacting with dead bodies, to dead bodies buried with anthropomorphic vessels and figurines, in the context of Anatolian cemeteries, bodies are omnipresent. In cemeteries, both living and dead bodies were surrounded by performative and sensorial rituals that accompanied mortuary practices. These rituals included secondary burial activities, feasting, and music, and evoked certain senses and emotions. Considering that physical characteristics of the body and of objects can be given social

meaning through repetitive performance, we need to look at burials, and objects that represent bodies in connection to each other, and in connection to other mortuary rituals. Cemeteries provide the perfect context for such a holistic approach. In this paper, by analyzing bodily performances and sensorial rituals in Bronze Age Anatolian cemeteries, I question the interactions between the living and the dead, production of images, and their role in mortuary practices.

Kerry Muhlestein (Brigham Young University): "Flying to the Stars or Climbing to the Sun? The Combined North and East Orientation of the Seila Pyramid as an Innovation and Transition at the Beginning of the Fourth Dynasty"
Snefru, first king of the Fourth Dynasty, developed the true pyramid and set a new design for pyramid complexes that would be followed closely thenceforth. The architectural elements of his pyramids represent a transition period. One of those transitions is a change from a primarily north-south orientation to that of primarily east-west. While much of the evidence for this transition has long been known, excavations from his small pyramid at Seila add more information about this transition. Much of the information about the Seila Pyramid has not been previously published. Herein I outline some of that evidence, demonstrating that the Seila Pyramid has elements of ritual activity on both the northern and eastern sides of the pyramid, including a northern altar, statue, and offering table, and an eastern ritual porch, stelae, and causeway. In the last year we have further revealed the configuration of these ritual areas. We have also done X-ray fluorescence (XRF) and spatial analysis that sheds light on what kind of liquid offerings were performed in the unique libation altar and how that unusual altar may have been used.

Shane M. Thompson (Brown University): "Samalian Funerary Ideology through an Egyptian Lens: New Insights on the Correlations Between the Npš/Nbš and the Ka"
The mortuary stele of KTMW provides an opportunity for further analysis of the Samalian language, as well as a window into the funerary ideology at Zincirli, and more broadly, the Syro-Hittite and West Semitic world. While it is not the only stele depicting a feast with the dead in a Syro-Hittite or West Semitic context, it is the sole example found in its original archaeological context. Within this study, I will briefly situate Sam'al using concepts of borderlands and frontiers in order to demonstrate the influence of surrounding entities. Following this, I will present a new method for analyzing the function of this stele and interpreting the root *npš/nbš*, based on correlation with Egyptian models. Unlike other studies which focus on Biblical correlations to deduce further understanding of this root, I will argue that the best model for further analysis is, in fact, a correlation with the Egyptian concept of the *ka*. This correlation will include linguistic, archaeological, and art historical comparisons with the goal of better understanding Samalian funerary practices and ideologies regarding the deceased.

12H. Interrogating Cultural Change – Punctuated Equilibria Models in Near Eastern Archaeology and Egyptology II

CHAIR: Thomas E. Levy (University of California, San Diego)

Thomas E. Levy (University of California, San Diego), Mohammad Najjar (University of California, San Diego), Brady Liss (University of California, San Diego), and Erez Ben-Yosef (Tel Aviv University) "The Iron Age Industrial Revolution in Southern Jordan—Thoughts on Punctuated Equilibrium and Technological Change"

How does exponential change in technological systems occur, the kind of transformation that promotes rapid social and economic change? While this question is highly relevant today in a world where Google, Facebook, Amazon, and other technological giants dominate our lives, technology has played a definitive role in social evolution throughout prehistory and history. This paper looks at rapid technological change in metallurgy during a relatively short period of less than two centuries during the Iron Age (ca. 1200–500 B.C.E.) of the southern Levant based on excavations by T. E. Levy and M. Najjar at the copper production site of Khirbat en-Nahas in Jordan's Faynan district, analyzed in collaboration with E. Ben-Yosef and B. Liss. The utility of applying Niles Eldredge and Stephen J. Gould's theory of punctuated equilibria is explored.

