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Cover photo by Selma Omerefendic	



Welcome from ASOR President, Susan Ackerman

Welcome to ASOR's 2017 Annual Meeting, which promises to be ASOR's biggest ever. Already back in February, we received a record number of paper proposals, and the Programs Committee has worked overtime to put the best of these proposals together into the richest and fullest set of sessions we have ever been able to offer—covering all the major regions of the Near East and wider Mediterranean from earliest times through the Islamic period. The poster session too, is bursting at the seams, with a wealth of new and important research to be presented.

Several special sessions this year mark important anniversaries. Three different sessions focus on the 50th anniversary of the Madaba Plains Project (MPP), and the MPP's fiftieth anniversary will also be celebrated at a reception on Thursday night. The CRANE Project—Computational Research on the Ancient Near East—is also celebrating an anniversary, its fifth, with two sessions on Friday afternoon and a reception that evening. Four other special sessions honor colleagues who have made especially distinguished contributions to the study of the Near East and the wider Mediterranean: Israel Finkelstein, Kenneth G. Holum, S. Thomas Parker, and Stuart Swiny. Other special receptions include the Institute for Oriental and European Archaeology (OREA) Reception on Thursday night and the Digital Archaeology Demo Showcase and Reception on Friday evening. Plus, our friends at the Harvard Semitic Museum have extended an invitation for as many of us as possible (for space reasons, there are a limited number of tickets available) to travel across the Charles River to join them for a reception on Saturday night.

It is also appropriate that while we are in her home town, we honor one of one of ASOR's most distinguished members, former Harvard University William Dorr Boardman Professor of Fine Arts Irene Winter, by inviting her to give this year's plenary address, on the topic "Archaeology, Object History, Art History: Questions of Definition and Discipline." I'm also particularly excited about some of the new member-organized sessions that will be featured in the ASOR Annual Meeting Program this year: for example, "Christians and Muslims in the Medieval Near East"; "Material Interconnections in the Levant during the Second Millennium B.C.E."; and "Study of Violence from the Region of the Ancient Near East and Its Neighbors." Some noteworthy member-organized sessions have also been renewed, for example, "The Archaeology of the Kurdistan Region of Iraq" and "Yerushalayim, Al Quds, Jerusalem: Recent Developments and Dilemmas in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods." Yet another important member-organized session, "The Soft Power of Place—Cultural Diplomacy, Archaeology, and the Overseas Research Centers," allows ASOR members to reflect on the vital role played by our affiliates in Jerusalem (the W. F. Albright Institute for Archaeological Research), Amman (the American Center for Oriental Research), and Nicosia (the Cyprus American Archaeological Research Institute).

The importance and the breadth of these member-organized sessions is vivid evidence of ASOR's greatest asset—its committed and devoted membership—and this year's meeting aims to engage that membership in new and better ways by moving the Members' Meeting from Thursday, from 12:45–2:00 (a time when many members are just arriving at the meeting or even still in transit) to Friday at the same time block. We hope this makes it possible for many more of you to attend the meeting and participate both in the meeting's business and in its celebration of the winners of this year's ASOR Honors and Awards.

But whether at the Members' Meeting; in paper sessions; at the "Posters on Parade" event; at the Plenary Address; or at evening receptions, I look forward to seeing each and every one of you at ASOR's 2017 Annual Meeting. Welcome to Boston!

Susan Ackerman
ASOR President



Welcome from the Executive Director, Andrew Vaughn

Welcome to our Annual Meeting in Boston! We are pleased to welcome the ASOR community to our hometown, which is overflowing with a rich array of culture, history, and architecture.

Founded in 1630, Boston is one of the oldest cities in the United States and is Massachusetts's capital and largest city. Boston's history is showcased in numerous museums and historic sites and structures. Today, the area's many colleges and universities make Boston an international center of higher education. Our conference hotel is located in the Seaport, a neighborhood nestled between Boston's beautiful waterfront and the historic Fort Point district.

With Thanksgiving nearly upon us, there are so many individuals to whom thanks are due for making our extraordinary program possible. This ambitious and wide-ranging meeting was overseen by one hard-working and talented committee in particular—the Annual Meeting Programs Committee, led by Co-Chairs Helen Dixon and Geoff Emberling. These Co-Chairs, and the Programs Committee members with whom they work, are dedicated, diligent, enthusiastic, and committed to putting together an exciting educational program of more than 650 papers and poster presentations. This is a record number and more than a 40% increase over last year! A full listing of all committees can be found on the ASOR Committees pages of this program book. Many thanks are also due to the session chairs and presenters who will bring the program to life.

I wish to thank several groups in particular for their generous financial support of receptions. Notably, the Institute for Oriental and European Archaeology (OREA) is sponsoring the reception on Thursday night; the King Abdullah University of Science and Technology together with the University of California, San Diego's Center for Cyber-Archaeology and Sustainability and the Scripps Center for Marine Archaeology are co-hosting the Digital Archaeology Demo Showcase on Friday night. The CRANE Project (Computational Research on the Ancient Near East) is hosting a reception on Friday evening as well. The Foundation for Biblical Archaeology and its director, Sheila Bishop, are providing crucial financial support for student scholarships. In addition, I would like to thank all of our exhibitors and encourage you to stop by and visit the displays. We would like to give our special thanks to this year's sponsors, Penn State University Press (Platinum) and The University of Chicago (Silver).

Last, but not least, I would like to extend special thanks and recognition to the ASOR staff. Their hard work and dedication throughout the year makes our Annual Meeting possible.

Please mark your calendars for our 2018 Annual Meeting, which will be held at the Denver Marriott Tech Center in the Denver Greenwood Village suburb from November 14–17, 2018. Please visit the meeting website at www.asor.org/am for details. We once again anticipate a record attendance and full hotel, so I encourage you to make your reservations early.

Please let me, or any member of the ASOR staff, know if there is anything we can do to make your experience in Boston a pleasant and rewarding one. I hope you enjoy this year's Annual Meeting.

With warm regards,

Andrew G. Vaughn

ASOR Executive Director



Welcome from the Chairman of the Board of Trustees, Richard Coffman



Welcome to Boston, one of the oldest and most historic cities in the United States—which is appropriate considering we are here to learn about old stuff.

Boston is one of America's truly unique cities. From the Boston Harbor to Revolutionary War sites to Faneuil Hall Marketplace to Fenway Park to the multiple bastions of higher learning to the museums and restaurants, Boston is a veritable cornucopia of historic, educational, culinary, and cultural offerings.

Speaking of cornucopias, we have one right here at the ASOR Annual Meeting. We received an all-time record number of abstract submissions this year—almost 700 paper proposals and 75 poster proposals. There are over 120 scheduled academic sessions to be led by a small army of intrepid archaeologists, biblical and Islamic scholars, anthropologists, conservators/curators, historians, and other interdisciplinary specialists working in the Near Eastern and Mediterranean regions. Since our last convocation, they have learned a lot of new stuff about old stuff and look forward to telling us what they learned and why it is important.

But there is also cultural heritage to protect. And a new home to find. And business to conduct. And committee meetings to attend. And financial statements to review. And No-Doze to take. While we come together to learn and reconnect, we also meet to review our progress and chart our path forward to ensure our continued success in the future.

This is a momentous time in ASOR's history. Our membership is growing; we are hovering at the all-time high water mark. We are financially strong. Our multi-faceted social media and electronic publishing initiatives are rapidly expanding. The new ASOR website has become the go-to source for Near Eastern and Mediterranean scholarship and cultural heritage. Our influence and prestige are on a meteoric rise. None of this, of course, is possible without you, your time, your talents, and your support. For that, I thank you.

So consider yourself properly welcomed. Go forth and enjoy the Annual Meeting. Learn something new. Reconnect with old friends. Introduce yourself to someone you don't know. It's time to shake hands and be friendly.

Richard Coffman
Chairman of the Board

ASOR's Mission



ASOR, founded in 1900, is an international organization whose mission is to initiate, encourage, and support research into, and public understanding of, the history and cultures of the Near East and wider Mediterranean, from the earliest times, by:

- Fostering original research, exploration, and archaeological fieldwork
- Encouraging scholarship in the region's languages, texts, traditions, and histories
- Disseminating research results and conclusions in a timely manner, through a robust publication program, annual meeting, and other venues
- Adhering to the highest ethical standards of scholarship and public discourse
- Upholding the highest academic standards in interdisciplinary research and teaching
- Promoting educational opportunities for undergraduates and graduates in institutions of higher education around the world
- Developing engaging programs of outreach for the general public
- Supporting and participating in efforts to protect, preserve, and present to the public the historic and cultural heritage of the Near East and the wider Mediterranean and to raise awareness of its degradation

Welcome from the Co-Chairs of the Annual Meeting Programs Committee, Geoff Emberling and Helen Dixon

Dear Colleagues,

On behalf of the Programs Committee, we would like to join our colleagues in welcoming you to Boston for ASOR's 2017 Annual Meeting.

The Annual Meeting has continued to grow over the past five years, in part because it is increasingly recognized as an exciting conference to present (and hear about) current research on the ancient Middle East and eastern Mediterranean, including recent finds as well as innovations in method and theory.

This year we've had the biggest increase in session and paper submissions of the last five years—20% more than 2016. We had so many excellent session proposals this year that we expanded the academic program to offer 10 sessions per time-slot. We will be interested in hearing how you like this format.

As the Annual Meeting continues to grow, it supports ASOR's vision for the 21st century, to be the “the leading organization committed to the dissemination of knowledge and understanding of the Near Eastern world.” Thanks to the energy of the Programs Committee, session chairs, and ASOR staff (particularly Arlene Press, Manager of Programs and Events) for all the work and attention that goes into planning our Annual Meeting.

As in the recent past, the meeting will have four types of sessions:

ASOR-sponsored sessions are standing sessions organized by geography, chronology, and discipline to provide a framework for individually submitted papers.

Member-organized sessions are proposed by ASOR members (and approved by the Programs Committee) to gather papers on a specific topic or theme for a term lasting between one and three years.

Member-organized workshops are also proposed by ASOR members, and are designed to have shorter presentations with significantly more time for discussion of focused topics.

Posters are also an excellent way to learn about the latest research results. Posters will be on display throughout the conference, but you will find authors next to their posters during the lunch break on Saturday, November 18.

There are four session blocks per day (Thursday: blocks 1–4; Friday: blocks 5–8; Saturday: blocks 9–12), and each individual session is given a letter designation (A–J, and sometimes K).

We would also like to encourage you to be thinking ahead to the 2018 ASOR meeting in Denver, November 14–17! Proposals for member-organized sessions will be due soon after the 2017 meeting (deadline: December 15, 2017), and information can be found on the ASOR website. The Call for Papers will be announced in early January 2018 with a deadline of February 15, 2018, for paper abstract submissions. We hope to continue to gather vibrant sessions and papers that present the broad range of innovative research being carried out by ASOR members, particularly during these times that are so troubling for the region we care about so much.

We hope that you will introduce yourselves to us in Boston and let us know if you have ideas for improving any aspect of the meeting.

Geoff Emberling
Helen Dixon
Co-Chairs, Programs Committee





CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
MARTIN J. WALSH



November 2017

Dear Friends,

On behalf of the City of Boston, it is my pleasure to welcome you to the 2017 Annual Meeting of ASOR. I can think of no better place to host this event than our city, which is rich in history and home to many leading research organizations at the forefront of their studies, including ASOR itself.

For more than 100 years, ASOR has served as a respected institution dedicated to preserving and promoting the cultures and histories of the Near East and Mediterranean world. Your participation in this meeting carries on this work, which has become so important during a time when ancient artifacts are put at risk by war and global climate change.

During your stay, I hope you can find time to enjoy our museums, world-class restaurants, historic neighborhoods and landmarks dating back to the earliest days of our Commonwealth.

Best wishes for a productive convening and many accomplishments in the years to come.

Sincerely,

Martin J. Walsh
Mayor of Boston

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History of ASOR

The Early Years

Since the end of the 19th century, the American Schools of Oriental Research has been on the forefront of American research efforts in the Near East. Founded in 1900, the American School of Oriental Study and Research in Palestine had its first headquarters in a hotel room in Jerusalem. Twenty-one colleges, universities, and theological schools chartered ASOR, while three organizations (the Archaeological Institute of America, the Society of Biblical Literature, and the American Oriental Society) helped oversee its creation. By 1901, our first excavation had begun at the tombs at Sidon, and our first grant was awarded. In 1909, excavations were underway at Samaria with George Reisner at the helm. Reisner introduced his pioneering excavation and recording techniques to Palestinian archaeology, beginning systematic excavations in the region.

In 1910, the School's managing committee declared its first ten years a success. However, the outbreak of World War I in 1914 and the Ottoman Empire's entry into the war led the director, James Montgomery, to close the school. We reopened in Jerusalem in 1919 and published the first volume of the *Bulletin of the American Schools of Oriental Research (BASOR)*. By the next year, William F. Albright, a fellow at the Jerusalem School, had been appointed director—a post he held for nine years. The first Annual of the American Schools of Oriental Research and the second volume of *BASOR* were published that same year, a propitious beginning for our young school.

The year 1921 marked a turning point for ASOR. We were incorporated in the United States and began to use the name The American Schools of Oriental Research. Our second center, the Baghdad School, opened in 1923. In 1925, the main buildings of the Jerusalem headquarters were completed thanks to generous gifts from James and Jane Nies. Our affiliated excavations in the Levant and Iraq continued throughout the 1920s and 1930s, including excavations at Tell Beit Mirsim and Jerash and Nelson Glueck's surveys of Jordan. In 1938 G. Ernest Wright launched *The Biblical Archaeologist* (now *Near Eastern Archaeology*). The outbreak of World War II and rising violence in the region forced ASOR to put programs on hold again in 1939.

Mid-Century

The 1940s were a time of change. The Baghdad School founded the *Journal of Cuneiform Studies* in 1947. The ASOR Newsletter began production in 1948, based on the private newsletters of Nelson Glueck. In that same year, the Dead Sea Scrolls were discovered and brought to ASOR, where John Trever, acting director, recognized their authenticity. We worked to photograph and publish the first scrolls in 1950. War left the Jerusalem headquarters damaged by mortars and small arms fire, and in 1949, ASOR ended up on the Jordanian side of the city—still in contact with all of Jordan but cut off from Israeli scholars and sites.

During the 1950s we helped sponsor digs in several areas of the Middle East, including Kathleen Kenyon's dig at Jericho and the excavations of Nippur. During the Suez conflict in 1956, staff were evacuated from the Jerusalem School but returned soon thereafter. By 1958, ASOR scholars were involved in the long-term dig at Sardis.

Late Century

The Six-Day War in 1967 prompted the evacuation of the Jerusalem School once again. The war left the Jerusalem School under Israeli control, and the American Center of Oriental Research (ACOR) was founded in 1968 in Amman, Jordan, to allow American scholars access to other countries in the region. In 1970 the Jerusalem School was renamed the W. F. Albright Institute for Archaeological Research (AIAR), while ASOR took charge of publications and fundraising efforts in the U.S. The Baghdad School closed in 1969 due to hostility from the ruling Baath Party and became the Committee on Mesopotamian Civilization.

The 1970s saw numerous ASOR-affiliated excavations taking place around the eastern Mediterranean, and from 1975 to 1979 at Carthage as well. The Cyprus American Archaeological Research Institute (CAARI) was founded in 1978 to foster research into the history of the island, particularly the Phoenicians, and to support the excavation of Idalion.

In 1985, Gary Rollefson recovered an important collection of 8,000 year old plaster figurines from 'Ain Ghazal, Jordan, one of the largest Neolithic settlements in the Near East. A desire to promote our mission in Canada led to the founding of the CASOR in 1990. Meanwhile, the first Gulf War temporarily caused ACOR to close, while AIAR and CAARI limited their work. ASOR's central office moved to Boston University in 1996.

ASOR Today

ASOR has three affiliated overseas research centers, approximately 75 member institutions, and about 1,800 individual members. We communicate news of the latest research findings through our journals, books, lectures, and annual meeting. We award dozens of fellowships for fieldwork in the eastern Mediterranean annually. Today, we continue to build on more than a century of work and follow our historic mission of promoting scholarship on and understanding of the eastern Mediterranean and Near East.

ASOR is a non-profit 501(c)3, scholar-directed society including individual members and a consortium of institutions dedicated to Near Eastern archaeology. ASOR continues to be a dynamic group of professionals with an unparalleled record of success in reawakening the Middle East's past, making unearthed antiquities speak eloquently.

Books



Hagia Sophia
Sound, Space, and Spirit in Byzantium

Bissera V. Pentcheva
304 pages | 50 color/42 b&w illus. | \$64.95 cloth

“Pentcheva establishes a fluid, multi-sensory, kinetic interpretive model that will transform our understanding of Byzantine sacred space.”

—Deborah Howard, coauthor of *Sound and Space in Renaissance Venice*



Icons and Power

The Mother of God in Byzantium
Bissera V. Pentcheva

312 pages | 20 color/100 b&w illus. | \$44.95 paper

Winner, 2010 John Nicholas Brown Prize sponsored by the Medieval Academy of America

“Brings much-needed contour to the study of the image of Mary in the Byzantine east.”

—Vera Shevzov, *Church History*



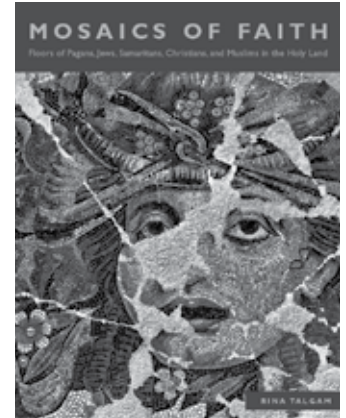
The Sensual Icon

Space, Ritual, and the Senses in Byzantium

Bissera V. Pentcheva
320 pages | 72 color/19 b&w illus. | \$44.95 paper

“This is a volume that will transform the discipline of medieval art.”

—Rebecca W. Corrie, *Studies in Iconography*



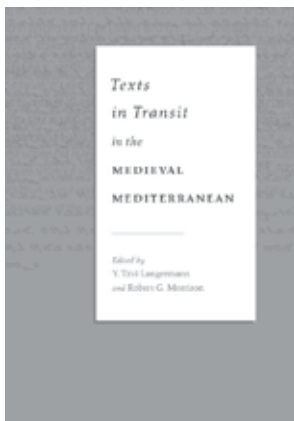
Mosaics of Faith

Floors of Pagans, Jews, Samaritans, Christians, and Muslims in the Holy Land

Rina Talgam
600 pages | 360 color/144 b&w illus. | \$129.95 cloth
Co-published with the Yad Ben-Zvi Institute

“This is a magisterial survey that deserves to take its place as the definitive work on the mosaics of the Holy Land.”

—*Burlington Magazine*

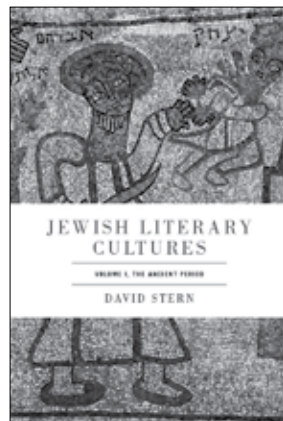


Texts in Transit in the Medieval Mediterranean

Edited by Y. Tzvi Langermann and Robert G. Morrison
280 pages | 1 illus. | \$89.95 cloth

“*Texts in Transit* is a pathbreaking collection of original studies. . . . [That] represent cutting-edge research and offer original interpretations of the journeys taken by these texts.”

—Charles H. Manekin, editor of *Medieval Jewish Philosophical Writings*



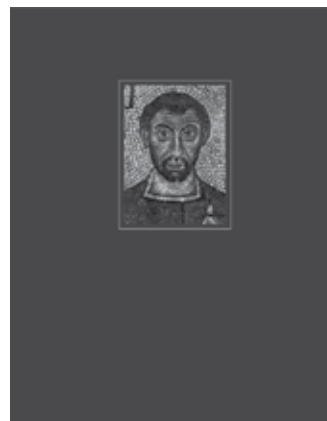
Jewish Literary Cultures

Volume 1, The Ancient Period
David Stern

256 pages | 4 illus. | \$44.95 paper

“This engaging and insightful collection illustrates the value of viewing together what originally were separately published writings.”

—A. J. Avery-Peck, *Choice*



Dynamic Splendor

The Wall Mosaics in the Cathedral of Eufrasius at Poreč

Ann Terry and Henry Maguire
2 volumes | 416 pages | 226 color/75 b&w illus.
\$113.95 cloth

Winner, 2007 PSP Award for Excellence in the category of Art and Art History
A 2007 Choice Outstanding Academic Title

Finalist, 2007 Charles Rufus Morey Award, College Art Association



The Jeselsohn Collection of Aramaic Ostraca from Idumea

Ada Yardeni
757 pages/usb | 1,159 color illus. | \$129.95 cloth
Co-published with Yad Ben-Zvi Press

This volume presents 574 ostraca—potsherds containing short notes written in ink—from the collection of David and Jemima Jeselsohn, almost all dating from the fourth century B.C.E.





Journals



Bustan

Uzi Rabi, Itamar Rabinovich, and Eyal Zisser eds.

Published by Moshe Dayan Center for Middle East and African Studies at Tel Aviv University, *Bustan: The Middle East Book Review* is a journal dedicated to review. Each issue of the journal includes essays that explore broad themes or issues on a particular topic that go beyond the content of the books under review. The journal publishes work on all periods of Middle Eastern or Islamic Studies, and invites reviews on a broad range of topics, including (but not limited to): culture, economy, demography, geography, history, language and literature, politics, and religion.

BIANNUAL
ISSN 1878-5301
E-ISSN 1878-5328



Mediterranean Studies

Susan O. Shapiro, ed.

Mediterranean Studies is an international, peer-reviewed journal focusing on the Mediterranean region in all aspects and disciplines. The journal's interdisciplinary approach is particularly concerned with the ideas and ideals of Mediterranean cultures from antiquity to the present and the influence of these ideas beyond the region's geographical boundaries. Such varied and rich contributions make for vibrant conversations across several disciplines. *Mediterranean Studies* is the official publication of the Mediterranean Studies Association.

BIANNUAL
ISSN 1553-0981
E-ISSN 1756-2597



Journal of Eastern Mediterranean Archaeology and Heritage Studies

Ann E. Killebrew and Sandra A. Scham, eds.

The *Journal of Eastern Mediterranean Archaeology and Heritage Studies* is a peer-reviewed journal devoted to traditional, anthropological, social, and applied archaeologies of the Eastern Mediterranean, encompassing both prehistoric and historic periods. The journal's geographic range spans three continents and brings together, as no academic periodical has done before, the archaeologies of Greece and the Aegean, Anatolia, the Levant, Cyprus, Egypt, and North Africa. The *Journal of Eastern Mediterranean Archaeology and Heritage Studies* is an affiliated journal of the Society of Biblical Literature.

QUARTERLY
ISSN 2166-3548
E-ISSN 2166-3556



International Journal of Persian Literature

Homa Katouzian, ed.

International Journal of Persian Literature is a peer-reviewed journal with a novel focus on Persian poetics, poetry, classical Persian philology, prose, and the literature of Iran and the broader geographical areas. Published annually, this journal aims to create an international dialogue and forum for Persian literary culture in Iran and these wider geographical areas, while encouraging interdisciplinary interventions.

ANNUAL
ISSN 2376-5739
E-ISSN 2376-5755



Pacific Coast Philology

Roswitha Burwick and Richard Sperber, eds.

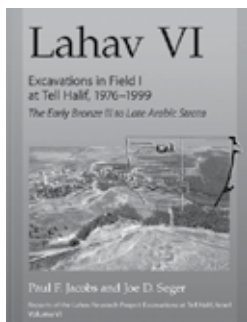
Pacific Coast Philology, the official journal of the Pacific Ancient and Modern Language Association, publishes peer-reviewed essays of interest to scholars in the classical and modern languages, literatures, and cultures. The journal publishes two annual issues (one regular and one special issue), which include articles and book reviews, as well as the presidential address, forum, and plenary speech from the preceding year's conference.

BIANNUAL
ISSN 0078-7469
E-ISSN 2326-067X

Lahav VI

*Excavations in Field I at Tell Halif, 1976–1999
The Early Bronze III to Late Arabic Strata*

by Paul F. Jacobs and Joe D. Seger



This is the sixth volume in the series of reports on investigations by the Lahav Research Project (LRP) at Tell Halif in Southern Israel. This work focuses on the Project's efforts in Field I conducted during eight excavation seasons between 1976 and 1999. Field I was opened down the northeast slope of the tell in order to assess the long term history of occupation at the mound site. Its excavation work documented the presence of fifteen primary occupation strata, including 46 sub-phases, stretching from the Early Bronze III period in the mid-third

millennium B.C.E. to modern times. The major exposures include four strata of EB III remains (Strata XV to XII), and another five of LB to early Iron I materials (Strata XI to VII). Traces of Iron II (Stratum V)I and Persian (Stratum V) remains were found in one area at the crest of the mound where levels were otherwise disturbed by a modern army trench and Bedouin graves (Stratum I). A few modest remains of Late Roman/Byzantine (Stratum III) and Islamic (Stratum II) were identified in down slope areas. These excavations revealed that following a robust occupation on the site's Eastern Terrace in the EB I period, it lay fallow in EB II, settlement only to recover on the hillock to the west as a major fortified enclave in EB III. Then, after another gap in occupation during the EB IV and MB periods, it recovered again in the early LB I era becoming an emporium associated with Egyptian trade, hence thriving with continuity of occupation into the Iron Age and beyond.

ISBN: 978-1-57506-423-9; Pp. ca. xxiv + 642

\$119.50

The 2000 Season at Tall al-'Umayri and Subsequent Studies

Edited by Larry G. Herr, Douglas R. Clark, and Lawrence T. Geraty



The seventh volume of the Tall al-'Umayri seasonal publication series covers the important finds of the excavations in 2000. There are copious illustrations, some in color. The volume also includes a report on the initial discovery of the large Late Bronze Age building, which had walls standing three meters high and more than a meter thick. It is one of the very few significant LB buildings ever found in central Jordan. The volume also includes a report on the second major house dating to the Late Bronze/Iron I transition. Together with the four-room

house reported in the fifth and sixth volumes, these are two of the best-preserved houses from this time ever excavated in the Southern Levant, with the remains standing two meters tall in places. The second house, reported here, contains several domestic cultic features and smashed pottery lying on the surface. One dramatic feature is the colorful but violent destruction layer two meters thick, representing a cataclysmic event that brought this city to its demise and covered the finds on the floors. How did people live in the ancient world? These two houses go a long way in answering that question.

ISBN: 978-1-57506-795-7; Pp. ca. 500; color photographs

\$99.50

Tel Miqne-Ekron Field IV Lower—The Elite Zone, The Iron Age I and IIC, The Early and Late Philistine Cities

Volume 9, Part 1: The Iron Age I Early Philistine City

Volume 9, Part 3B: The Iron Age I and IIC Early and Late Philistine Cities Plans and Sections

by Trude Dothan, Yosef Garfinkel, and Seymour Gitin



Tel Miqne-Ekron Field IV Lower—The Elite Zone, The Iron Age I and IIC, The Early and Late Philistine Cities, Parts 9/1-9/3B present the evidence of two large Philistine cities, one in Iron I, the period of its initial development, and the other in Iron IIC, its final stage when it achieved its zenith of physical growth and prosperity. They also offer a unique opportunity to check and evaluate the excavators' observations and conclusions based on their comprehensive database. Published under the auspices of the Harvard Semitic Museum,

they comprise the final reports of the nine seasons of excavations during the years 1985–1995, directed by Trude Dothan and Seymour Gitin and sponsored by the W. F. Albright Institute of Archaeological Research and the Hebrew University.

ISBN: 978-1-57506-956-2; Vol. 9/1: Pp. xx + 620; Vol. 9/3B: Pp. iv + many plans

Published for the Harvard Semitic Museum

\$189.50

Tel Miqne: Field IV Lower—The Elite Zone, Part 2

The Iron Age IIC Late Philistine City

Tel Miqne-Ekron, Volume 9, Part 2: The Iron Age IIC Late Philistine City

by Seymour Gitin, Trude Dothan, and Yosef Garfinkel



This well-illustrated volume presents the evidence from Stratum Pre-IC of the end of the 8th century, from Strata IC and IB of the 7th century, when Ekron achieved the zenith of its physical growth and prosperity, and from Stratum IA, the final Iron Age IIC phase of the early 6th century BCE. It offers a detailed discussion of the Iron Age IIC occupational history; a comprehensive analysis of the ceramic assemblages; a quantitative analysis of the pottery from the main Stratum IB buildings; and studies on vessel capacity, ceramic, lithic, ivory, and metal objects, jewelry,

scarabs, faunal remains, and fish bones.

ISBN: 978-1-57506-957-9; Pp. xxvi + 422; heavily illustrated, some color

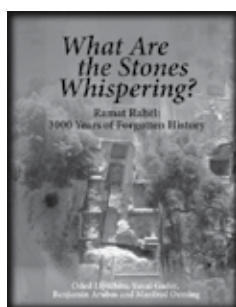
\$99.50



What Are the Stones Whispering?

Ramat Rahel: 3,000 Years of Forgotten History

by Oded Lipschits, et al.



The excavations at Ramat Rahel, just south of Jerusalem, revealed a complex of structures that existed for hundreds of years in which the Kingdom of Judah was a vassal of diverse empires.

Over some 500 years,

jars bearing seals were stored at the site. The findings throw new light on the late First Temple period and on most of that of the Second Temple. During these centuries Ramat Rahel was the administrative contact point between Judah and the ruling empires. This is what enabled independent Judean control of Jerusalem and the Temple, and the ability to maintain Jewish identity within Jerusalem almost without outside intervention and supervision. All this came to an end during the Hasmonean revolt.

ISBN: 978-1-57506-498-7; Pp. vi + 183, 224 figures/illustrations, more than 125 in color \$59.50

Child Sacrifice in Ancient Israel

by Heath D. Dewrell

In addition to examining the historical reality of Israelite child sacrifice, Dewrell's study also explores the biblical rhetoric condemning the practice. While nearly every tradition preserved in the Hebrew Bible rejects child sacrifice as abominable to Yahweh, the rhetorical strategies employed by the biblical writers vary to a surprising degree. Thus, even in arguing against the practice of child sacrifice, the biblical writers themselves often disagreed concerning why Yahweh condemned the rites and why they came to exist in the first place.

ISBN: 978-1-57506-494-9; Pp. xvi + 236 \$49.50

A Grammar of the Ancient Egyptian Pyramid Texts

Vol. 1: Unis

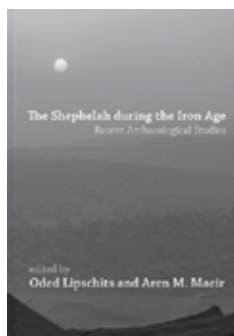
by James P. Allen

ISBN: 978-1-57506-752-0; Pp. xiv + 375 \$74.50

The Shephelah during the Iron Age

Recent Archaeological Studies

Edited by Oded Lipschits and Aren M. Maeir



The area of the Judean Foothills—the biblical *Shephelah*—has in recent years become one of the most intensively excavated regions in the world. Numerous projects, at sites of different types and utilizing various methodological approaches, are actively

excavating in this region. Of particular importance are the discoveries dating to the Iron Age, a period when this region was a transition zone between various cultures—Philistine, Canaanite, Judahite, and Israelite. The current volume includes reports from eight of the excavations currently being conducted in the region as well as a general study of the region by Ido Koch. It serves as an excellent introduction to current research on the Iron Age in this crucial zone and also serves as a reflection of current trends, methodologies, and approaches in the archaeology of the Southern Levant.

ISBN: 978-1-57506-486-4; Pp. x + 207; 85 illustrations, most color \$64.50

Assyria

The Imperial Mission

by Mario Liverani

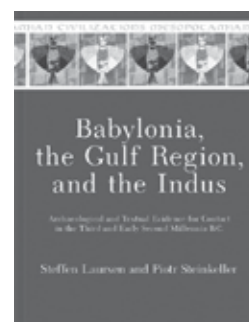
In ancient traditions, Assyria was the first world empire in a series that continued with Persia, Macedonia, and Rome. Assyria, often overlooked or slighted by modern studies of empire, still maintains our interest because it provides an example of the “simple form” of empire and imperialism, before subsequent developments resulted in structures of greater complexity. Ancient Assyria presents a prototype of the “empire of evil” against which democracy fights and must resist. This book outlines the basic features of Assyrian imperialism within the framework of the general development of the imperial idea, all the while insisting on noting comparative material.

ISBN: 978-1-57506-754-4; Pp. x + 341 \$59.50

Babylonia, the Gulf Region and the Indus

Archaeological and Textual Evidence for Contact in the Third and Early Second Millennia BC

by Steffen Laursen and Piotr Steinkeller



During the third millennium BC, the huge geographical area stretching between the Mediterranean in the west and the Indus Valley in the east witnessed the rise of a commercial network of unmatched proportions and intensity, within which the Persian Gulf for long periods functioned as a central node.

In this book, Laursen and Steinkeller examine the nature of cultural and commercial contacts between Babylonia, the Gulf region, and Indus Civilization. Focusing on the third and early second millennia BC, and using both archaeological data and the evidence of ancient written sources, their study offers an up-to-date synthetic picture of the history of interactions across this vast region.

ISBN: 978-1-57506-756-8; Pp. x + 141 \$59.50

Rethinking Israel

Studies in the History and Archaeology of Ancient Israel in Honor of Israel Finkelstein

Edited by Oded Lipschits, Yuval Gadot, and Matthew Adams

Israel Finkelstein is perhaps the best-known Israeli archaeologist in the world. Renowned for his innovative and ground-breaking research, he has written and edited more than 20 books and published more than 300 academic papers. This volume, dedicated to Professor Finkelstein's accomplishments and contributions, features 36 articles written by his colleagues, friends, and students in honor of his decades of scholarship and leadership in the field of biblical archaeology.

Pp. ca. 600 \$89.50

Program-at-a-Glance

Wednesday, November 15

7:00–8:15pm	Plenary Address by Irene J. Winter	Harbor Ballroom
8:30–10:00pm	Opening Reception	Marina Ballroom

Thursday, November 16

Session 1 (8:20–10:25am)	1A	Archaeology of Mesopotamia	Harbor 1
	1B	Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods I	Harbor 2
	1C	Integrating Organic Residue Analysis into Archaeology (Workshop)	Harbor 3
	1D	Ancient Inscriptions I	Burroughs
	1E	Reports on Current Excavations	Carlton
	1F	Archaeology of the Ancient Near East: Bronze and Iron Ages I	Lewis
	1G	Study of Violence from the Region of the Ancient Near East and Its Neighbors I	Otis
	1H	Madaba Plains Project at 50: Tall Hisban	Stone
	1I	Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands I	Webster
	1J	The Cultural Mosaic of Maresha: Reconstructing Domestic and Ritual Life from Subterranean Contexts	Hancock
Session 2 (10:40am–12:45pm)	2A	The Archaeology of the Kurdistan Region of Iraq I	Harbor 1
	2B	Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods II	Harbor 2
	2C	Archaeology of Israel I	Harbor 3
	2D	Ancient Inscriptions II	Burroughs
	2E	Career Options for ASOR Members: The Academy and Beyond	Carlton
	2F	Archaeology of the Ancient Near East: Bronze and Iron Ages II	Lewis
	2G	Study of Violence from the Region of the Ancient Near East and Its Neighbors II	Otis
	2H	Madaba Plains Project at 50: Tall al-'Umayri	Stone
	2I	Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands II	Webster
	2J	Houses and Households in the Near East: Archaeology and History I	Hancock
1:00–1:55pm	Junior Scholars' Panel Discussion	Harbor 1	
Session 3 (2:00–4:05pm)	3A	The Archaeology of the Kurdistan Region of Iraq II	Harbor 1
	3B	Archaeology and Biblical Studies I	Harbor 2
	3C	Archaeology of Israel II	Harbor 3
	3D	Ancient Inscriptions III	Burroughs
	3E	Southern Phoenicia Initiative I (Workshop)	Carlton
	3F	Archaeology of the Ancient Near East: Bronze and Iron Ages III	Lewis
	3G	Connectivities in the Near East: Social Impact of Shifting Networks I	Otis
	3H	Madaba Plains Project at 50: Tall Jalul	Stone
	3I	The Synagogue at Horvat Kur	Webster
	3J	Houses and Households in the Near East: Archaeology and History II	Hancock
3K	Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration I	Griffin	

Session 4 (4:20–6:25pm)	4A	The Archaeology of the Kurdistan Region of Iraq III	Harbor 1
	4B	Archaeology and Biblical Studies II	Harbor 2
	4C	Archaeology and History of Feasting and Foodways	Harbor 3
	4D	The History of the Early Alphabet	Burroughs
	4E	Southern Phoenicia Initiative II (Workshop)	Carlton
	4F	Archaeology of the Ancient Near East: Classical Periods I	Lewis
	4G	Connectivities in the Near East: Social Impact of Shifting Networks II	Otis
	4H	Border Dynamics in the Tenth Century B.C.E. Levant: A Junior Scholars' Panel	Stone
	4I	New Light on Persian Period Judah	Webster
	4J	New Discoveries at Beth She'arim	Hancock
	4K	Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration II	Griffin

Friday, November 17

Session 5 (8:20–10:25am)	5A	Landscapes of Settlement in the Ancient Near East	Harbor 1
	5B	Senses and Sensibility in the Near East I	Harbor 2
	5C	Cultural Heritage Management: Methods, Practices, and Case Studies I	Harbor 3
	5D	<i>This session has been moved to Thursday, 3K</i>	
	5E	Archaeology of Cyprus I	Carlton
	5F	Archaeology of the Ancient Near East: Classical Periods II	Lewis
	5H	Death and Dying in the Ancient Near East	Stone
	5I	Meeting the Expenses: Ancient Near Eastern Economies I	Webster
	5J	Baths and Bathing in the East	Hancock

Session 6 (10:40am–12:45pm)	6A	Archaeology of Lebanon I	Harbor 1
	6B	Senses and Sensibility in the Near East II	Harbor 2
	6C	Cultural Heritage Management: Methods, Practices, and Case Studies II	Harbor 3
	6D	<i>This session has been moved to Thursday, 4K.</i>	
	6E	Archaeology of Cyprus II	Carlton
	6F	Antiochia Hippos of the Decapolis and Its Territorium	Lewis
	6H	Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations I	Stone
	6I	Meeting the Expenses: Ancient Near Eastern Economies II	Webster
	6J	New Studies on Tel Azekah	Hancock

12:45–2:00pm	ASOR Members' Meeting	Harbor 1
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Session 7 (2:00–4:05pm)	7A	Archaeology of Lebanon II	Harbor 1
	7B	Art Historical Approaches to the Near East I	Harbor 2
	7C	Glass in the Ancient Near East	Harbor 3
	7D	Archaeology of Jordan I	Burroughs
	7E	Archaeology of Cyprus III	Carlton
	7F	Archaeology of Iran	Lewis
	7G	The CRANE Project I	Otis
	7H	Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations II	Stone
	7I	Archaeology of the Southern Levant I	Webster
	7J	Caesarea Maritima Session in Memory of Kenneth G. Holum: Renewed Excavations, Recent Discoveries	Hancock

Session 8 (4:20–6:25pm)	8A	GIS and Remote Sensing in Archaeology	Harbor 1
	8B	Art Historical Approaches to the Near East II	Harbor 2
	8C	Rethinking Israel	Harbor 3
	8D	Archaeology of Jordan II	Burroughs
	8E	Digging “Lustily” into Cypriot Prehistory: Studies in Honor of Stuart Swiny	Carlton
	8F	History of Archaeology	Lewis
	8G	The CRANE Project II	Otis
	8H	Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations III	Stone
	8I	Archaeology of the Southern Levant II	Webster
	8J	Religion in “Edom”	Hancock

6:30–10:30pm Digital Archaeology Demo Showcase and Reception Marina 2–4

Saturday, November 18

Session 9 (8:20–10:25am)	9A	Developing Isotopic Investigations in the Ancient Near East and Caucasus	Harbor 1
	9B	Approaches to Dress and the Body I	Harbor 2
	9C	Theoretical and Anthropological Approaches to the Ancient Near East	Harbor 3
	9D	Putting your Ph.D. to Work: How to Apply for Careers Inside <i>and</i> Outside the Academy (Workshop)	Burroughs
	9E	Archaeology of the Natural Environment: Archaeobotany and Zooarchaeology in the Near East	Carlton
	9F	Ancient Texts and Modern Photographic and Digital Technologies	Lewis
	9G	The Enigma of the Hyksos I (Workshop)	Otis
	9H	New Work on Sardis from the Harvard-Cornell Excavations to Sardis	Stone
	9I	Archaeology of the Southern Levant III	Webster
	9J	Mesopotamian Civilizations: The Economic Scope of Institutional Households I	Hancock

Session 10 (10:40am–12:45pm)	10A	Archaeology of Arabia I	Harbor 1
	10B	Approaches to Dress and the Body II	Harbor 2
	10C	Archaeology of Anatolia I	Harbor 3
	10D	Archaeologists Engaging Global Challenges	Burroughs
	10E	The Tells of Two Cities: Did Tell es-Sultan and Tall el-Hammam Interact during the Middle Bronze Age?	Carlton
	10F	Strategies for Cultural Resource Protection in Libya	Lewis
	10G	The Enigma of the Hyksos II (Workshop)	Otis
	10H	Archaeology of Islamic Society	Stone
	10I	Gender in the Ancient Near East	Webster
	10J	Mesopotamian Civilizations: The Economic Scope of Institutional Households II	Hancock
10K	Maritime Archaeology	Griffin	

12:45–2:00pm Projects on Parade Poster Session Galleria

12:45–2:00pm Initiative on the Status of Women in ASOR: Mentoring Meeting Marina 1