Andrew McCarthy (University of Edinburgh), "The Archaeology of Conservatism"

Historical materialism is a crucial foundation of the study of archaeology, inferring a relationship between material remains and the type of society that made them. Inherent in Marxist thought is the idea that progress (or some kind of change) occurs, leading to revolutions in society. Academic focus has emphasized these moments of change, whereas how societies maintain a structural paradigm is not well understood. Acknowledgement that change comes at different paces and that states of cultural equilibrium can be punctuated by rapid shifts has enhanced our appreciation of the diversity of development. On the other hand, the forces keeping culture static, that is to say the forces acting to conserve social structures, have escaped widespread analysis. As archaeology of conservatism requires observation of how change does *not* occur, it also requires special evidence to elucidate. Understanding conservatism can shed light on both moments of change as well as long periods of relative stasis that make up the bulk of history. This paper will propose an index of conservativism for the archaeological record and will discuss two roughly contemporary case studies from the Bronze Age. Prastio-*Mesorotsos* in Cyprus and Tell Leilan in Syria show variations on how societies struggle to maintain the status quo in the face of growing pressure to change. They demonstrate that society develops not only with continuity and change, but also with active resistance to change. Forces of change are neither inevitable nor all powerful, and can be countered by opposing forces of social conservatism.

Assaf Yasur-Landau (University of Haifa), "Punctuated Currents: Modeling Trajectories of Maritime Adaptation"

Maritime connectivity, namely trade and other maritime interactions, may be presented as an adaptive strategy for risk management in the uncertain Mediterranean climate, when used in tandem with the well-tested building blocks of the specialized Mediterranean economy, aimed at minimizing the impact of "bad years." The coast of Israel, with its rich coastal and underwater archaeological record, is an ideal laboratory to test concepts of connectivity and adaptation to maritime environment in Mediterranean micro-regions. This presentation will examine two interrelated key themes in the study of the material

manifestations of such adaptation. First, it will reexamine the prevalent theories for the development of harbors in the eastern Mediterranean from the Bronze Age to the Roman period. It will evaluate whether linear or quasi-linear evolutionary trajectories stressing technical advances still stand, or should be replaced by other models manifesting punctuated or truncated trajectories. Second, it will aim to create a model of decision-making processes connected with the construction of maritime structures combining new opportunities (i.e., new construction techniques and new trading networks), political constrains (i.e., imperial policies and demands) as well as environmental changes (i.e., sedimentation and sea level changes).

Eric Cline (George Washington University), "Punctuated Equilibrium and the 3.2Kya Collapse in the Aegean, Egypt, and the Eastern Mediterranean"
In a previous publication (Cline 2014), I discussed the collapse at the end of the Late Bronze Age in terms of a perfect storm of destructive events, including drought, famine, invaders, and earthquakes, which resulted in multiplier effects and a systems collapse across the region. The following year, in 2015, Miroslav Bárta introduced Niles Eldredge's and Stephen Jay Gould's model of "punctuated equilibrium" to help explain the end of the Old Kingdom in Egypt and suggested that it could be used to help explain other similar catastrophic periods and major changes. In this paper, I will examine this concept and determine if a "punctuated equilibrium model" might provide a fresh perspective on the ending of the Late Bronze Age.

Norman Yoffee (University of Michigan), "Unpunctuated Non-Equilibria in Ancient Mesopotamia"
The evolution of cities in Mesopotamia and elsewhere has been modeled as "punctuated," that is, extremely rapid, or at least not explicable as the cumulation of gradual changes. Rapid and significant changes in ancient Mesopotamian history has sometimes been attributed to, variously, climate change, invasions of foreigners, the decisions of leaders who engineered environmental degradation, and/or the actions or inactions of weak kings. Is there a link between "punctuated" change in prehistory and the kinds of changes that are often labeled "collapses" in historic periods? Archaeological and historical data from Mesopotamia, with limited comparisons to other ancient cities and states, are briefly offered.