Session 11 (2:00–4:05pm)	11A	Archaeology of Arabia II	Harbor 1
	11B	Material Culture and Identities in the Eastern Mediterranean I	Harbor 2
	11C	Archaeology of Anatolia II	Harbor 3
	11D	Altered States: Alternative Trajectories to Complexity in the Ancient Middle East I	Burroughs
	11E	Talking about Gender-Related “Situations” in Our Workplaces (Workshop)	Carlton
	11F	Papers in Honor of S. Thomas Parker in Celebration of the Publication of a Festschrift	Lewis
	11G	Israel’s Exodus in Transdisciplinary Perspective	Otis
	11H	Antioch—A Legacy Excavation and Its Aftermath	Stone
	11I	Encoding Data for Digital Discovery I	Webster
	11J	Technology in Archaeology: Recent Work in the Archaeological Sciences	Hancock
Session 12 (4:20–6:25pm)	12A	Archaeology of Arabia III	Harbor 1
	12B	Material Culture and Identities in the Eastern Mediterranean II	Harbor 2
	12C	Archaeology of Egypt	Harbor 3
	12D	Altered States: Alternative Trajectories to Complexity in the Ancient Middle East II	Burroughs
	12E	Bioarchaeology of the Near East	Carlton
	12F	The Soft Power of Place—Cultural Diplomacy, Archaeology, and the Overseas Research Centers	Lewis
	12G	The Iron Age I in the Levant: A View from the North	Otis
	12H	Archaeology of the Byzantine Near East	Stone
	12I	Encoding Data for Digital Discovery II	Webster
	12J	Material Interconnections in the Levant during the Second Millennium B.C.E.	Hancock

ASOR Members’ Meeting

Susan Ackerman, ASOR President, Presiding

Friday, November 17
12:45pm • Harbor 1

Agenda

1. Call to Order
2. Roll Call (Secretary Lynn Swartz Dodd; by written circulation)
3. Approval of Agenda
4. Welcome (Board Chair Richard Coffman)
5. Memorial Moments (Susan Ackerman)
6. Financial Report Summary (Treasurer Christopher White)
7. Update on the Work of the Membership and Outreach Committee (Randall Younker)
8. Nominations Committee Report and Election Results (Ann-Marie Knoblauch)
9. Honors and Awards (Laura Mazow)
10. Adjournment

Business Meetings and Special Events

Wednesday, November 15, 2017

1:00–3:00pm	Madaba Plains Project-‘Umayri and Khirbat Balu’a Workshop, Douglas R. Clark and Kent V. Bramlett, Presiding (Lewis)
3:00–5:00pm	Madaba Regional Archaeological Museum Project (MRAMP) Workshop, Douglas R. Clark, Presiding (Lewis)
3:30–5:00pm	Administrative Oversight Committee, Susan Ackerman, Presiding (ASOR Suite 1545)
5:30–6:30pm	Session Chairs Social (Carlton)
7:00–8:15pm	Welcome to the Annual Meeting and Plenary Address (Harbor)
8:30–10:00pm	Welcome Reception (Marina)

Thursday, November 16, 2017

7:00–8:15am	<i>Bulletin of ASOR</i> Editorial Board, Eric H. Cline and Christopher Rollston, Presiding (Independence)
7:00–8:15am	<i>Near Eastern Archaeology</i> Editorial Discussion (Paine)
7:00–8:15am	Consultation of Dig Directors in Jordan, Bethany Walker, Presiding (Marina 1)
8:30–10:30am	ASOR Committee on Publications (COP), Charles Jones, Presiding (Revere)
10:40am–12:45pm	Cultural Heritage Committee, Sturt Manning, Presiding (Independence)
12:45–1:45pm	CAP Fellowship Committee Meeting, Kathryn Grossman, Presiding (ASOR Suite 1545)
12:45–2:00pm	ASOR Baghdad Committee, Steven Garfinkle, Presiding
1:00–1:55pm	Junior Scholars’ Panel Discussion, Heather Parker, Presiding (Harbor 1)
2:30–5:30pm	ASOR Committee on Archaeological Research and Policy (CAP), Thomas E. Levy, Presiding (Revere)
3:00–5:00pm	AIAR Executive Committee, Sharon Herbert, Presiding (Independence)
5:00–6:30pm	AIAR Development Committee, Sharon Herbert, Presiding (Independence)
5:30–6:30pm	CAP Affiliated ASOR Dig Directors’ Reception *by invitation (ASOR Suite 1545)
6:30–8:00pm	Institute for Oriental and European Archaeology (OREA) Open Reception (Marina 2–4)
9:00–10:30pm	Madaba Plains Project Reception (Marina 3–4)

Friday, November 17, 2017

7:00–8:15am	ASOR Programs Committee, Geoff Emberling and Helen Dixon, Presiding (Independence)
7:15–8:15am	Open House Meeting of the Initiative on the Status of Women, Beth Alpert Nakhai, Presiding (Marina 3)
7:15–9:30am	ASOR Membership and Outreach Committee, Randall Younker, Presiding (Griffin)

7:30–10:00am	AIAR Fellowship Committee, John Spencer, Presiding (Paine)
8:30–9:30am	ASOR Honors and Awards Committee, Laura Mazow, Presiding (Independence)
10:00am–1:00pm	AIAR Board of Trustees, Sidnie White Crawford, Presiding (Marina 2)
12:45–2:00pm	ASOR Members' Meeting, Susan Ackerman, Presiding (Harbor 1)
2:00–3:00pm	ASOR Damascus Committee, Jesse J. Casana, Presiding (Independence)
2:00–3:00pm	Tel Gezer Excavation Consortium and Staff Consultation, Steve Ortiz and Sam Wolff, Presiding (Paine)
3:30–5:00pm	Development Committee Meeting, J. Edward Wright, Presiding (ASOR Suite 1545)
6:30–7:00pm	Israel Finkelstein Festschrift Reception (Harbor 3)
6:30–7:30pm	CAARI Reception (Paine)
6:30–7:30pm	CRANE Reception (Commonwealth A)
6:30–10:30pm	Digital Archaeology Demo Showcase and Reception (Marina 3–4) <i>*Hosted Reception from 8:00-10:00pm</i>
7:00–9:30pm	Legacy Circle and Friends Dinner (Marina 1) <i>*by invitation</i>

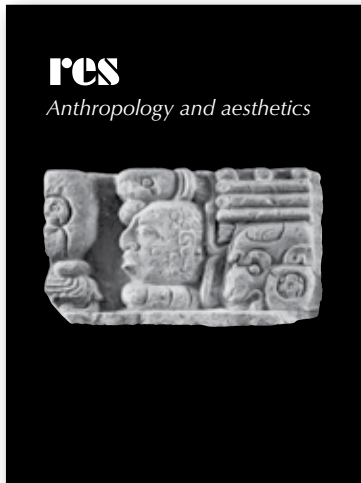
Saturday, November 18, 2017

8:00–9:30am	ACOR Executive Committee Meeting, Randolph B. Old, Presiding (Marina 2)
8:00–11:00am	CAARI Executive Committee, Bryan Wilkins, Presiding (Marina 4)
8:15–11:15am	Chairs Coordinating Council (CCC), Sharon Herbert, Presiding (Marina 3)
9:45am–1:45pm	ACOR Board of Trustees Meeting, Randolph B. Old, Presiding (Marina 2)
10:45am–12:45pm	ASOR Canada (CASOR), Debra Foran, Presiding (Independence)
11:00am–12:30pm	CAARI Development Committee Meeting, Annemarie Carr, Presiding (Marina 4)
11:30am–12:30pm	ASOR Finance Committee, Christopher White, Presiding (ASOR Suite 1545)
12:45–2:00pm	Projects on Parade Poster Session, Jennifer Ramsay, Presiding (Galleria)
12:45–2:00pm	Mentoring Meeting: Initiative on the Status of Women in ASOR, Beth Alpert Nakhai, Presiding (Marina 1)
1:00–6:00pm	CAARI Board of Trustees Meeting, Bryan Wilkins, Presiding (Marina 4)
2:00–4:00pm	Eurasian Archaeology Isotope Research Group, G. Bike Yazıcıoğlu-Santamaria, Presiding (Marina 3)
2:00–5:00pm	ASOR Executive Committee Meeting, Richard Coffman, Presiding (Independence)
3:00–5:00pm	Tell el-Hesi Board and Publications Committee, Jeffrey A. Blakely, Presiding (Paine)
6:30–9:00pm	Harvard Semitic Museum Reception (Harvard Semitic Museum, 6 Divinity Ave., Cambridge) <i>*A limited number of complimentary tickets are available. Please check at the ASOR registration desk.</i>

Sunday, November 19, 2017

8:00am–8:30am	ASOR Board of Trustees Breakfast (Harbor 1)
8:30am–12:30pm	ASOR Board of Trustees Meeting, Richard Coffman, Presiding (Harbor 1)

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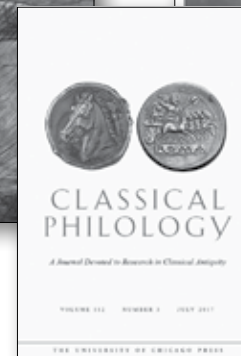
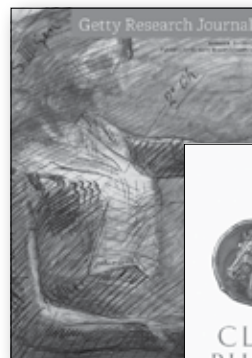
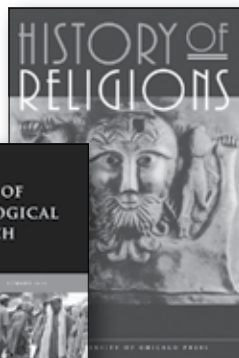
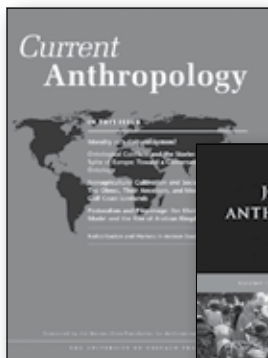
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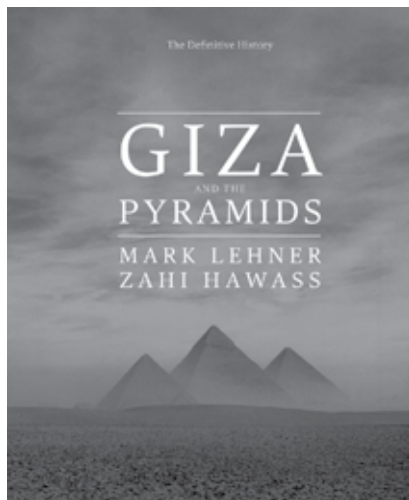
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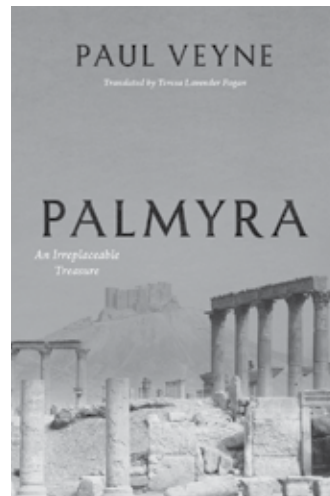
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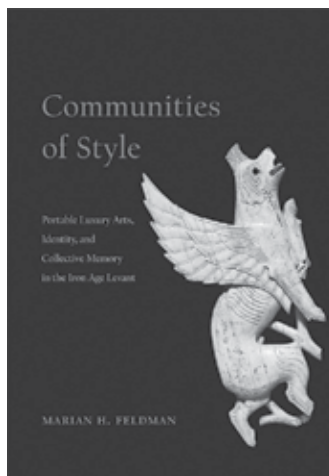
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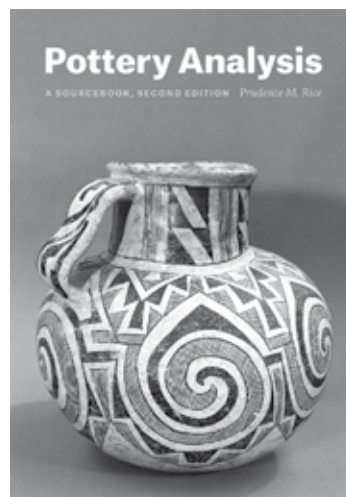
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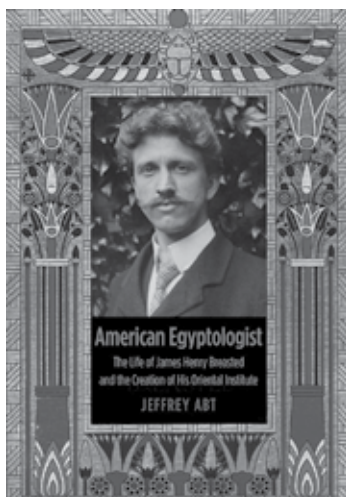
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Academic Program

2017 ASOR ANNUAL MEETING

The presenter's name will be underlined if he or she is not the first author or the only author.

WEDNESDAY, NOVEMBER 15

7:00–8:15pm

Plenary Address

Harbor Ballroom

Irene J. Winter, (Professor Emerita, former William Dorr Boardman Professor of Fine Arts, Harvard University), “Archaeology, Object History, Art History: Questions of Definition and Discipline.”

8:30–10:00pm

Opening Reception

Marina Ballroom

THURSDAY, NOVEMBER 16

Session 1, 8:20–10:25am

1A Archaeology of Mesopotamia

Harbor 1

Theme: This session presents new excavations and new work on old excavations in Mesopotamia, understood broadly.

CHAIR: Lauren Ristvet (University of Pennsylvania)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Emily Hammer (University of Pennsylvania), “The City and Landscape of Ur: An Aerial, Satellite, and Ground Reassessment” (15 min.)
- 8:45 Andrea Polcaro (University of Perugia) and Davide Nadali (Sapienza University of Rome), “Results of the First Three Campaigns of Excavation (2015–2017) to Tell Zurghul, Ancient Nigin, in Southern Iraq” (15 min.)
- 9:05 Darren Ashby (University of Pennsylvania), “A New Interpretation of the Bagara and the Ibgal, Two Religious Complexes from Tell al-Hiba, Ancient Lagash” (15 min.)
- 9:25 Jennifer R. Pournelle (University of South Carolina), Liviu Giosan (Woods Hole Oceanographic Institution), and Aimen Al Rubaie (University of Basra), “A Brain Coral’s Memoir of a Mesopotamian Port” (15 min.)

- 9:45 Arthur Stefanski (University of Toronto), “State Formation and the Emergence of Imperialism in the Akkadian Period at Khafajah” (15 min.)
- 10:05 Mark Schwartz (Grand Valley State University) and David Hollander (University of South Florida), “Evolving Colonies: A Reconstruction of Middle to Late Uruk Exchange Dynamics as Seen through Analyses of Ancient Trade Goods” (15 min.)

1B Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods I

Harbor 2

CHAIR: Yuval Gadot (Tel Aviv University)

PRESENTERS:

- 8:20 Israel Finkelstein (Tel Aviv University), Oded Lipschits (Tel Aviv University), and Ido Koch (Tel Aviv University), “The Mound on the Mount: A Possible Solution to the Problem with Jerusalem” (15 min.)
- 8:40 Yuval Baruch (Israel Antiquities Authority), “The Temple Mount: Results of the Archaeological Investigations of the Past Decade” (15 min.)
- 9:00 David Gurevich (The Hebrew University of Jerusalem) “Ancient Water Supply, GIS, and Archives: The Northern Aqueduct of the Temple Mount” (15 min.)
- 9:20 Guy Steibel (Tel Aviv University), “A Light Unto the Nations’—Symbolic Architecture of Religious Buildings” (15 min.)
- 9:40 Beatrice St. Laurent (Bridgewater State University), “Mu’awiyah’s Urban Vision for Early Islamic Jerusalem, 638–680” (15 min.)
- 10:00 Gideon Avni (Israel Antiquity Authority), Discussant (15 min.)

1C Integrating Organic Residue Analysis into Archaeology (Workshop)

Harbor 3

Theme: OpenARCHEM (<http://openarchem.org>) is an open and collaborative database to facilitate the sharing of scientific datasets especially as they pertain to organic residue analysis (ORA). This workshop seeks to gather both specialists and nonspecialists to discuss obstacles and best practices while offering feedback on the beta version of the OpenARCHEM database.

CHAIRS: Andrew J. Koh (Brandeis University) and Kate J. Birney (Wesleyan University)

PRESENTERS:

Part I: ORA in Practice

- 8:20 Andrew J. Koh (Brandeis University), Opening Remarks (5 min.)
- 8:25 Elsa Perruchini (University of Glasgow), Claudia Glatz (University of Glasgow), and Jaime Toney (University of Glasgow), “Can’t Touch This!: Preventing Excavation and Post-Excavation Contamination” (10 min.)
- 8:35 Zuzana Chovanec (Tulsa Community College), “Transforming Chemistry into Anthropology: Issues in the Interpretation of Analytical Results” (10 min.)
- 8:45 Alison M. Crandall (University of California, Los Angeles), “Field ORA in the Storerooms of Tel Kabri” (10 min.)
- 8:55 Andrew J. Koh (Brandeis University) and Kate J. Birney (Wesleyan University), “The Value of Legacy ORA Data and Objects: Case Studies” (10 min.)

Part II: Building for the Future

- 9:05 Kate J. Birney (Wesleyan University), Introductory Remarks (5 min.)
- 9:10 Andrea M. Berlin (Boston University), “The Levantine Ceramics Project” (10 min.)
- 9:20 Anna K. Krohn (Brandeis University), “Designing the OpenARCHEM Archaeometric Database” (10 min.)
- 9:30 Eric H. Cline (George Washington University), Discussant (10 min.)
- 9:40 General Discussion (45 min.)

1D Ancient Inscriptions I Burroughs

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Brent Davis (University of Melbourne), “The Phaistos Disk: A New Way of Viewing the Language behind the Script” (15 min.)
- 8:45 Federico Zangani (Brown University), “The Satirical Letter of Hori on 8 Ostraca from the Museo Egizio of Turin” (15 min.)
- 9:05 Aren Wilson-Wright (Universität Zürich), “Māṭ Gets a Promotion: A Revised Reading of Sinai 349” (15 min.)
- 9:25 Douglas Petrovich (The Bible Seminary), “Egyptian Elements in the Proto-Consonantal Hebrew Inscriptions of the Bronze Age” (15 min.)
- 9:45 Jessie DeGrado (University of Chicago), “The God ŠYY in the Second Amulet from Arslan Tash” (15 min.)
- 10:05 Tracy Spurrier (University of Toronto), “Not Just Another Brick in the Wall: New Shalmaneser III Inscriptions in the Nimrud Tombs” (15 min.)

1E Reports on Current Excavations Carlton

Theme: This session serves as an opportunity for current excavations, both ASOR-affiliated and non-affiliated, to report on their latest findings.

CHAIRS: Jack Green (Cornell University) and Robert Homsher (Harvard University)

PRESENTERS:

- 8:20 Carrie Duncan (University of Missouri), Robert Darby (University of Tennessee, Knoxville), and Erin Darby (University of Tennessee, Knoxville), “The 2017 Season at the ‘Ayn Gharandal Archaeological Project, Jordan” (15 min.)
- 8:40 James Riley Strange (Samford University), “A Report of the 2016 and 2017 Shikhin Excavation Project” (15 min.)
- 9:00 Michael G. Hasel (Institute of Archaeology, Southern Adventist University), “Socoh of the Judean Shephelah: The 2010 Survey” (15 min.)
- 9:20 Nicholas Pumphrey (Baker University) and Ann E. Killebrew (Pennsylvania State University), “Tel Akko Total Archaeology Project: Preliminary Report on Eight Seasons of Excavation and Survey” (15 min.)
- 9:40 Erez Ben-Yosef (Tel Aviv University), Sabine Kleiman (Tel Aviv University), and Assaf Kleiman (Tel Aviv University), “Social and Chronological Aspects of Early Iron Age Copper Production in the Southern Arabah: New Ceramic and Radiocarbon Studies of the Central Timna Valley Project (CTV)” (15 min.)
- 10:00 Daniel Warner (New Orleans Baptist Theological Seminary), “‘One Thing Leads to Another’: New Insights on the Development of Tel Gezer from Eight Seasons of Excavations of the Gezer Water System” (15 min.)

1F Archaeology of the Ancient Near East: Bronze and Iron Ages I Lewis

CHAIR: Eric Lee Welch (University of Kansas)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Susan Cohen (Montana State University), “Diet, Drink, and Death: The Transition from the Intermediate to the Middle Bronze Age in the Southern Levant” (15 min.)
- 8:45 Naama Yahalom-Mack (The Hebrew University of Jerusalem), Irina Segal (Geological Survey of Israel), and Israel Finkelstein (Tel Aviv University), “The Complexity of the Late Bronze Age Mediterranean Copper Trade: A View from the Southern Levant” (15 min.)
- 9:05 Igor Kreimerman (The Hebrew University of Jerusalem), “Destructions at the End of the Late Bronze Age: A Comparison between the Northern Levant, the Southern Levant, and Cyprus” (15 min.)
- 9:25 Margreet Steiner (Independent Scholar), “The Late Bronze Age Temple at Deir Alla: A Reassessment” (15 min.)

9:45 Tiffany Earley-Spadoni (University of Central Florida), Arthur Petrosyan (Institute of Archaeology and Ethnography, National Academy of Sciences, Armenia), and Boris Gasparyan (Institute of Archaeology and Ethnography, National Academy of Sciences, Armenia), "Digital Storytelling as Public Archaeology: Results from the 2017 Vayots Dzor Fortress Landscapes Project (Armenia)" (15 min.)

10:05 General Discussion

1G Study of Violence from the Region of the Ancient Near East and Its Neighbors I Otis

Theme: Violence from the region of the ancient Near East and its neighbors: anthropology and hermeneutics of text and image analysis.

CHAIRS: Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University) and Leann Pace (Wake Forest University)

PRESENTERS:

8:20 Introduction (5 min.)

8:25 Tracy Lemos (Huron University College; University of Western Ontario), "Order from Chaos: The Mental and the Material in Explanations of Ancient Near Eastern Violence" (20 min.)

8:50 Amanda Morrow (University of Wisconsin–Madison), "Poetics of Violence in Neo-Babylonian Period Judah: An Anthropological Approach to Violence in the Archaeological and Textual Record" (20 min.)

9:15 Seth Richardson (University of Chicago) and Steven Garfinkle (Western Washington University), "Community Violence in the Middle Bronze Age" (20 min.)

9:40 Laura Battini (Laboratoire PROCLAC-Collège de France), "The Message of Violence and Its Audience in Third Millennium B.C. Mesopotamia" (20 min.)

1H Madaba Plains Project at 50: Tall Hisban Stone

Theme: Contextualizing MPP at Tall Hisban. This is the first of three sessions marking 50 years of research in Jordan by the Madaba Plains Project or MPP. The goal is to present a history of the people, ideas, and research agendas that shaped fieldwork priorities and strategies at each site.

CHAIRS: Oystein LaBianca (Andrews University) and Lawrence Geraty (La Sierra University)

PRESENTERS:

8:20 Lawrence Geraty (La Sierra University), "Contextualizing the Quest for Biblical Heshbon at Tall Hisban" (20 min.)

8:45 Bert de Vries (Calvin College), "Contextualizing the Quest for Early Christianity at Esbus" (20 min.)

9:10 Bethany Walker (University of Bonn), "Contextualizing the Quest for Islamic Housban at Tall Hisban" (20 min.)

9:35 Frode Jacobsen (Western Norway University of Applied Sciences), "Al Musallah: Local Ideas about Tall Hisban" (20 min.)

10:00 Oystein LaBianca (Andrews University), "Contextualizing the Quest for Theories of the *Longue Durée* at Tall Hisban" (20 min.)

1I Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands I Webster

Theme: Settlement Patterns, Subsistence Modes, and Socio-political Developments from the Chalcolithic Period to the Iron Age

CHAIRS: Uri Davidovich (The Hebrew University of Jerusalem) and Ido Wachtel (The Hebrew University of Jerusalem)

PRESENTERS:

8:20 Dina Shalem (Kinneret College on the Sea of Galilee), "Was There a Galilean Cultural Entity in the Late Chalcolithic Period?" (20 min.)

8:45 Austin Hill (Dartmouth College), Yorke Rowan (Oriental Institute, University of Chicago), and Morag Kersel (DePaul University), "Filling in the Gaps: Fifth Millennium B.C.E. Villages in the Galilee" (20 min.)

9:10 Uri Davidovich (The Hebrew University of Jerusalem), "The Emergence of Highland Polities: Qedesh and the Upper Galilee during the Early Bronze Age" (20 min.)

9:35 Ido Wachtel (The Hebrew University of Jerusalem), "Settlement Shifts and Demographic Changes in the Upper Galilee during the Bronze and Iron Ages" (20 min.)

10:00 Karen Covello-Paran (Israel Antiquities Authority), "Socio-economic Strategies at Ramat Razim, a Mid-second Millennium B.C.E. Site on the Slopes of Mt. Canaan, Upper Galilee" (20 min.)

1J The Cultural Mosaic of Maresha: Reconstructing Domestic and Ritual Life from Subterranean Contexts Hancock

CHAIR: Ian Stern (Hebrew Union College; Archaeological Seminars Institute)

PRESENTERS:

8:20 Introduction (5 min.)

8:25 Ian Stern (Hebrew Union College-Jewish Institute of Religion, Jerusalem; Archaeological Seminars Institute), "The Cultic Remains from Maresha Subterranean Complex 169" (25 min.)

8:55 Adi Erlich (University of Haifa), "Terracotta Figurines from SC 169: Between Koine and Local Traditions" (25 min.)

9:25 Gerald Finkielsztein (Israel Antiquity Authority), "Hellenistic Maresha: *Instrumenta*, Trade, Administration and History" (25 min.)

9:55 Esther Eshel (Bar Ilan University), "The Aramaic Texts from Maresha" (25 min.)

10:25am–10:40am

Coffee Break**Galleria****Session 2, 10:40am–12:45pm****2A The Archaeology of the Kurdistan Region of Iraq I Harbor 1***Theme: Recent research focused on the Chalcolithic and Bronze Age of the Kurdistan Region.*

CHAIR: Jason Ur (Harvard University)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Gil Stein (University of Chicago), “Kurdish Chalcolithic Conundra: Regional Identities and Local Variation at Surezha and Greater Mesopotamia” (15 min.)
- 11:05 Agnese Vacca (Sapienza University of Rome), “Recent Results from Ongoing Archaeological Researches at Helawa, Southwest Erbil Plain, Iraqi Kurdistan: New Data on the Late Chalcolithic and Late Bronze Age Periods” (15 min.)
- 11:25 Tim Skuldbøl (University of Copenhagen), Carlo Colantoni (University of Leicester), and Mette Marie Hald (National Museum of Denmark), “Exploring the Anatomy and Development of Early Urbanism in NE Iraq. Five Years of Investigations by the Danish Archaeological Expedition to Iraq (DAEI)” (15 min.)
- 11:45 Martin Uildriks (Brown University), “Living on the Edge: Calculating Flood Damage in the Dūkan Reservoir” (15 min.)
- 12:05 Marshall Schurtz (University of Pennsylvania), “Locating Kakmum: Searching for the Bronze Age Polity of the Northern Zagros” (15 min.)
- 12:25 Jason Ur (Harvard University) and Nader Babakr (Directorate of Antiquities, Erbil Governorate, Kurdistan Region of Iraq), “The Evolution of the Assyrian Landscape in the Kurdistan Region of Iraq” (15 min.)

2B Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods II Harbor 2

CHAIR: Gideon Avni (Israel Antiquities Authority)

PRESENTERS:

- 10:40 Omer Sergi (Tel Aviv University) “The Emergence of Judah as a Political Entity between Jerusalem and Benjamin” (15 min.)

- 11:00 Yuval Gadot (Tel Aviv University) and Johanna Regev (Weizmann Institute of Science), “The Elusive Stratum 13: Evaluating New Finds from Iron Age Levels in Jerusalem and Their Contribution for Understanding the City’s Growth” (15 min.)
- 11:20 Abra Spiciarich (Tel Aviv University), Omri Lernau (Independent Scholar), and Lidar Sapir-Hen (Tel Aviv University) “Animal Economy of Jerusalem in the Eighth Century B.C.E. in Light of 30 Years of Publications” (15 min.)
- 11:40 Zubair Adawi (Israel Antiquities Authority), “Biblical Netofa, Byzantine Metoba, and Early Islamic Umm Tuba—A Multi-period Settlement on the Road from Bethlehem to Jerusalem” (15 min.)
- 12:00 Helena Roth (Tel Aviv University), “Talking Trash: The Role of Botanical Remains in the Identification of Garbage in Archaeology” (15 min.)
- 12:20 Amit Re'em (Israel Antiquities Authority), “The Tomb of David and the Room of the Last Supper on Mount Zion: New Findings—Theories vs. Reality” (15 min.)

2C Archaeology of Israel I Harbor 3*Theme: This session focuses on the presentation of data from recent excavations of Bronze and Iron Age sites in Israel.*

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

PRESENTERS:

- 10:40 Aren Maeir (Bar-Ilan University), “The 2017 Season of Excavations at Tell es-Safi/Gath” (20 min.)
- 11:05 Nava Panitz-Cohen (The Hebrew University of Jerusalem), “A Unique Architectural Quarter at Ninth Century B.C.E. Tel Rehov” (20 min.)
- 11:30 Avraham Faust (Bar-Ilan University), “Tel ‘Eton in the Tenth Century B.C.E.: The Resettlement of the Shephelah in the Iron Age IIA and the United Monarchy” (20 min.)
- 11:55 Robert Mullins (Azusa Pacific University), Naama Yahalom-Mack (The Hebrew University of Jerusalem), and Nava Panitz-Cohen (The Hebrew University of Jerusalem), “Results of the Fifth Season of Excavations at Tel Abel Beth Maacah” (20 min.)
- 12:20 Assaf Yasur-Landau (University of Haifa), Eric H. Cline (George Washington University), and Andrew Koh (Brandeis University), “Preliminary Report on the Results of the 2017 Excavation Season at Tel Kabri” (20 min.)

2D Ancient Inscriptions II Burroughs

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

PRESENTERS:

- 10:40 Introduction (5 min.)

- 10:45 K. Lawson Younger, Jr. (Trinity International University–Divinity School), “Arameans in the Zagros: The Cuneiform and Aramaic Evidence” (15 min.)
- 11:05 Jan Dušek (Charles University, Prague), “Dating the Aramaic Stela Sefire I” (15 min.)
- 11:25 Matthew Richey (University of Chicago), “A Bull Figurine with an Old Aramaic Inscription” (15 min.)
- 11:45 Bezalel Porten (The Hebrew University of Jerusalem), “Provenanced Aramaic Ostraca from the Land of Israel” (15 min.)
- 12:05 Robert Deutsch (Independent Scholar), “Revising the Reading of Recently Published Hebrew Seals and Seal Impressions” (15 min.)
- 12:25 Samantha Lindgren (Johns Hopkins University), “Siloam Tunnel Inscription, among Its Contemporaries” (15 min.)

2E Career Options for ASOR Members: The Academy and Beyond Carlton

CHAIR: Emily Miller Bonney (California State University, Fullerton)

PRESENTERS:

- 10:40 Johanna Best (Smithsonian Institution), “Working ‘For The Increase and Diffusion of Knowledge’: Being A Public Fellow at the Smithsonian” (25 min.)
- 11:10 Andrew Cohen (U.S. Department of State), “The Federal Government as a Career Option: A Perspective from the State Department’s Civil Service” (25 min.)
- 11:40 Charles Jones (The Pennsylvania State University), “Living an #Alt-Ac Life” (25 min.)
- 12:10 Suzi Wilczynski (Dig-It! Games), “From the Known to the Unknown: Utilizing Archaeology in Software Development” (25 min.)

2F Archaeology of the Ancient Near East: Bronze and Iron Ages II Lewis

CHAIR: Eric Lee Welch (University of Kansas)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Ian Cipin (University College London), “EB III Jezreel and its Significance in a Regional Context” (15 min.)
- 11:05 Nadeshda Knudsen (Tel Aviv University), “The Terracotta Herd: Zoomorphic Figurines in the Early Bronze Age Southern Levant” (15 min.)
- 11:25 Gilad Itach (Israel Antiquities Authority; Bar-Ilan University), Dor Golan (Israel Antiquities Authority), “‘The Thinker’: A Unique MB II Burial Complex from Tel Yehud” (15 min.)
- 11:45 Jeffrey Chadwick (Brigham Young University Jerusalem Center), “How to Build a Glacis: Construction Dynamics of the MB II Fortifications at Tell es-Safi/Gath” (15 min.)

- 12:05 Robert Homsher (Harvard University) and Melissa Cradic (University of California, Berkeley), “Rethinking Amorites” (15 min.)
- 12:25 Golan Shalvi (University of Haifa), Shay Bar (University of Haifa), Shlomo Shoval (The Open University of Israel), and Ayelet Gilboa (University of Haifa), “The Tel Esur Courtyard House: A Glimpse into the Lives of the Lower Classes in Rural Areas in Late Bronze Age Canaan” (15 min.)

2G Study of Violence from the Region of the Ancient Near East and Its Neighbors II Otis

Theme: Violence from the region of the ancient Near East and its neighbors: anthropology and hermeneutics of text and image analysis.

CHAIRS: Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University) and Leann Pace (Wake Forest University)

PRESENTERS:

- 10:40 Niv Allon (The Metropolitan Museum of Art), “Cruel Art: Ancient Egyptian Violence in Literary Texts and Tomb Art” (20 min.)
- 11:00 Angelos Papadopoulos (College Year in Athens [CYA] Greece), “Images of Battle and Hunting in the Late Bronze Age: Why Is the Aegean So Different from Its Eastern Neighbors?” (20 min.)
- 11:20 Anne-Caroline Rendu Loisel (University of Strasbourg), “Senses and Violence in Cuneiform Texts (Second–First Millennium B.C.)” (20 min.)
- 11:40 General Discussion (20 min.)
- 12:00 Terhi Nurmikko-Fuller (Australian National University) and Sanna Nurmikko-Metsola (Brunel University London), “A Strategy of Violence? Using Game Theory to Analyze Political Power in the Ancient Near East” (25 min.)
- 12:25 General Discussion (20 min.)

2H Madaba Plains Project at 50: Tall al-‘Umayri Stone

Theme: Contextualizing MPP at Tall al-‘Umayri: This is the second of three sessions marking 50 years of research in Jordan by the Madaba Plains Project (MPP). The goal is to present a history of the people, ideas, and research agendas that shaped fieldwork priorities and strategies at each site.

CHAIRS: Douglas R. Clark (La Sierra University) and Larry Herr (Burman University)

PRESENTERS:

- 10:40 Timothy P. Harrison (University of Toronto), “Contextualizing MPP at Tall al-‘Umayri: The Early Bronze Age” (20 min.)
- 11:05 Kent Bramlett (La Sierra University), “Contextualizing MPP at Tall al-‘Umayri: The Late Bronze Age” (20 min.)
- 11:30 Douglas R. Clark (La Sierra University), “Contextualizing MPP at Tall al-‘Umayri: The Early Iron Age” (20 min.)

- 11:55 Larry Herr (Burman University), “Contextualizing MPP at Tall al-‘Umayri: The Late Iron Age and Early Persian Period” (20 min.)
- 12:20 Gary Christopherson (University of Arizona), “What Happened When the Tall al-‘Umayri Regional Survey Met Fernand Braudel’s Temporal Hierarchy?” (20 min.)

2I Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands II

Webster

Theme: The Hellenistic, Roman, and Byzantine Periods in Galilee—Society, Ethnicity, and Materiality

CHAIR: Andrea M. Berlin (Boston University)

PRESENTERS:

- 10:40 Uzi Leibner (The Hebrew University of Jerusalem), “Material Culture, Settlement, and Ethnicity in Hellenistic Period Galilee” (20 min.)
- 11:05 Roi Sabar (The Hebrew University of Jerusalem), “Ethnic Boundaries and Settlement History in the Eastern Upper Galilee during the Hellenistic, Roman, and Byzantine Periods: Results of a High Resolution Site Survey” (20 min.)
- 11:30 Mordechai Aviam (Kinneret College on the Sea of Galilee), “Phoenician Material Culture Influence in Upper Galilee during the Hellenistic, Roman, and Byzantine Periods” (20 min.)
- 11:55 Jacob Ashkenazi (Kinneret College on the Sea of Galilee) and Mordechai Aviam (Kinneret College on the Sea of Galilee), “Economic Growth and Religious Materiality in Christian Galilee in Late Antiquity” (20 min.)
- 12:20 A.D. Riddle (Trinity International University), “The Evidentiary Bases for Mapping Ancient Roads in Southern Lebanon” (20 min.)

2J Houses and Households in the Near East: Archaeology and History I

Hancock

Theme: Foundation Deposits and Household Ritualized Burials. Presentations explore the purpose of foundation deposits in domestic contexts and offer a particular focus on the burial of humans, including infants, and animals as part of these ritualized deposits.

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

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Miriam Müller (Leiden University), “Foundation Ceremonies in Near Eastern and Egyptian Domestic Architecture” (15 min.)
- 11:05 Yağmur Heffron (University College London), “Domestic Space and Religious Admixture in Kültepe-Kanesh” (15 min.)

- 11:25 Haskel Greenfield (University of Manitoba), Tina Greenfield (University of Saskatchewan), Elizabeth Arnold (Grand Valley State University), Aren Maeir (Bar-Ilan University), “A Bunch of Asses: Recent Asinine Discoveries from Early Bronze Tell es-Safi/Gath” (15 min.)
- 11:45 Melissa Cradic (University of California, Berkeley), “Residential Burial and Social Memory in the Middle Bronze Age Levant” (15 min.)
- 12:05 Timothy Matney (University of Akron), “Infant Burial Practices as Domestic Funerary Ritual at Early Bronze Age Titriş Höyük” (15 min.)
- 12:25 Burcu Yıldırım (Middle East Technical University), Laurel D. Hackley (Brown University), and Sharon R. Steadman (SUNY Cortland), “Sanctifying the House: Child Burial in Prehistoric Anatolia” (15 min.)

1:00–1:55pm

Junior Scholars’ Panel Discussion

Harbor 1

CHAIR: Heather Dana Davis Parker (Johns Hopkins University)

- 1:10 Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University), “What Exactly Are the Digital Humanities and Why Should Scholars of the Ancient Near East Care?”

Session 3, 2:00–4:05pm

3A The Archaeology of the Kurdistan Region of Iraq II

Harbor 1

Theme: Recent research focused on the Late Bronze Age and Iron Age (Neo-Assyrian Period) in the Kurdistan Region.

CHAIR: Jason Ur (Harvard University)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Claudia Glatz (University of Glasgow), and Jesse Casana (Dartmouth College), “Sketching out Imperial *Handlungsräume* in the Zagros-Mesopotamian Interface—Recent Results from the Sirwan Regional Project and Khani Masi Excavations” (15 min.)
- 2:25 Hasam Qasim (Directorate of Antiquities, Duhok Governorate, Kurdistan Region of Iraq), “A New Neo-Assyrian Palace at Sêmêl Hill Rescue Excavations of the Duhok Directorate of Antiquities in the Kurdistan Region of Iraq” (15 min.)
- 2:45 Shin Nishiyama (Chubu University), “Iron Age Village and City in Iraqi Kurdistan: Results from Qalat Said Ahmadan and Yasin Tepe” (15 min.)
- 3:05 Maria Grazia Masetti-Rouault (École Pratique des Hautes Études / Paris Sciences et Lettres Research University), “Before the Assyrians, After the Assyrians: News from Qasr Shemamok” (15 min.)

3:25 Lisa Cooper (University of British Columbia), "Archaeological Reflections of Identity in the Late Assyrian Period Remains at Bestansur, Kurdistan" (15 min.)

3:45 Jason Herrmann (University of Tübingen) and Paola Sconzo (University of Tübingen), "Environmental Influences on Survey Results and Settlement Patterns, Eastern H̄abur Region, Iraqi Kurdistan" (15 min.)

3B Archaeology and Biblical Studies I Harbor 2

Theme: This session explores the intersections between and among history, archaeology, and the Jewish and/or Christian Bibles and related texts.

CHAIR: Jonathan Rosenbaum (Gratz College)

PRESENTERS:

2:00 Introduction (5 min.)

2:05 Aaron Demsky (Bar-Ilan University), "Rabbi Estori Haparhi, the Father of Biblical Historical Geography" (15 min.)

2:25 Dale Manor (Harding University), "Toys 'R' Us at Tel Beth-Shemesh" (15 min.)

2:45 Peter Feinman (Institute of History, Archaeology, and Education), "Rethinking Israel: The 400-Year Stories of the Hyksos and Israel" (15 min.)

3:05 Richard Hess (Denver Seminary), "Cultural Contexts Compared: The Onomastic Profiles of the Books of Joshua and Judges" (15 min.)

3:25 Amit Dagan (Bar-Ilan University) and Aren Maeir (Bar-Ilan University), "And the Gods of the Philistines' (Judges 10:6): Understanding Philistine Cultic Practices in Light of Archaeological and Textual Evidence" (15 min.)

3:45 Robert Miller (The Catholic University of America), "The Archaeology of Midianite Religion and Yahweh's Southern Origins" (15 min.)

3C Archaeology of Israel II Harbor 3

Theme: This session focuses on the presentation of data from recent excavations of Bronze and Iron Age sites in Israel.

CHAIRS: J. P. Dessel (University of Tennessee, Knoxville) and Rachel Hallote (Purchase College SUNY)

PRESENTERS:

2:00 Introduction (5 min.)

2:05 Haggai Cohen Klonimus (The Hebrew University of Jerusalem), "The Renewed Excavation in Teluliyot Batashi—A View from the Southernmost Wadi Rabah Sites" (15 min.)

2:25 Marcin Czarnowicz (Jagiellonian University in Kraków), Krzysztof Ciałowicz (Jagiellonian University in Kraków), Agnieszka Ochał-Czarnowicz (Jagiellonian University in Kraków), Yuval Yekutieli (Ben-Gurion University of the Negev), Eli Cohen-Sasson (Ben-Gurion University of the Negev), Eliot Braun (Jagiellonian University in Kraków), Dmitry Yegorov (Israel Antiquities Authority), and Ianir Milevski

(Israel Antiquities Authority), "Tel Erani: The Jagellonian and Ben-Gurion Universities and Israel Antiquities Authority Excavations (2013-2017)" (15 min.)

2:45 Geoffrey Ludvik (University of Wisconsin–Madison), "Hard Stone Beads and Socio-Economic Interaction in the Intermediate Bronze Age: Tracing Foreign Connections with Israel in the Third Millennium B.C.E." (15 min.)

3:05 Jacob Damm (Cotsen Institute of Archaeology, University of California, Los Angeles), "Pots and People: Imperial Collapse and Identity Negotiation at New Kingdom Jaffa" (15 min.)

3:25 Jeffrey Blakely (University of Wisconsin–Madison), "The So-Called 'Governor's Residencies' at Tell el-Hesi" (15 min.)

3:45 Zvi Lederman (Tel Aviv University), "Water for the Royal Horses: Rethinking Iron Age II Water Systems" (15 min.)

3D Ancient Inscriptions III Burroughs

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

PRESENTERS:

2:00 Introduction (5 min.)

2:05 Janling Fu (Harvard University), "A Thick Description of the Tabnit Sarcophagus" (15 min.)

2:25 Andrew Burlingame (University of Chicago), "Eshmunazor's Last Full 'Measure' of Devotion? An Old Reading and a New Interpretation of KAI 14:19" (15 min.)

2:45 Dov Gera (Ben-Gurion University of the Negev), "The Greek Inscriptions from Maresha" (15 min.)

3:05 Gil Gambash (University of Haifa) and Assaf Yasur-Landau (University of Haifa), "Governor of Judea, Patron of Dor: A New Inscription of Gargilius Antiquus" (15 min.)

3:25 Gaby Abou Samra (Lebanese University), "The Arabic Inscriptions in Deir Es-Salib Church in the Qadisha Valley (Lebanon)" (15 min.)

3:45 General Discussion (20 min.)

3E Southern Phoenicia Initiative I (Workshop) Carlton

The Southern Phoenicia Initiative is a newly formed working group that seeks to establish research ties across key sites in the region of southern Phoenicia. We aim to use the workshop to outline common agendas of the group, develop research questions, and propose common protocols for projects.

CHAIR: Becky Martin (Boston University)

PRESENTERS:

2:00 Introduction (5 min.)

2:05 Ilan Sharon (The Hebrew University of Jerusalem), "The Southern Phoenicia Initiative: Defining Space and Chronology" (10 min.)

- 2:15 Ayelet Gilboa (University of Haifa), “Early Iron Age Phoenicia as a Construct and Tool” (10 min.)
- 2:25 Becky Martin (Boston University), “‘Phoenicianism’ in the Persian Period: Definitions and Problems” (10 min.)
- 2:35 Jessica Nitschke (Stellenbosch University; University of Cape Town), “Southern Phoenicia in the Hellenistic and Roman Eras” (10 min.)
- 2:45 Assaf Yasur-Landau (University of Haifa), “The Contribution of Underwater Archaeology to the Study of Southern Phoenicia” (10 min.)
- 2:55 Discussion (20 min.)
- 3:15 Meir Edrey (Tel Aviv University), “Burial Diversity in Phoenicia and Its Social Implications” (15 min.)
- 3:30 Paula Waiman-Barak (University of Haifa), “Phoenician Maritime Transport Containers of the Early Iron Age, a Provenance Analysis” (15 min.)
- 3:45 Discussion (20 min.)

3F Archaeology of the Ancient Near East: Bronze and Iron Ages III

Lewis

CHAIR: Eric Lee Welch (University of Kansas)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Itzhaq Shai (Ariel University), Debi Cassuto (Bar-Ilan University), and Chris McKinny (Texas A&M University Corpus Christi), “Tel Burna Archaeological Project: The Results of the 2016–2017 Seasons” (15 min.)
- 2:25 Hoo-Goo Kang (Seoul Jangsin University), “The City Gate of Tel Lachish Level V: Where Is It?” (15 min.)
- 2:45 Gerald Mattingly (Johnson University) and Mark Green (Indiana State University), “Where the Lines of Evidence Converge: Dating the Origin of Khirbat al-Mudaybi, on Central Jordan’s Karak Plateau” (15 min.)
- 3:05 Yifat Thareani (Hebrew Union College-Jewish Institute of Religion, Jerusalem), “Movers and Shakers of the Ancient Near East: Assyria’s Deportation Policy in Light of the Archaeological Evidence from Tel Dan” (15 min.)
- 3:25 Assaf Kleiman (Tel Aviv University) “The Invisible Kingdom? Settlement Oscillations in the Northern Jordan Valley and State Formation in Southwestern Syria” (15 min.)
- 3:45 David Kertai (The Hebrew University of Jerusalem), “The Architecture of the Gaze: Palace J/K at Zincirli” (15 min.)

3G Connectivities in The Near East: Social Impact of Shifting Networks I

Otis

Theme: Connectivity and its impact from the Neolithic period through the Bronze Ages will be the focus of this session, covering regions from Anatolia, the Levant, and reaching Egypt. Chronological discourse as well as a look into material culture will be presented.

CHAIR: Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences)

PRESENTERS:

- 2:00 Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences) and Arkadiusz Marciniak (Poznan University), “Connecting and Constructing: Pathways to the Late Neolithic of Central and Western Anatolia” (20 min.)
- 2:25 Christoph Schwall (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), Moritz Numrich (Curt-Engelhorn-Centre Archaeometry), and Ernst Pernicka (Curt-Engelhorn-Centre Archaeometry; Institute of Geosciences, Heidelberg University), “The Early Bronze Age Gold Treasures of Troy and Related Finds: Indicators for the Connectivity of Rising Elites?” (20 min.)
- 2:50 Felix Höflmayer (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences) and Katharina Streit (The Hebrew University of Jerusalem), “Tracing Transformations in the Southern Levant at the Transition from the Middle to the Late Bronze Age” (20 min.)
- 3:15 Katharina Streit (The Hebrew University of Jerusalem), “Fluctuating Connectivity of the Levant and Mesopotamia—A *Longue Durée* View of Long Distance Ties from the Pottery Neolithic to the Early Bronze Age” (20 min.)
- 3:40 Bettina Bader (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Technological and Morphological Differences in Pottery Production in Egypt in the Second Intermediate Period (1700–1550 B.C.): Signs of Changing Regional Connectivity?” (20 min.)

3H Madaba Plains Project at 50: Tall Jalul Stone

CHAIR: Randall Younker (Andrews University)

PRESENTERS:

- 2:00 David Merling (Andrews University) and Randall Younker (Andrews University), “In the Trenches at Jalul: Struggles, Strategies, Discoveries” (20 min.)
- 2:25 Constance Gane (Andrews University), “Jalul and the Empires of the North” (20 min.)
- 2:50 Paul Gregor (Andrews University), “Tall Jalul: What Happened to Amorite Heshbon?” (20 min.)
- 3:15 Paul Ray (Andrews University), “Jalul and the Mesha Inscription: Was Tall Jalul Biblical Bezer?” (20 min.)
- 3:40 Randall Younker (Andrews University), “Jalul and the Modified High Chronology for the Iron Age IIA–B” (20 min.)

3I The Synagogue at Horvat Kur Webster

CHAIR: Byron R. McCane (Florida Atlantic University)

PRESENTERS:

- 2:00 Stefan Münger (Institute of Jewish Studies, University of Bern), "Introduction to the Kinneret Regional Project" (10 min.)
- 2:15 Tine Rassalle (University of North Carolina at Chapel Hill), Rick Bonnie (University of Helsinki), and Annalize Reeder (University of Augsburg), "Architecture and Stratigraphy of the Horvat Kur Synagogue Area" (15 min.)
- 2:35 Philip Bes (Leiden University) and Dennis Braekmans (Leiden University), "Fifty Shades of Clay: Roman and Byzantine Pottery from the Horvat Kur Synagogue (Galilee, Israel)" (15 min.)
- 2:55 Patrick Wyssmann (University of Bern), "The Numismatic Evidence from Horvat Kur" (15 min.)
- 3:15 Jürgen Zangenberg (Leiden University), "The 'Mysterious' Stone Table and Its Functional Context in the Synagogue at Horvat Kur (Galilee)" (15 min.)
- 3:35 Byron R. McCane (Florida Atlantic University), "The Mosaic Floor in the Horvat Kur Synagogue: Context and Interpretation" (15 min.)
- 3:55 Discussion (10 min.)

3J Houses and Households in the Near East: Archaeology and History II Hancock

Theme: Social Identity and Material Culture. Presentations explore the interconnection between houses and structures, material culture, and the social identity imparted by both building and objects.

CHAIR: Laura Battini (Laboratoire PROCLAC–Collège de France, Paris)

PRESENTERS:

- 2:00 Monique Vincent (La Sierra University), "Households, Communities, and Dimensions of Social Identity in the Early Iron Age at Tall al-'Umayri, Jordan" (20 min.)
- 2:25 Clemens Reichel (University of Toronto / Royal Ontario Museum), "House or Household? Intricate Overlaps between Domestic and Administrative/Economic Space in Late Chalcolithic Hamoukar" (20 min.)
- 2:50 Janelle Batkin-Hall (University of Michigan), "Live and Let Dye: Fabrication and Dye Characterization of Roman-Period 'Dolls' from Karanis, Egypt" (20 min.)
- 3:15 S. Thomas Parker (North Carolina State University), "Ceramic Imports to Petra: Domestic versus Funerary Contexts" (20 min.)
- 3:40 Heather D. Baker (University of Toronto), "Quantifying the Use of Space in the Babylonian House of the First Millennium B.C." (20 min.)

3K Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration I Griffin

Theme: Object, Text, and Image: Views through Object and Administrative Function and Context

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

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Denise Schmandt-Besserat (University of Texas), "Early Administrative Technologies: Tokens And Seals" (15 min)
- 2:25 Holly Pittman (University of Pennsylvania), "Appropriated Images: What Do They Tell Us about Cultural Interaction in the Bronze Age of Exchange?" (15 min)
- 2:45 Clelia Paladre (Université Paris 1 Panthéon-Sorbonne, French National Center for Scientific Research—CNRS), "The Early Third Millennium B.C.E. Seal Impressions from Susa Housed in the Louvre Museum—A New Contribution" (15 min)
- 3:05 Diana Stein (Birkbeck, University of London), "A New Angle on the Contest Scene: Exploring Its Context on Seals and Sealings of the Third Millennium B.C." (15 min.)
- 3:25 Ann-Kathrin Jeske (University of Vienna), "Reassessment of Seals and Scarabs to Reconstruct Egyptian Engagement in the Southern and Central Levant" (15 min)
- 3:45 Marta Ameri (Colby College), "Imagery and Material Choice in the Glyptic Arts of the Harappan World" (15 min.)

Session 4, 4:20–6:25pm

4A The Archaeology of the Kurdistan Region of Iraq III Harbor 1

Theme: Recent research focused on the Hellenistic, Parthian, Sasanian, and Islamic Periods in the Kurdistan Region.

CHAIR: Jason Ur (Harvard University)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Rocco Palermo (University of Groningen), "Empires and the Rural Landscape: New Data from the Land of Nineveh Archaeological Project and the Erbil Plain Archaeological Survey for the Seleucid, Parthian, and Sasanian Periods" (15 min.)
- 4:45 Tina Greenfield (University of Saskatchewan), "Frontiers of Empires—A Zooarchaeological Perspective of the Neo-Assyrian and Hellenistic Presence along the Zagros Foothills of Kurdistan" (15 min.)

- 5:05 Gianfilippo Terribili (Sapienza University of Rome) and Camilla Insom (L'Orientale University of Naples), "In the Shade of a Tree: Religious Patterns in the Kurdistan Region from Late Antiquity to Modern Times" (15 min.)
- 5:25 Kyra Kaercher (University of Cambridge), "Excavations at Gird-i Dasht, 2013–2016" (15 min.)
- 5:45 Luca Colliva (Sapienza University of Rome), "Preliminary Results of the MAIKI—Italian Archaeological Mission in Iraqi Kurdistan—2016 and 2017 Campaigns" (15 min.)
- 6:05 John MacGinnis (British Museum), "The Darband-i Rania Archaeological Project" (15 min.)

4B Archaeology and Biblical Studies II Harbor 2

Theme: This session explores the intersections between and among history, archaeology, and the Jewish and/or Christian Bibles and related texts.

CHAIR: Jonathan Rosenbaum (Gratz College)

Introduction (5 min.)

PRESENTERS:

- 4:20 Rami Arav (University of Nebraska at Omaha), "I was a city wall, and my breasts were like towers; then I was in his eyes as one who brings peace' (Song of Solomon 8:10): Walls and Towers in the Archaeology of the Iron Age Southern Levant" (15 min.)
- 4:40 Jean-Philippe Delorme (University of Toronto), "Pekah and Aram-Damascus: An Onomastic Investigation into the Name of Pekah of Israel and its Historical Implications" (15 min.)
- 5:00 Mitka R. Golub (The Hebrew University of Jerusalem) and Shira J. Golani (The Hebrew University of Jerusalem), "Judean Personal Names in the Book of Jeremiah in Light of Archaeological Evidence" (15 min.)
- 5:20 Yossi Nagar (Israel Antiquities Authority), Hanania Hizmi (Israel Antiquities Authority), and Yevgeny Aharonovich (Israel Antiquities Authority), "The People of Qumran—New Discoveries and Paleo-demographic Interpretations" (15 min.)
- 5:40 Oren Gutfeld (The Hebrew University of Jerusalem) and Ahiaad Ovdia (The Hebrew University of Jerusalem), "Old Cave–New Project: The Renewed Excavations in Qumran Cave 53" (15 min.)
- 6:00 Clint Burnett (Boston College), "Gaius (Caligula) and His Almost Sojourn in Yahweh's Temple" (15 min.)

4C Archaeology and History of Feasting and Foodways Harbor 3

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

PRESENTERS:

- 4:20 Introduction (5 min.)

- 4:25 Melissa Sharp (University of Tübingen), "Under the Influence: Communal Drinking, Ceramic Styles, and Identity in the Third Millennium B.C. Syrian Jezirah" (15 min.)
- 4:45 Daniel Griswold (University at Buffalo), "Feasting and Elite Emulation in the Fifteenth Century Sharon Plain" (15 min.)
- 5:05 Lidar Sapir-Hen (Tel Aviv University), "Livestock Animals as Symbol and Wealth in the Late Bronze Age–Iron Age in the Southern Levant" (15 min.)
- 5:25 Elizabeth Arnold (Grand Valley State University), Deirdre Fulton (Baylor University), and James Fulton (Baylor University), "Feeding the Philistine City: An Isotopic Investigation of Animal Resources at Ashkelon in the Iron Age I" (15 min.)
- 5:45 Laura Mazow (East Carolina University), "The Host and the Hosted: Commensal Politics, Feasting Traditions and Cultural (Mis)understandings at Samson's Wedding" (15 min.)
- 6:05 Andrew Danielson (University of California, Los Angeles), "Edom in Judah: A Case Study on 'Edomite' Presence, Interaction, and Identity in the Negev" (15 min.)

4D The History of the Early Alphabet Burroughs

CHAIRS: Orly Goldwasser (The Hebrew University of Jerusalem) and Thomas Schneider (University of British Columbia)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Ben Haring (Leiden University), "The Earliest Alphabet as a Case of Bricolage" (15 min.)
- 4:45 Aaron Koller (Yeshiva University), "Early History of the Alphabet: The First Half-Millennium" (15 min.)
- 5:05 Orly Goldwasser (The Hebrew University of Jerusalem), "The Role of Egypt in the Development of the Alphabet during the Second Millennium B.C.E." (15 min.)
- 5:25 Alice Mandell (University of Wisconsin–Madison), "Script Choice and Iconicity in Canaan: Rethinking the 'Short' Alphabetic Texts" (15 min.)
- 5:45 Christopher Rollston (George Washington University), "The Early Alphabet West and East: Ugarit, Megiddo, and Babylonia" (15 min.)
- 6:05 Thomas Schneider (University of British Columbia), "Egyptian Transcription Systems for Semitic Languages and the Semitic Alphabet Sequences" (15 min.)

4E Southern Phoenicia Initiative II (Workshop) Carlton

CHAIR: Ilan Sharon (The Hebrew University of Jerusalem)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Golan Shalvi (University of Haifa), "The Tel Shiqmona Project: Salvaging a Phoenician Centre at the Margins of Phoenicia" (15 min.)

- 4:45 Elizabeth Bloch-Smith (Princeton Theological Seminary), Gunnar Lehmann (Ben-Gurion University of the Negev), and David Schloen (University of Chicago), “New Excavations at Tell Keisan, 2016” (15 min.)
- 5:05 Ehud Arkin Shalev (University of Haifa), Ayelet Gilboa (University of Haifa), Ilan Sharon (The Hebrew University of Jerusalem), and Assaf Yasur-Landau (University of Haifa), “Iron Age Coastal Structures at Tel Dor: Results of the 2016 and 2017 Underwater Excavation Seasons” (15 min.)
- 5:25 Sveta Matskevich (The Hebrew University of Jerusalem) and Paula Waiman-Barak (University of Haifa), “Tell Sites Along Nahal Taninim as an Inland Extension of the Maritime Trade Network” (15 min.)
- 5:45 Bronwen Manning-Rozenblum (The Hebrew University of Jerusalem), “Shifting Sands: Transitions within Late Iron Age Ceramic Assemblages along the Carmel Coast of Southern Phoenicia” (15 min.)
- 6:05 Barak Monnickendam-Givon (The Hebrew University of Jerusalem), “Engagement and Non-Engagement: The Study of Behavioral Changes in Southern Phoenicia” (15 min.)

4F Archaeology of the Near East: Classical Periods I Lewis

CHAIR: Michael S. Zimmerman (Bridgewater State University)

PRESENTERS:

- 4:20 Orit Peleg-Barkat (The Hebrew University of Jerusalem), “Continuity and Change in Rural Judaea in the Hellenistic and Roman Periods: The Case of Horvat Midras” (20 min.)
- 4:45 Brian Coussens (University of North Carolina at Chapel Hill), “Bring Out Your Dead (to the Desert): The Herodium Mausoleum and the Funerary Landscape of the Judean Wilderness” (20 min.)
- 5:10 Anat Cohen-Weinberger (Israel Antiquities Authority) and Achim Lichtenberger (Ruhr Universität), “Late Roman Workshops of Beit Nattif Figurines: Petrography, Typology, and Style” (20 min.)
- 5:35 Shulamit Miller (The Hebrew University of Jerusalem), “Living Large: The Houses and Daily Life of Late Antique Palestine’s Upper Ten” (20 min.)
- 6:00 Mitchel Allen (Scholarly Roadside Service; Archaeological Research Facility, University of California, Berkeley) and William B. Trousedale (National Museum of Natural History, Smithsonian Institution), “Cultural Complexity in Parthia Sistan, Afghanistan” (20 min.)

4G Connectivities in The Near East: Social Impact of Shifting Networks II Otis

Technological and economical approaches and tracing influences of material culture in this regard involving Egypt, the Levant, and reaching into Mesopotamia will be considered particularly with regard to connectivity.

CHAIR: Felix Höflmayer (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences)

PRESENTERS:

- 4:20 Christian Knoblauch (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Connectivity in the Egyptian Nile Valley—A Technological (and Social) Approach to Understanding Supra-regional and Regional Processes (2200–1750 B.C.E.)” (20 min.)
- 4:45 Reinhard Jung (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Exchange of Goods—Exchange of Commodities? Greece and the Levant in the Second Millennium B.C.E.” (20 min.)
- 5:10 Teresa Bürge (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “The Late Bronze to Early Iron Age Transition in Transjordan: Eastern Mediterranean Material Influences” (20 min.)
- 5:35 Joseph Lehner (University of Central Florida) “Finance, Production, and Connectivity in Hittite Central Anatolia: New Metallurgical Data from Hattusa” (20 min.)

4H Border Dynamics in the Tenth Century B.C.E. Levant: A Junior Scholars’ Panel Stone

Theme: This panel addresses recent research by junior scholars into strategies of border administration and inter-cultural interaction in the tenth century B.C.E. Levant. Papers address key sites and new discoveries in ancient Israel, Judah, and the Transjordan.

CHAIRS: Geoffrey Ludvik (University of Wisconsin) and Lydia Buckner (Mississippi State University)

PRESENTERS:

- 4:20 Lydia Buckner (Mississippi State University), “Opening Remarks” (15 min.)
- 4:35 Zachary Thomas (Macquarie University) and Kyle Keimer (Macquarie University), “The Expansion of the United Monarchy and Its Strategies of Power and Control” (20 min.)
- 5:00 Abelardo Rivas (Andrews University), “Jalul as a Border City in Iron Age Transjordan?” (20 min.)
- 5:25 Chris McKinny (Texas A&M University Corpus Christi), “Pressing On: Identifying the ‘Other’ Gath and Its Implications for Understanding the Border between the Kingdoms of Israel and Judah” (20 min.)
- 5:50 Geoffrey Ludvik (University of Wisconsin) and Lydia Buckner (Mississippi State University), “Border Dynamics in the Tenth Century B.C.E.: A Response from the Tell el-Hesi Region” (20 min.)
- 6:15 Lydia Buckner (Mississippi State University), “Closing Remarks” (5 min.)

4I New Light on Persian Period Judah Webster

Theme: The 205 years between 539/538 and 333 B.C.E., the so-called “Persian period,” are a well-defined period from the historical point of view. For Judah, this is the beginning of the Second Temple Period. This session will explore some basic archaeological questions regarding the understanding of the material culture of this period.

CHAIR: Oded Lipschits (Tel Aviv University)

PRESENTERS:

- 4:20 Oded Lipschits (Tel Aviv University), “Introduction to the Third Session and Summarizing the Three Years of Discussion the Persian Period” (20 min.)
- 4:45 Lester Grabbe (University of Hull), “The Governor of Yehud—Inside Out” (20 min.)
- 5:10 Aharon Tavger (Ariel University), “The Northern Boundary of the Province of Yehud: An Updated Archaeological View from the North” (20 min.)
- 5:35 Pirchia Eyall (Israel Antiquities Authority), “New Insights on the Southern Shephelah in the Persian Period” (20 min.)
- 6:00 Lucas Schulte (University of Nebraska–Lincoln), “Judean Adaptations of Persian Propaganda: A Comparison of Isaiah 44–45 and Nehemiah 2 to Achaemenid-Period Inscriptions of Babylon and Egypt” (20 min.)

4J New Discoveries at Beth She‘arim Hancock

Theme: Beth She‘arim was an important Jewish town in the Galilee during the Roman period, the home of famous sages and a popular cemetery for Jews from Roman Palestine and the Diaspora. New discoveries and studies from recent years will be presented in tis session.

CHAIR: Adi Erlich (University of Haifa)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Rona-Shani Evyasaf (Technion–Israel Institute of Technology) and Adi Erlich (University of Haifa), “The Haifa University Excavations at Beth She‘arim: An Overview of the Results of the 2014–2017 Seasons on the Sheikh Abreik Hill” (15 min.)
- 4:45 Ran Kaftory (University of Haifa), “An Early Roman Period Structure and a Middle Roman Period Building on the Hilltop of Beth She‘arim” (15 min.)
- 5:05 Fanny Vitto (Israel Antiquities Authority), “A Gateway and an Industrial Area on the Eastern Edge of Beth She‘arim (Area X)” (15 min.)
- 5:25 Mechael Osband (University of Haifa; Ohalo College), “The Settlement of Beth She‘arim in Light of the Pottery: A Revised Chronological Perspective” (15 min.)
- 5:45 Tsvika Tsuk (Israel Nature and Parks Authority), Iosi Bordowicz (Israel Nature and Parks Authority), and Achia Kohn-Tavor (Independent Archaeologist), “Impressive Reservoir and Aqueduct in Beth She‘arim National Park, Israel” (15 min.)

- 6:05 Zeev Weiss (The Hebrew University of Jerusalem), “Beth She‘arim and Beyond: Urban Necropoleis in Roman and Late Antique Galilee” (15 min.)

4K Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration II Griffin

Theme: Object, Text, and Image: Views from Individual Identities

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

PRESENTERS:

- 4:20 Melinda Nelson-Hurst (Tulane University), “Spheres of Economic and Administrative Control: Textual, Visual, and Archaeological Evidence for Female and Male Sealers” (20 min)
- 4:45 Oya Topcuoglu (Northwestern University), “The Seals of Šamši-Adad: Ideology, Iconography, Identity” (20 min.)
- 5:10 Christina Chandler (Bryn Mawr College), Annalisa Azzoni (Vanderbilt University), Mark Garrison (Trinity University) and Erin Daly (University of Chicago), “The Chamberlain and the Queen: An Inscribed Seal and Administrative Networks at Persepolis” (20 min.)
- 5:35 Anne Goddeeris (Ghent University) and Katrien De Graef (Ghent University), “Dangerous Liaisons? Temple Personnel with Royal Seals in the Old Babylonian Period” (20 min.)
- 6:00 Katherine Burge (University of Pennsylvania), “The Internal Administration of the Eastern Lower Town Palace at Tell Leilan” (20 min.)

FRIDAY, NOVEMBER 17

Session 5, 8:20–10:25am

5A Landscapes of Settlement in the Ancient Near East Harbor 1

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

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Emily Boak (Oriental Institute, University of Chicago), and Kathryn Franklin (Oriental Institute, University of Chicago), “Graveyard of Empires, Cradle of Commerce: Remotely-sensed Research of Early Modern Travel Infrastructure in Afghanistan” (15 min.)
- 8:45 Anthony Lauricella (University of Chicago), and Emily Hammer (University of Pennsylvania), “Mound Volume as a Proxy for Settlement Intensity in Southern Bactria” (15 min.)
- 9:05 Mehrnoush Soroush (Harvard University), “Water History and Urbanism on the Susiana Plain in the Age of Transition” (15 min.)

- 9:25 Georgia Andreou (Cornell University), "The River Valley as a Study Unit and Conceptual Boundary in Settlement Studies: The Case of South-Central Cyprus" (15 min.)
- 9:45 Evie Gassner (The Hebrew University of Jerusalem), "'Water, Water, Everywhere'—Water as a Landscape Element in Herod's Building Projects" (15 min.)
- 10:05 Norma Franklin (University of Haifa; W. F. Albright Institute of Archaeological Research), "Revealing Greater Jezreel" (15 min.)

5B Senses and Sensibility in the Near East I Harbor 2

Theme: This year's Senses and Sensibility session highlights aspects of intentionality in the exploration of senses and sense-making in the ancient Near East. Papers explore what forms of sensory experience are intentionally constructed in activities and encounters of past worlds, how we might access intentionality, and how best to understand such intentions with respect to particular social and cultural contexts. Also considered are unintentional sensory phenomena, the involuntary and at times overlooked sensory aspects that are equally formidable and impactful in a variety of encounters between agents and spaces.

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

PRESENTERS:

- 8:20 Saana Svård (University of Helsinki) and Alekski Sahala (University of Helsinki), "Am I Seeing Things? Language Technology Approach to 'Seeing' in Akkadian" (20 min.)
- 8:45 Dora Goldsmith (Egyptology Seminar, Freie Universität Berlin), "The Archaeology of Smell in Ancient Egypt—A Cultural Anthropological Study Based on Written Sources: An Olfactory Hierarchy Manifested in the Realm of Gods, Temples, Kings, Royals, and Ordinary People" (20 min.)
- 9:10 Paul Flesher (University of Wyoming), "Acoustic Typology of Ancient Synagogues in Greater Galilee" (20 min.)
- 9:35 Allison Thomason (Southern Illinois University Edwardsville), "Getting Inside Teumann's Head: Material Evidence for Sensing, Emotion, and Cognition in the Neo-Assyrian Period" (20 min.)
- 10:00 Irene J. Winter (Harvard University), "Mesopotamian Ritual as *Gesamtkunstwerk*" (20 min.)

5C Cultural Heritage Management: Methods, Practices, and Case Studies I Harbor 3

CHAIR: Glenn J. Corbett (American Center of Oriental Research)

PRESENTERS:

- 8:20 Joseph Greene (Harvard University), "Cultural Resource Management in Jordan, 30 Years On" (20 min.)

- 8:45 Mohammed El-Khalili (Hashemite University and University of Petra), Nizar Al Adarbeh (University of Jordan/Hamdi Mango Center for Scientific Research), and Abeer Al Bawab (University of Jordan/Hamdi Mango Center for Scientific Research), "Restoration and Rehabilitation of the Roman Nymphaeum in Amman: 'Nymphaeum Archaeological Park'" (20 min.)

- 9:10 Suzanne Richard (Gannon University), Marta D'Andrea (Sapienza University of Rome), Douglas R. Clark (La Sierra University), and Andrea Polcaro (University of Perugia), "Community Engagement to Protect Cultural Heritage in Jordan: The Madaba Regional Archaeological Museum Project (MRAMP)" (20 min.)

- 9:35 Jenna Morton (PAX Foundation), "Measuring Cultural Heritage Preservation through Community Engagement Related to the Umm al-Jimal Interpretive and Hospitality Center in Umm al-Jimal, Jordan" (20 min.)

- 10:00 Erin Linn-Tynen (Integrated Heritage Project), "Putting the 'Sustainable' in Sustainable Heritage Management: Case Studies from Jordan and Cambodia" (20 min.)

5E Archaeology of Cyprus I Carlton

Theme: This session focuses on current archaeological research in Cyprus from prehistory to the modern period. Presentations include reports on archaeological fieldwork and survey, artifactual studies, as well as more focused methodological or theoretical discussions.

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

PRESENTERS:

- 8:20 Lindy Crewe (Cyprus American Archaeological Research Institute), "Excavating Souskiou-Laona Chalcolithic Cemetery" (20 min.)
- 8:45 Peter Fischer (University of Gothenburg) and Teresa Bürge (OREA, Austrian Academy of Sciences), "Tombs and Offering Pits at the Late Bronze Age Metropolis of Hala Sultan Tekke, Cyprus: Results from the Excavations in 2016" (20 min.)
- 9:10 Paula Waiman-Barak (University of Haifa), Anna Georgiadou (University of Cyprus), and Ayelet Gilboa (University of Haifa), "Early Iron Age Cypro-Phoenician Interactions: Cypro-Geometric Ceramics from Tel Dor and Cyprus, a Study of Ceramic Petrography" (20 min.)
- 9:35 Giorgos Bourogiannis (Museum of Mediterranean and Near Eastern Antiquities [Medelhavsmuseet], Stockholm), "The Ayia Irini Project at the Medelhavsmuseet, Stockholm: New Research on an Old Excavation" (20 min.)
- 10:00 Andrew McCarthy (University of Edinburgh), Kathryn Grossman (North Carolina State University), Tate Paulette (Brown University), Lisa Graham (University of Edinburgh), Christine Markussen (University of Vienna), "A Transriverine Hellenistic Settlement at Prastio-Mesorotsos, Cyprus" (20 min.)

5F Archaeology of the Near East: Classical Periods II Lewis

CHAIR: Michael S. Zimmerman (Bridgewater State University)

PRESENTERS:

- 8:20 Sharon Herbert (University of Michigan), “Phoenician Funerary Mask Impressions from the Kedesh Archive” (20 min.)
- 8:45 John Harmon (Southwest Baptist Theological Seminary), “The Sanctuary of Mizpe Yammim: A Proposed Explanation for Its Unusual Location” (20 min.)
- 9:10 Marcela Zapata Meza (Universidad Anáhuac México Sur, Magdala Center Archaeological Project) and [Jordan Ryan](#) (Wheaton College, Magdala Center Archaeological Project), “Rethinking the Layout of the Magdala Synagogue” (20 min.)
- 9:35 Barak Monnickendam-Givon (The Hebrew University of Jerusalem), “Tel ‘Akko’s Periphery during the Classical Periods” (20 min.)
- 10:00 Alexandra Ratzlaff (Boston University), “Tel Achziv in the Hellenistic and Roman Periods” (20 min.)

5H Death and Dying in the Ancient Near East Stone

Theme: This session aims to challenge typical cultural-historical approaches to mortuary archaeology, focusing instead on the practices of death and dying, including change and continuity in mortuary objects and rituals, the use of burial spaces, and expressions of social memory, especially in periods that are under-represented in ancient Near Eastern study.

CHAIRS: Stephanie Selover (University of Washington) and Pinar Durgun (Brown University)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Maria Forza (Freie Universität Berlin), “Cremations Burials at Tell Halaf: a Theory of Reconstruction of a Post-Mortem Ritual” (15 min.)
- 8:45 David Ilan (Hebrew Union College-Jewish Institute of Religion, Jerusalem) and Yorke Rowan (University of Chicago) “Reconstructing the Stages of Dying, Death, and Rebirth in the Chalcolithic of the Southern Levant” (15 min.)
- 9:05 Lanah Haddad (University of Frankfurt), “Burying Family Members of the Settlement Founder Generation during the Early Bronze Age in Northern Mesopotamia” (15 min.)
- 9:25 Tara Ingman (Koç University), “Changing Mortuary Practices at Tell Atchana, Ancient Alalakh, and the Use of GIS Modeling” (15 min.)
- 9:45 Petra Creamer (University of Pennsylvania), “Invoking Memory within the Neo-Assyrian Royal and Domestic Mortuary Cults: Combining Material, Spatial, and Textual Evidence” (15 min.)
- 10:05 Sophie Moore (Brown University), “Memory and Burial at Historic Çatalhöyük” (15 min.)

5I Meeting the Expenses: Ancient Near Eastern Economies I Webster

Theme: Measuring Value—Hoardings and Systems of Weight. The economies of the ancient Near East, moving beyond the dichotomy between “ancient” and “modern” economy. In this year our theme includes measuring systems and ways of defining value, wealth deposits (hoards), and economic modes of exchange.

CHAIR: Raz Kletter (University of Helsinki)

PRESENTERS:

- 8:20 Ianir Milevski (Israel Antiquities Authority), “Before Weighting: Prehistoric Economies of the Southern Levant” (20 min.)
- 8:45 Lorenz Rahmstorf (University of Göttingen), “Hoardings with Weights in the Third Millennium B.C.E. between the Aegean and the Indus” (20 min.)
- 9:10 William Hafford (University of Pennsylvania), “Early Bronze Age Silver Hoards in the Diyala” (20 min.)
- 9:35 Judy Bjorkman (Independent Scholar), “Interpreting Ancient Hoards and Ritual Deposits” (20 min.)
- 10:00 Maribel Dorka Moreno (Heidelberg University), “Late Bronze Age Metal Hoards from Greece: Approaches to Identification and Interpretation” (20 min.)

5J Baths and Bathing in the East Hancock

Theme: This session brings together international and North American scholars to present and discuss recent research on baths and bathing in the Near East. Papers cover a wide geographic and temporal spread, and they include presentations on recent fieldwork, comparative analyses, architectural studies, and the social use of baths.

CHAIR: Craig A. Harvey (University of Michigan)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Eyal Regev (Bar-Ilan University), “Jewish Purity and Greco-Roman Pleasure: Hot Baths and the Ritual Baths from the Hasmoneans to Herod” (20 min.)
- 8:50 M. Barbara Reeves (Queen’s University), “Elevated Luxury: The Nabataean Villa Bathhouse at Wadi Ramm” (15 min.)
- 9:10 Sophie Tews (Independent Scholar) and Craig A. Harvey (University of Michigan), “The Newly Discovered Bath on the Petra North Ridge: An Initial Report” (15 min.)
- 9:30 Robert Darby (University of Tennessee, Knoxville), “Awash in Change: Roman Military Bathhouses in the East from the First–Fourth Centuries” (15 min.)
- 9:50 Thibaud Fournet (French Institute for the Near East), “Zenobia’s Baths in Palmyra (Syria): an Assessment” (15 min.)
- 10:10 General Discussion (15 min.)

10:25–10:40am

Coffee Break
Galleria

Session 6, 10:40am–12:45pm

**6A Archaeology of Lebanon I
Harbor 1**

Theme: The focus of this session is on current archaeological fieldwork and researches in Lebanon.

CHAIR: Hanan Charaf (Lebanese University)

PRESENTERS:

- 10:40 Gassia Artin (Maison de l'Orient et de la Méditerranée), "Lebanon During the Chalcolithic Period" (20 min.)
- 11:05 Graham Philip (Durham University), Kamal Badreshany (Durham University), Melissa Kennedy (University of Sydney), and Hélène Sader (American University of Beirut), "Excavations at Koumba: Pathways to 'Complexity' in Northern Lebanon. A Regional Perspective" (20 min.)
- 11:30 Melissa Kennedy (University of Sydney) and Kamal Badreshany (Durham University), "Koumba, North Lebanon: The Ceramics and Their Regional Context" (20 min.)
- 11:55 Claude Doumet-Serhal (Director, Sidon Excavations), "Sidon in the Iron Age I: A Haven of Continuity" (20 min.)
- 12:20 Sarkis el-Khoury (General Directorate of Antiquities-DGA, Lebanon), "Overview of Recent Archaeological Activities in Lebanon" (20 min.)

**6B Senses and Sensibility in the Near East II
Harbor 2**

Theme: This year's Senses and Sensibility session highlights aspects of intentionality in the exploration of senses and sense-making in the ancient Near East. Papers explore what forms of sensory experience are intentionally constructed in activities and encounters of past worlds, how we might access intentionality, and how best to understand such intentions with respect to particular social and cultural contexts. Also considered are unintentional sensory phenomena, the involuntary and at times overlooked sensory aspects that are equally formidable and impactful in a variety of encounters between agents and spaces.

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

PRESENTERS:

- 10:40 Kiersten Neumann (Oriental Institute, University of Chicago), "To Touch Upon: A Tactile Exploration of the Apadana Reliefs at Persepolis" (20 min.)
- 11:05 Neville McFerrin (Sweet Briar College), "The Tangible Self: Materiality and Haptic Negotiations of Agency in, on, and at Persepolis" (20 min.)

- 11:30 Sarah J. Scott (Wagner College), "Skin on Skin: Exploring Surface Relationships between Seals and Impressions" (20 min.)
- 11:55 Laurel Hackley (Brown University), "'You Go to a Place Difficult of Access: Multi-sensory Engagement with Ancient Amulets'" (20 min.)
- 12:20 General Discussion (25 min.)

**6C Cultural Heritage Management: Methods, Practices, and Case Studies II
Harbor 3**

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

PRESENTERS:

- 10:40 Thomas Roby (The Getty Conservation Institute), Leslie Friedman (The Getty Conservation Institute), Livia Alberti (Independent Conservator), Ermanno Carbonara (Independent Conservator), Moheddine Chaouali (Institut National du Patrimoine, Tunis), and Hamida Rhouma (Institut National du Patrimoine, Tunis), "The Conservation Plan for Mosaics at Bulla Regia: A Component of the MOSAIKON Model Field Project" (20 min.)
- 11:05 Rachel Aronin (Harvard University), "'To Make One Know the Place Beforehand': Integrating Archival Data and 3D Visualization on the Digital Giza Website" (20 min.)
- 11:30 Boaz Gross (Tel Aviv University), "Why 1700 C.E.? The Possible Contribution of Archaeological Research into the Last 300 Years: The Case of Beit Nattif" (20 min.)
- 11:55 Leann Pace (Wake Forest University), "Teaching Cultural Heritage Management at a Divinity School: A Case Study in Answering the Call for Education outside of the Discipline" (20 min.)
- 12:20 Paul Christians (Stanford University), "Cultural Heritage, Distributive Politics, and Public-Private Cultural Development in Qatar" (20 min.)

**6E Archaeology of Cyprus II
Carlton**

Theme: This session focuses on current archaeological research in Cyprus from prehistory to the modern period. Presentations include reports on archaeological fieldwork and survey, artifactual studies, as well as more focused methodological or theoretical discussions.

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

PRESENTERS:

- 10:40 Thomas Landvatter (Reed College), "Cremation Practice and Social Meaning in the Ptolemaic East Mediterranean" (15 min.)
- 11:00 Karolina Rosińska-Balik (Jagiellonian University in Kraków), "Architectural Features of the Agora of Paphos (Cyprus)—Some Remarks" (15 min.)
- 11:20 Nancy Serwint (Arizona State University), "The Workshops of Ancient Arsinoe" (15 min.)

- 11:40 Pamela Gaber (Lycoming College), “The 2017 Season of the Lycoming College Expedition to Idalion, Cyprus” (15 min.)
- 12:00 R. Scott Moore (Indiana University of Pennsylvania), Brandon Olson (Metropolitan State University of Denver), and William Caraher (University of North Dakota), “The Circulation of Imported Fine Wares on Cyprus in the Roman and Late Roman Periods” (15 min.)
- 12:20 Ann-Marie Knoblauch (Virginia Tech), “Excavating Cesnola: Public Interest in Archaeological Field Techniques in 1880s New York” (15 min.)

6F Antiochia Hippos of the Decapolis and Its Territorium Lewis

Theme: Antiochia Hippos (Sussita) of the Decapolis is the last polis to be unearthed in the Land of Israel. The city, founded upon Sussita Mountain, is the center of on-going archaeological research started at 2000. In recent years, the research has expanded to Sussita’s saddle-ridge area and the Territorium of Hippos.

CHAIR: Michael Eisenberg (University of Haifa)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Chaim Ben David (Kinneret College on the Sea of Galilee) and Mechael Osband (University of Haifa; Ohalo College), “The Territorial Borders and the Rural Settlements of the Hippos District during the Roman and Byzantine Periods: the Current State of Research and the Contribution from the Recent Excavations at Khirbet Majduliyya” (15 min.)
- 11:05 Adam Pažout (University of Haifa), “Regional Defenses in the Territory of Hippos: A Spatial Analysis Approach” (15 min.)
- 11:25 Michael Eisenberg (University of Haifa), “The Urban Expansion at Hippos (Sussita) during the Roman Period: a Newly Excavated Sanctuary at the Saddle-Ridge” (15 min.)
- 11:45 Arleta Kowalewska (University of Haifa), “The Southern Bathhouse of Antiochia Hippos” (15 min.)
- 12:05 Stephen Chambers (Concordia Lutheran Seminary, Canada), “A Story in Glass: How Distribution Patterns Assist in the Reconstruction of the History of the Northeast Insula” (15 min.)
- 12:25 Mark Schuler (Concordia University, St. Paul), “Re-visioning Structures and Spaces: a History of the Northeast Insula at Antiochia Hippos” (15 min.)

6H Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations I Stone

Theme: Papers in this session explore interaction with the divine world, and the labeling and classification of divine beings.

CHAIR: Daniel E. Fleming (New York University)

PRESENTERS:

- 10:40 Daniel E. Fleming (New York University), Introduction (5 min.)
- 10:45 Seth Richardson (University of Chicago), “Uncertain Omens and the Ambiguous Future: Prediction and Query as Figure and Ground” (15 min.)
- 11:05 Elizabeth Knott (New York University), “What’s in a Name? Ištar as Common Noun and Divine Name” (15 min.)
- 11:25 Nancy Highcock (New York University), “City and God: The Materiality of Old Assyrian Assur” (15 min.)
- 11:45 Michael Stahl (New York University), “Challenging the Concept of the ‘City God’: ‘NIN.URTA’s Social and Political Agency at Emar” (15 min.)
- 12:05 Jennifer Singletary (Georg-August-Universität Göttingen), “The Holy Ones: Taxonomies of Divine Beings in the Hebrew Bible” (15 min.)
- 12:25 Lauren McCormick (Syracuse University), “Fleeting Identity in the Judean Pillar Figurines” (15 min.)

6I Meeting the Expenses: Ancient Near Eastern Economies II Webster

Theme: Measuring Value—Hoardings and Systems of Weight. The economies of the Ancient Near-East, moving beyond the dichotomy between “ancient” and “modern” economy. In this year our theme includes measuring systems and ways of defining value, wealth deposits (hoards), and economic modes of exchange.

CHAIR: Lorenz Rahmstorf (University of Göttingen)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Karl Petruso (University of Texas at Arlington), “A Theory of Everything in Ancient Weight Metrology?” (15 min.)
- 11:05 Raz Kletter (University of Helsinki), “Major Changes on the Road to Small Change: Scale Weights, Hoards, and Modes of Exchange” (15 min.)
- 11:25 Graciela Gestoso Singer (CEHAO–Pontifical Catholic University of Argentina), “Beyond Amarna: Hoards, Tribute, Gifts, and Exchange of Metals in the Levant” (15 min.)
- 11:45 Eran Arie (The Israel Museum, Jerusalem), “A New Jewelry Hoard from Iron Age I Megiddo” (15 min.)
- 12:05 Tzilla Eshel (University of Haifa), Naama Yahalom-Mack (The Hebrew University of Jerusalem), Sariel Shalev (University of Haifa), Yigal Erel (The Hebrew University of Jerusalem) and Ayelet Gilboa (University of Haifa), “Silver Hoards in the Bronze and Iron Age Southern Levant: How was the Quality of Silver Monitored?” (15 min.)
- 12:25 General Discussion (20 min.)

6J New Studies on Tel Azekah Hancock

CHAIR: Yuval Gadot (Tel Aviv University)

PRESENTERS:

- 10:40 Oded Lipschits (Tel Aviv University), "Fortifications, Destructions, and the Life in Between: Azekah after Five Seasons of Excavations" (5 min.)
- 10:45 Joshua Errington (Tel Aviv University; Macquarie University), "Processes in the Site Formation of Tel Azekah: A Test Case for the Modification of Landscape in the *Longue Durée*" (15 min.)
- 11:05 Sabine Kleiman (Tel Aviv University) and Maya Hadash (Tel Aviv University), "Azekah's Regional and Inter-regional Connections during the 13th and 12th Centuries B.C.E.: A Narrative from Its Ceramic Evidence" (15 min.)
- 11:25 Lyndelle Webster (Tel Aviv University), "A Radiocarbon-Based Chronology for Late Bronze Age Tel Azekah" (15 min.)
- 11:45 Karl Berendt (University of Alberta), "The People Left Behind: Disaster Skeletal Assemblage at Tel Azekah, Israel" (15 min.)
- 12:05 Ido Koch (Tel Aviv University) and Sarah Richardson (University of Manitoba), "A Late Bronze Age III Workshop at Tel Azekah" (15 min.)
- 12:25 Alexandra Wrathall (Tel Aviv University), "The Resettlement of Azekah: The Iron Age IIA-IIB Ceramic Transition" (15 min.)

12:45–2:00pm

ASOR Members' Meeting Harbor 1

Session 7, 2:00–4:05pm

7A Archaeology of Lebanon II Harbor 1

Theme: The focus of this session is on current archaeological fieldwork and researches in Lebanon.

CHAIR: Hanan Charaf (Lebanese University)

PRESENTERS:

- 2:00 Jeanine Abdul Massih (Lebanese University) and Shin Nishiyama (Chubu University), "New Archaeological Observations and Documentations in the Bekaa Valley, Lebanon" (20 min.)
- 2:25 Paul Newson (American University of Beirut), "Landscape Archaeology in the Central Bekaa: Challenges and Opportunities" (20 min.)
- 2:50 Zeina Fani Alpi (Lebanese University) and Frédéric Alpi (Institut Français du Proche-Orient), "Eros/Putti Figures during the Greco-Roman Period in Lebanon" (20 min.)

3:15 Anis Chaaya (Lebanese University), "New Insights into the Medieval Castle of Gbail/Byblos, Lebanon" (20 min.)

3:40 Nada Hélou (Lebanese University), "An Early Image of the Virgin on a Tomb from Tyre: An Iconographical Approach" (20 min.)

7B Art Historical Approaches to the Near East I Harbor 2

Theme: Challenging the Past. Papers in this session challenge previous approaches to art objects and offer new interpretations of these works.

CHAIR: Allison Thomason (Southern Illinois University Edwardsville)

PRESENTERS:

- 2:00 Pedro Azara (UPC-ETSAB, Barcelona) and Marc Marin (UPC-ETSAB, Barcelona), "Sumer and the Modern Paradigm" (20 min.)
- 2:25 Virginia Herrmann (University of Tübingen), "Appropriation and Emulation in the Iron Age Gate Sculptures from Zincirli-Sam'al" (20 min.)
- 2:50 Ariel Winderbaum (Tel Aviv University), "Images of Belief in Iron Age IIA Jerusalem: Iconic Inspection into the Belief Systems of Jerusalem at the Genesis of the Judahite Kingdom" (20 min.)
- 3:15 Alison Barclay (Saint Mary's University), "New Thoughts on the 'Syrianizing' Bronzes from Mt. Ida, Crete, Ninth-Eighth Centuries B.C.E." (20 mins.)
- 3:40 Shannon Martino (School of the Art Institute) and Matthew Martino (University of Chicago Laboratory Schools), "Visualizing Museum Collections in Place and through Time" (20 min.)

7C Glass in the Ancient Near East Harbor 3

CHAIRS: Katherine Larson (Corning Museum of Glass) and Carolyn Swan (University College London, Qatar)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Tori Benson (Cranfield Forensic Institute, Cranfield University), Angela McDonald (Centre for Open Studies, Glasgow), and Andrew J. Shortland (Cranfield Forensic Institute, Cranfield University), "Analysis of Near Eastern Early Glass Beads Found in Egypt and a Hint to the Origin of Glass?" (25 min.)
- 2:35 Katharina Schmidt (German Protestant Institute of Archaeology, Amman), "Innovations in Iron Age Mesopotamian Glass Technology" (25 min.)
- 3:05 Laure Dussubieux (The Field Museum), "Production and Circulation of the Glass Beads from Kish, Iraq" (25 min.)

- 3:35 Katherine Eremin (Harvard Art Museums), Elizabeth LaDuc (University College London), Elizabeth Molacek (Harvard Art Museums), Patrick Degryse (Centre for Archaeological Sciences, Leuven), and Andrew J. Shortland (Cranfield Forensic Institute, Cranfield University), “Glass within the Tethys Pavement at Harvard University: Analysis and Interpretation” (25 min.)

7D Archaeology of Jordan I Burroughs

Theme: Early Bronze through Iron Ages

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

PRESENTERS:

- 2:00 Michael Orellana Mendez (Andrews University), “Building an Iron IIB-IIC Pottery Assemblage for Tall Jalul” (20 min.)
- 2:25 Trisha Broy (Andrews University), “Working toward a Definition of the Collared-rim Pithos” (20 min.)
- 2:50 Friedbert Ninow (La Sierra University; Friedensau Adventist University), Monique Vincent (La Sierra University), and Kent Bramlett (La Sierra University), “The 2017 Season of Excavation at Khirbat al-Balu’a—In Search of Patterns of Settlement” (20 min.)
- 3:15 Robert D. Bates (Andrews University) and Paul J. Ray, Jr. (Andrews University), “Between the Roads: An Update on the Iron Age Roads at Tall Jalul 2016–2017” (20 min.)
- 3:40 Wilma Wetterstrom (Semitic Museum, Harvard University; Ancient Egypt Research Associates) and Joseph Greene (Semitic Museum, Harvard University), “Unpublished Plant Remains from Tell el-Kheleifeh Provide New Insights into an Edomite Entrepôt” (20 min.)

7E Archaeology of Cyprus III Carlton

Theme: Presented in honor of Stuart Swiny, this session contains research inspired by his contributions to Cypriot archaeology. The papers demonstrate the continued breadth of his influence on the practice and interpretation of archaeology in Cyprus and expand on diverse aspects of his scholarship including settlement patterns, games, and subsistence strategies.

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

PRESENTERS:

- 2:00 Katelyn DiBenedetto (University of Nevada, Las Vegas), “The First Permanent Settlers of Cyprus: Pushing the Neolithic Boundaries” (15 min.)
- 2:20 Walter Crist (Arizona State University), “Changing the Game: Bronze Age Gaming Stones from Cyprus” (15 min.)
- 2:40 Louise Steel (University of Wales Trinity Saint David), “What Happened in Room 103 at Aredhiou?” (15 min.)

- 3:00 Kevin Fisher (University of British Columbia), “From Duplex to Courtyard House: Re-assessing Bronze Age Social Change on Cyprus” (15 min.)
- 3:20 A. Bernard Knapp (University of Glasgow), “Piracy and Pirates in the Prehistoric Mediterranean” (15 min.)
- 3:40 Joanna S. Smith (University of Pennsylvania), “Facing a Crowd: Dedicatory and Museum Displays of Cypriot Art” (15 min.)

7F Archaeology of Iran Lewis

CHAIR: Holly Pittman (University of Pennsylvania)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Golnaz Hossein Mardi (University of Toronto), “The Petrographic Analysis of the Dalma Pottery in Central Zagros, Iran” (15 min.)
- 2:25 Marcin Wagner (University of Warsaw), “The Temple of Fire from Topaz Gala Depe in Southern Turkmenistan” (15 min.)
- 2:45 Possum Pincé (Ghent University), “The Production and Distribution of Late Bronze Age Ceramics in the Kur River Basin (Fars, Iran)—New Insights Based on Handheld X-Ray Fluorescence Spectrometry and Thin Section Petrography” (15 min.)
- 3:05 Serenella Mancini (Sapienza University of Rome) and Agnese Fusaro (University of Barcelona), “Estakhr (Fars): An Archaeological Reassessment of the Pottery Corpus” (15 min.)
- 3:25 Breton Langendorfer (University of Pennsylvania), “Serpentine Surfaces: Snakes and Animated Textures in the ‘Intercultural Style’ Objects from Jiroft, Iran” (5 min.)
- 3:45 Benjamin Mutin (Harvard University; French National Center for Scientific Research—CNRS) and Omran Garazhian (University of Neyshabur), “Recent Archaeological Research in the Southern Periphery of the Lut Desert, Iran” (15 min.)

7G The CRANE Project I Otis

Theme: Large-Scale Data Integration and Analysis in Near Eastern Archaeology

CHAIR: Timothy P. Harrison (University of Toronto)

PRESENTERS:

- 2:00 Sandra Schloen (University of Chicago) and Miller Prosser (University of Chicago), “Integration as Inspiration: Achieving Research Goals Using the Online Cultural and Historical Research Environment (OCHRE)” (20 min.)
- 2:25 Stanley Klassen (University of Toronto), “CRANE Data Integration: Results after the First Five Years” (20 min.)
- 2:50 Darren Joblonkay (University of Toronto), “Archaeological Data Mining: A Digital Key to Unlocking the Past” (20 min.)
- 3:15 Andy Chow (University of Toronto) and Eugene Fiume (University of Toronto), “The CRANE Ceramics Project: The Challenges of Automated Sherd Matching” (20 min.)

3:40 Stephen Batiuk (University of Toronto), “3D Visualization Tools for Analysis, Publication, and Public Outreach” (20 min.)

7H Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations II Stone

Theme: From the archaeological record to the textual record, the papers of this session explore the applicability of modern classifications to ancient evidence.

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

PRESENTERS:

- 2:00 Bruce Routledge (University of Liverpool), “Duration Not Sequence: Rethinking Tell Formation at Tall Dhiban, Jordan” (20 min.)
- 2:25 James Osborne (University of Chicago), “Ambiguous Nation-States: Diaspora and the Rise of the Syro-Anatolian Culture Complex” (20 min.)
- 2:50 Jacob Lauinger (Johns Hopkins University), “The Statue of Idrimi Inscription: Composite Text or Pastiche?” (20 min.)
- 3:15 Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University), “What about Considering an Author’s Intentionality for Revisiting a Text-Genre of a Narrative Story? A Concrete Example with the Cycle of Ba’lu and ‘Anatu” (20 min.)
- 3:40 General Discussion (25 min.)

7I Archaeology of the Southern Levant I Webster

CHAIR: Owen Chesnut (North Central Michigan College)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Holly Winter (University of Sydney), “Palaces of the Dead: A New Perspective on Middle Bronze Age Palaces in the Southern Levant” (15 min.)
- 2:25 Nurith Goshen (University of Pennsylvania; Israel Museum), “Building for Power: The Role of Construction in the Establishment of MBA South Levantine Rulership” (15 min.)
- 2:45 Shay Bar (University of Haifa), Ayelet Gilboa (University of Haifa), and Michael Eisenberg (University of Haifa), “Renewed Excavations at Tel Shiqmona: The Project, the Iron Age Strata, and the Transition from a Small Village to a Border Town between Israel and Phoenicia” (15 min.)
- 3:05 Shirly Ben-Dor Evian (Israel Museum; Tel Aviv University), “Follow the Negebite Ware Road: The Copper Exchange Network in the Early Iron Age Southern Levant” (15 min.)
- 3:25 Heidi Fessler (Independent Researcher), “Transit Corridors and Assyrian Warfare Strategy in the Kingdom of Israel” (15 min.)

3:45 David Sugimoto (Keio University), “Construction Period and Function of the Tower at Burj Beitin, Palestine: Preliminary Considerations Based on Recent Excavations” (15 min.)

7J Caesarea Maritima Session in Memory of Kenneth G. Holum: Renewed Excavations, Recent Discoveries Hancock

Theme: After a general pause early in the new millennium, archaeological research at Caesarea, King Herod’s celebrated port city, has once again taken center stage since 2014. The papers here present a preliminary look at the important and illuminating results, in particular as they relate to the discoveries of the 1990s.

CHAIR: Peter Gendelman (Israel Antiquities Authority)

PRESENTERS:

- 2:00 Peter Gendelman (Israel Antiquities Authority) and Mohamad Hater (Israel Antiquities Authority), “The Western Façade of the Roma and Augustus Temple Platform” (20 min.)
- 2:25 Rivka Gersht (Tel Aviv University; Oranim Academic College of Education), “Caesarea Sculpted Stones: New Excavations, New Perspectives” (20 min.)
- 2:50 Uzi Ad (Israel Antiquities Authority) and Yoav Arbel (Israel Antiquities Authority), “New Discoveries in the Harbour Quarter: The Northern Warehouse Complex” (20 min.)
- 3:15 Jacob Sharvit (Israel Antiquities Authority), “Sunken Treasures from Sebastos, Caesarea’s Harbor, and the Continuity of an Ancient Haven” (20 min.)
- 3:40 Beverly Goodman Tchernov (University of Haifa), “Caesarea Tsunamis: New Islamic-Era Evidence from Abandoned Warehouses” (20 min.)

Session 8, 4:20–6:25pm

8A GIS and Remote Sensing in Archaeology Harbor 1

Theme: Reports on archaeological research on the ancient Near East using geospatial or remote sensing technologies.

CHAIR: Kevin D. Fisher (University of British Columbia)

PRESENTERS:

- 4:20 Marco Ramazzotti (Sapienza University of Rome), “Encoding the Space: The Epistemic Frames of the Atlas of the Ancient Near East (AANE)” (20 min.)
- 4:45 Jeffrey C. Howry (Harvard University), “Journeys of the Curator—Recreating the Travelogues of David Lyon in the Near East” (20 min.)
- 5:10 Carrie Fulton (University of Toronto), Andrew Fulton (Independent Scholar), Andrew Viduka (Flinders University), and Sturt Manning (Cornell University), “Using Photogrammetry in Large-area Survey of the Late Bronze Age Anchorage at Maroni-Tsaroukkas, Cyprus” (20 min.)

- 5:35 Howard Cyr (University of Tennessee, Knoxville), “Connecting the Dots: Benefits of an Integrated Geoarchaeological and Geophysical Approach at `Ayn Gharandal, a Late Roman Fort in Southern Jordan” (20 min.)
- 6:00 Jane C. Skinner (Penn State University), Jamie Quartermaine (Oxford Archaeology), Michal Artzy (University of Haifa), and Ann E. Killebrew (Penn State University), “An Integrated Use of GIS, Photogrammetry, and LiDAR to Reconstruct Tel Akko, Israel and Its Hinterland” (20 min.)

8B Art Historical Approaches to the Near East II Harbor 2

Theme: Bringing Art to Life. Papers in this session seek to reconstruct practices and spaces of past worlds and material encounters by adopting innovative approaches to the visual culture, architecture, and material traces of the ancient Near East.

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

PRESENTERS:

- 4:20 Helen Dixon (Wofford College), “The ‘Look’ and ‘Feel’ of Levantine Phoenician Sacred Space” (20 min.)
- 4:45 Avery Taylor (Johns Hopkins University), “Experiencing ‘Embroidered’ Spaces: The Garment Details in the Bas-Reliefs at the Northwest Palace of Nimrud” (20 min.)
- 5:10 Türkan Pilavcı (Columbia University), “Channeling the Liquid, Doubling the Act: Ovoid Shaped Relief Vases in Hittite Libation” (20 min.)
- 5:35 Liat Naeh (The Hebrew University of Jerusalem), “What May (and May Not) Be Divided in Half: Images of Plants, Hathor-like Goddesses, and Banquet on Bronze Age Inlays in the Levant” (20 min.)
- 6:00 Agnete Lassen (Yale University), “Hidden and Revealed—Kassite Seal Stones in the Yale Babylonian Collection” (20 min.)

8C Rethinking Israel (Joint session with the Society of Biblical Literature) Harbor 3

Theme: Israel Finkelstein will be retiring soon from his teaching post at Tel Aviv University. His impressive scientific work is varied archaeologically, chronologically, geographically, and thematically. In this session we wish to celebrate a unique tome in honor of his work, with the title “Rethinking Israel,” where scholars and friends from different fields of research re-examine, re-evaluate, or respond to subjects that Israel has written about, reflecting on the selected subject from their own perspective.

CHAIR: Oded Lipschits (Tel Aviv University)

PRESENTERS:

- 4:20 Oded Lipschits (Tel Aviv University), “Introductory Remarks on Rethinking Israel” (5 min.)
- 4:25 Neil Silberman (University of Massachusetts Amherst), “The Ever-Changing History of Israel” (20 min.)
- 4:50 Eric H. Cline (The George Washington University), “Israel and Archaeology: Person, Place, and Influence” (20 min.)

- 5:15 Matthew J. Adams (W. F. Albright Institute of Archaeological Research) and Yuval Gadot (Tel Aviv University), “Megiddo through the Ages” (20 min.)
- 5:40 Dafna Langgut (Tel Aviv University), “More Than Meets the Eye: Microarchaeology at Megiddo” (20 min.)
- 6:05 Israel Finkelstein (Tel Aviv University), “Rethinking Israel? A Proper Answer” (20 min.)

8D Archaeology of Jordan II Burroughs

Theme: Hellenistic to Modern Periods

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

PRESENTERS:

- 4:20 Debra Foran (Wilfrid Laurier University), “The 2017 Excavations at the Ancient Town of Nebo (Khirbat al-Mukhayyat)” (15 min.)
- 4:40 Cynthia Finlayson (Brigham Young University), “The Nabataean Coins of Ad-Deir: New Numismatic Evidence from the Ad-Deir Plateau, Petra” (15 min.)
- 5:00 Leigh-Ann Bedal (Penn State Behrend) and Robert Wenning (University of Münster), “Hidden in Plain View: An Overlooked Betyl in the Shadow of Petra’s Khazneh” (15 min.)
- 5:20 David Culclasure (American School of Classical Studies at Athens), “Supplying the Roman Military in Wadi Arabah during Late Antiquity” (15 min.)
- 5:40 Noor Mulder-Hymans (University of Groningen), “The Bread Ovens and Egg Ovens of Tell Abu Sarbut in the Roman and Abbasid Period” (15 min.)
- 6:00 Arwa Massadeh (Department of Antiquities of Jordan), “Al-Balu’a between the Site and People” (15 min.)

8E Digging “Lustily” into Cypriot Prehistory: Studies in Honor of Stuart Swiny Carlton

Theme: This symposium is inspired by the life, work, and legacy of Stuart Swiny and addresses his contributions to Cypriot archaeology as long-time director of CAARI and dedicated mentor and professor at the University at Albany. Papers in this session are presented by colleagues, family, and students.

CHAIRS: Zuzana Chovanec (Tulsa Community College) and Walter Crist (Arizona State University)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Helena Wylde Swiny (Harvard University), “Why Cyprus?” (15 min.)
- 4:45 Francesca Chelazzi (University of Glasgow), “Settlement Archaeology in Bronze Age Cyprus: The Pioneering Legacy of Stuart Swiny in the Southwest Forty Years Later” (15 min.)

- 5:05 Thomas Davis (Tandy Institute for Archaeology, Southwestern Baptist Theological Seminary), "The House of the Dancing Bird" (15 min.)
- 5:25 Laura Swantek (Arizona State University) and William Weir (University of Cincinnati), "A Dig of a 'Certain Kind': Stuart Swiny and the Past and Future Potential of *Sotira Kaminoudhia*" (15 min.)
- 5:45 Zuzana Chovanec (Tulsa Community College) and Sean M. Rafferty (University at Albany), "A Legacy of Education and Collaboration: Stuart Swiny's Role in Cypriot Studies at the University at Albany" (15 min.)
- 6:05 Alan Simmons (University of Nevada, Las Vegas), "Thinking Outside the Hippo: A Personal Tribute to Stuart Swiny" (15 min.)

- 5:35 Doğa Karakaya (University of Tübingen), "Current Progress in Archaeobotanical Research at Tell Tayinat and Zincirli" (20 min)
- 6:00 Lynn Welton (University of Toronto), "Modeling the Interaction of Social and Environmental Processes in the Orontes Watershed: The CRANE Simulation Project" (20 min.)

8H Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations III
Stone

Theme: The papers in this session interpret particular writings, spaces, and types of objects.

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

PRESENTERS:

- 4:20 Jay Crisostomo (University of Michigan) and Eduardo Escobar (Stevanovich Institute for the Formation of Knowledge, University of Chicago), "An Assortment of Kinds: Determinatives in Cuneiform Scholarship" (20 min.)
- 4:45 Martin Worthington (University of Cambridge and Institute for the Study of the Ancient World), "The Rain, the Wheat, and the Trick" (20 min.)
- 5:10 Gina Konstantopoulos (University of Helsinki), "Public and Private: the Role of Text and Ritual in Constructing and Maintaining Protected Spaces in Mesopotamia" (20 min.)
- 5:35 Miriam Said (University of California, Berkeley), "Stamped and Staring: Pazuzu Stamp Seals and the Ambiguity of Form" (20 min.)
- 6:00 Victoria Almansa-Villatoro (Brown University), "An Image that Means Another: Syncretism and the Case-Study of a Mummiform Dwarf" (20 min.)

8F History of Archaeology
Lewis

CHAIR: Kevin M. McGeough (University of Lethbridge)

PRESENTERS:

- 4:20 Rannfrid Thelle (Wichita State University), "Early Explorations of the 'City of David' in the Context of British and German Agendas in the Holy Land" (25 min.)
- 4:50 Caitlin Chaves Yates (Metropolitan Museum of Art), "Archaeology's Role in the Development of the Ancient Near Eastern Art Department at the Metropolitan Museum of Art" (25 min.)
- 5:20 Sveta Matskevich (The Hebrew University of Jerusalem), and Daphna Tsoran (The Hebrew University of Jerusalem), "Lost & Found: The Institute of Archaeology (The Hebrew University of Jerusalem) and Israel Exploration Society Archival Collections" (25 min.)
- 5:50 Kevin M. McGeough (University of Lethbridge), Discussant (25 min.)

8G The CRANE Project II
Otis

Theme: Chronology, Regional Landscapes, and Paleoenvironmental Reconstruction

CHAIR: Timothy P. Harrison (University of Toronto)

PRESENTERS:

- 4:20 Sturt Manning (Cornell University) and Brita Lorentzen (Cornell University), "Highly Resolved Timeframes for the CRANE Project: Bayesian Chronological Modeling on Orontes Sites from the Third to First Millennia B.C.E." (20 min)
- 4:45 Dominique Langis-Barsetti (University of Toronto), "The CRANE Site Database Project" (20 min.)
- 5:10 Kamal Badreshany (Durham University), Graham Philip (Durham University), and Melissa Kennedy (University of Sydney), "Ceramic Development in the Upper Orontes Basin from the Neolithic to the Late Bronze Age: Dealing with the Challenge of Diffuse and Dynamic Ceramic Regionalism in Ancient Syria" (20 min.)

8I Archaeology of the Southern Levant II
Webster

CHAIR: Owen Chesnut (North Central Michigan College)

PRESENTERS:

- 4:20 Joshua Walton (Capital University), "The Iron Age IIB Remains from Ashkelon: A Preliminary Report" (20 min.)
- 4:45 Vanessa Workman (Bar-Ilan University) and Adi Eliyahu-Behar (Bar-Ilan University), "Early Iron Workshops at Tel Megiddo and Tell es-Safi/Gath: Comparative Analysis of Working Debris and Paraphernalia" (20 min.)
- 5:10 Eric Welch (University of Kansas), "The Gats of Gath: Ninth Century Olive Oil Production in Area K at Tell es-Safi/Gath" (20 min.)
- 5:35 Barry M. Gittlen (Towson University), "An Enigmatic Death At Tel Miqne/Ekron, Stratum IB" (20 min.)

6:00 Casey Sharp (University of Haifa), Ladislav Smejda (University of West Bohemia), Itzhaq Shai (Ariel University), and Chris McKinny (Bar-Ilan University), “New Methods in Excavating the Periphery: Tel Burna Area C in the Bronze and Iron Ages” (20 min.)

8J Religion in “Edom” Hancock

Theme: Papers in this session draw upon multiple approaches to Iron Age religion in southern Israel and Jordan, focusing on sites and artifacts that, traditionally, have been associated with the territory of Edom or the Edomites.

CHAIRS: Erin Darby (University of Tennessee, Knoxville) and Andrea Creel (University of California, Berkeley)

PRESENTERS:

4:20 Juan Manuel Tebes (University of Michigan), “Late Bronze Age/Iron Age Extra-mural Shrines of the Arid Southern Levant and the Syro-Arabian Desert Cultic Architecture” (20 min.)

4:45 Regine Hunziker-Rodewald (University of Strasbourg), “Ready to Give Birth—Towards an Interpretation of the Iron Age Female Terracotta Figurines from Edom” (20 min.)

5:10 Joel Burnett (Baylor University), “Do We Have an Image of Qaus? Ceramic Anthropomorphic Statues in Edom and Beyond” (20 min.)

5:35 Andrea Creel (University of California, Berkeley), “Connectivity on the Edge of Empire: Horvat Qitmit as Ritual Node in a Landscape of Movement” (20 min.)

6:00 Erin Darby (University of Tennessee, Knoxville), “Religion and Edomite Expansion: The View from ‘En Hazeva” (20 min.)

6:30–10:30pm

Digital Archaeology Demo Showcase and Reception Marina 2–4

SATURDAY, NOVEMBER 18

Session 9, 8:20–10:25am

9A Developing Isotopic Investigations in the Ancient Near East and Caucasus Harbor 1

Theme: In recent years, biogeochemical analysis has gained pace in the archaeology of the Near East and Caucasus, embracing a holistic understanding of human ecology. Having focused on Environment and Mobility in 2016, this year’s session focuses on diet and other practices, methodological advances, and region-specific challenges in research design.

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

PRESENTERS:

8:20 Introduction (5 min.)

8:25 Estelle Herrscher (Aix Marseille University; French National Center for Scientific Research—CNRS), Liana Bitadze (Tbilisi State University), Modwene Poulmarc’h (ArchéOrient; French National Center for Scientific Research—CNRS), Nikolos Vanishvili (Georgian National Museum), Giorgi Bedianashvili (Georgian National Museum), Gela Giunashvili (Georgian National Museum), Giorgi Gogochuri (Georgian National Museum), Kakha Kakhiani (Georgian National Museum), Johny Kozsiashvili (Kashuri Museum, Georgia), Bitdzina Murvanidze (Georgian National Museum), Elena Rova (University of Venice), Guy André (Aix Marseille University; French National Center for Scientific Research—CNRS), “Dietary Practice Changes during the Bronze Age in the Southern Caucasus: Evidence of Millet Consumption Using a Multi-isotopic Approach” (20 min.)

8:50 Benjamin Irvine (Freie Universität Berlin), “Stable Isotopes of Sulphur to Further Investigate Dietary Habits in Anatolian Early Bronze Age Populations” (20 min.)

9:15 G. Bike Yazıcıoğlu-Santamaria (University of Chicago) and Lynn Welton (University of Toronto), “A Reassessment of ⁸⁷Sr/⁸⁶Sr Data from Human Remains at the Anatolian Bronze Age Sites of Kültepe and İkiztepe: New Observations in Light of Weaning Age” (20 min.)

9:40 Maureen E. Marshall (University of Illinois at Urbana-Champaign), “The Biogeochemistry of Agro-pastoralism in the Bronze Age Tsaghkahovit Plain, Armenia” (20 min.)

10:05 Stanley H. Ambrose (University of Illinois at Urbana-Champaign), Discussant (10 min.)

10:15 General Discussion (10 min.)

9B Approaches to Dress and the Body I Harbor 2

Theme: Traces of practices relating to dress and the body are present in many ways in the archaeological, textual, and visual records of the ancient world, from the physical remains of dressed bodies, to images depicting them, to texts describing such aspects as textile production and sumptuary customs. Previous scholarship has provided useful typological frameworks but has often viewed these objects as static trappings of status and gender. The goal of this session is to illuminate the dynamic role of dress and the body in the performance and construction of aspects of individual and social identity, and to encourage collaborative dialogue within the study of dress and the body in antiquity.

CHAIR: Megan Cifarelli (Manhattanville College)

PRESENTERS:

8:20 Amir Golani (Israel Antiquities Authority), “Beyond Ornamentation: Contextualizing Research of Personal Adornment in the Ancient Near East” (20 min.)

8:45 Nili Fox (Hebrew Union College-Jewish Institute of Religion, Cincinnati), “Sanctifying Body Marking: Biblical and Archaeological Evidence” (20 min.)

- 9:10 Christine Palmer (Gordon-Conwell Theological Seminary), "Israelite High Priestly Apparel: Constructing an Identity between Human and Divine" (20 min.)
- 9:35 Sarah Mady (The Graduate Center at the City University of New York), "Transvestite Female Saints in Byzantine Traditions: The Case of Marina of Qalamoun" (20 min.)
- 10:00 Betty Hensellek (Cornell University; Metropolitan Museum of Art), "Banqueting, Dress, and the Idealized Sogdian Merchant" (20 min.)

9C Theoretical and Anthropological Approaches to the Ancient Near East

Harbor 3

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

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Anne Chapin (Brevard College), "The Expert's Eye: Theory, Method, and Connoisseurship in Aegean Fresco Studies" (15 min.)
- 8:45 Neil Erskine (University of Glasgow), "Religiosity in Routine: Movement, Landscape, and Bridging the Data-Theory Divide" (15 min.)
- 9:05 Christopher Brinker (Johns Hopkins University), "The Rehabilitation of Segmentary Lineage Systems as a Heuristic Model" (15 min.)
- 9:25 Kristine Garroway (Hebrew Union College-Jewish Institute of Religion, Los Angeles), "Childist Archaeology: Children, Toys, and Skill Transmission in Ancient Israel" (15 min.)
- 9:45 Maurits Ertsen (Delft University of Technology), "Youths in the Future, Elderly in the Past, but Ancestors in the Present—Time and Space in Ancient Near Eastern Irrigation" (15 min.)
- 10:05 Frederic Brandfon (Expedition to the Coastal Plain of Israel), "Digging a Hole and Telling a Tale: Science and Art in Archaeology" (15 min.)

9D Putting your Degree to Work: How to Apply for Careers Inside and Outside the Academy (Workshop)

Burroughs

CHAIRS: Tiffany Earley-Spadoni (University of Central Florida) and Fred Winter (F. A. Winter Associates)

This workshop will discuss the often overlooked practical aspects of seeking employment such as CVs vs. resumes, cover letters, networking, dossiers, references, when to apply, etc. It will be led by Fred Winter, who worked first as a tenured university professor, subsequently for the National Endowment for the Humanities and the Department of Education, and presently runs his own consulting firm addressing non-traditional academic employment; and Tiffany Earley-Spadoni, who previously worked in the private and public sectors and is now a tenure-track university professor. They will focus the discussion on the unique traits of academic vs. private-public job markets and how to apply for each. This workshop is meant to complement the "Careers Options for ASOR Members" session.

9E Archaeology of the Natural Environment: Archaeobotany and Zooarchaeology in the Near East

Carlton

Theme: This session presents papers that examine past human resources (flora and fauna) uses and human/environment interactions in the ancient Near East.

CHAIRS: Melissa S. Rosenzweig (Miami University) and Madelynn von Baeyer (University of Connecticut)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Melina Seabrook (Stony Brook University) and Kathryn C. Twiss (Stony Brook University), "Animals of Ur: Preliminary Faunal Data from the Ur III and Old Babylonian Deposits" (15 min.)
- 8:45 Kathryn Grossman (North Carolina State University), "Animals in the Orontes Basin: Contextualizing the Zooarchaeological Assemblage from Tell Qarqur, Syria" (15 min.)
- 9:05 Edward F. Maher (North Central College), "Where the Wild Things Are: Non-Domesticated Animals from Late Bronze Age Jaffa" (15 min.)
- 9:25 Alexia Smith (University of Connecticut), Thomas Hart (University of Texas at Austin), Lucas Proctor (University of Connecticut), and Gil Stein (Oriental Institute, University of Chicago), "Ubaid Period Agriculture and Fuel Use at Tell Zeidan, Syria: Integrating Macrobotanical and Phytolith Data" (15 min.)
- 9:45 Andrew Fairbairn (The University of Queensland) and Nathan Wright (McDonald Institute for Archaeological Research, University of Cambridge), "Feasting and Burning in Middle Bronze Age Anatolia: Archaeobotanical Evidence for Elite Food Consumption from Büklükale" (15 min.)
- 10:05 John Marston (Boston University) and Kate J. Birney (Wesleyan University), "Hellenistic Agricultural Economy in the Southern Levant: New Evidence from Ashkelon" (15 min.)

9F Ancient Texts and Modern Photographic and Digital Technologies

Lewis

CHAIRS: Annalisa Azzoni (Vanderbilt University) and Christopher Rollston (George Washington University)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Jana Mynarova (Czech Institute of Egyptology, Charles University), "Acquisition and Adaptation of Cuneiform Writing in Peripheral Areas: A Case Study of Amarna Cuneiform Palaeography" (25 min.)
- 8:55 Michael B. Toth (University College London; R. B. Toth Associates), Roberta Mazza (University of Manchester), and William A. Christens-Barry (Equipoise Imaging), "New Technologies to Reveal Texts in Mummy Cartonnage" (25 min.)

- 9:25 Anat Mendel Geberovich (Tel Aviv University), Arie Shaus (Tel Aviv University), Shira Faigenbaum-Golovin (Tel Aviv University), and Barak Sober (Tel Aviv University), “Arad Ostrakon 16 Rediscovered via Multispectral Imaging” (25 min.)
- 9:55 Katherine Jones (The George Washington University), “Likely Lies: A Statistical Analysis of the Prevalence of Modern Forgeries” (25 min.)

9G The Enigma of the Hyksos I Otis

CHAIRS: Manfred Bietak (Austrian Academy of Sciences) and Hanan Charaf (Lebanese University)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Danielle Candelora (University of California, Los Angeles), “Defining the Hyksos: A Reevaluation of the Term *Hkꜥ3 H3swt* and its Significance” (15 min.)
- 8:45 Aleksandra Ksiezak (University of Toronto), “Tell el-Yahudiyeh Ware in the Eastern Nile Delta—Production, Distribution, and Fabric Use Specialization at the Site of Tell el-Maskhuta during the Second Intermediate Period” (15 min.)
- 9:05 Ezra Marcus (University of Haifa), “Trade Floruit and Crisis: A Maritime Approach to the Hyksos Phenomenon” (15 min.)
- 9:25 Nina Maaranen (University of Bournemouth), “The Hyksos in Egypt—A Bioarchaeological Perspective” (15 min.)
- 9:45 Hendrik Bruins (Ben-Gurion University of the Negev), Johannes van der Plicht (Groningen University; Leiden University), Lawrence Stager (Harvard University), and Michael Dee (Groningen University), “Middle Bronze Age Stratigraphies at Ashkelon and Tell el-Dab’a: Radiocarbon Dating and Material Culture *Comparée* with Emphasis on the Hyksos Period” (15 min.)
- 10:05 General Discussion (20 min.)

9H New Work on Sardis from the Harvard-Cornell Excavations to Sardis Stone

CHAIRS: Nicholas Cahill (University of Wisconsin–Madison) and Jane DeRose Evans (Temple University)

PRESENTERS:

- 8:20 Introduction (5 min.)
- 8:25 Nicholas Cahill (University of Wisconsin–Madison), “The Lydian Palace at Sardis” (15 min.)
- 8:45 William Bruce (Gustavus Adolphus College), “Religious and Domestic Life in Lydian and Achaemenid Sardis” (15 min.)
- 9:05 Philip Stinson (University of Kansas) and Bahadır Yıldırım (Harvard Art Museums), “Architecture and Sculpture of a Julio-Claudian Temple in Central Sardis” (15 min.)
- 9:25 Vanessa Rousseau (Weisman Art Museum, University of Minnesota), “If These Walls Could Talk: Late Roman Decoration at Roman Sardis” (15 min.)

- 9:45 Frances Gallart Marqués (Independent Scholar; Archaeological Exploration of Sardis), “A Wink and a Smile: The Terracotta Quadrupeds of Late Roman Sardis” (15 min.)
- 10:05 Jane DeRose Evans (Temple University), “Coins and Pottery: Tracking the Numismatic Profile of Fourth and Fifth Century Sardis” (15 min.)

9I Archaeology of the Southern Levant III Webster

CHAIR: Owen Chesnut (North Central Michigan College)

PRESENTERS:

- 8:20 Mike Freikman (The Hebrew University of Jerusalem), “Into the Darkness—Shamanism in the Archaeological Context” (20 min.)
- 8:45 Vered Eshed (Israel Antiquities Authority) and Avi Gopher (Israel Antiquities Authority), “Agriculture and Lifestyle: Paleodemography of the Pottery Neolithic (8500–6500 cal B.P.) Farming Populations in the Southern Levant” (20 min.)
- 9:10 Ralph Hawkins (Averett University) and David Ben-Shlomo (Ariel University), “The Bedouin at Modern Ras el-Auja and the Early Iron Age Settlers at Khirbet el-Mastarah” (20 min.)
- 9:35 Daniel Leviathan (The Hebrew University of Jerusalem) and Yosef Garfinkel (The Hebrew University of Jerusalem), “New Light on the Origin of the Triglyphs in the Doric Order” (20 min.)
- 10:05 Johanna Berkheij-Dol (Leiden University), “The Shape of Rounded Fenestrated Models and Their Contents: Were Shrine Models with a Hollow Base Ever Made to Contain a Figurine?” (20 min.)

9J Mesopotamian Civilizations: The Economic Scope of Institutional Households I Hancock

CHAIRS: Claudia Glatz (University of Glasgow), Jacob Lauinger (Johns Hopkins University), and Piotr Michalowski (University of Michigan)

PRESENTERS:

- 8:20 Odette Boivin (University of Toronto), “Institutional Integration in the Sealand I Palace Economy” (25 min.)
- 8:50 Rune Rattenborg (Durham University), “The Scale and Extent of Institutional Household Economies of the Middle Bronze Age Jazīrah and the Bilād al-Šām: Critical Perspectives” (25 min.)
- 9:20 Tate Paulette (North Carolina State University), “Storing Like a State in Mesopotamia (4000–2000 B.C.) or: How Great Were the Great Organizations?” (25 min.)
- 9:50 Susanne Paulus (University of Chicago), “Investment, Debt, and Slavery—The Economy of Nippur in the Kassite Period” (25 min.)

10:25–10:40am

**Coffee Break
Galleria**

Session 10, 10:40am–12:45pm

**10A Archaeology of Arabia I
Harbor 1**

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Knut Bretzke (University of Tübingen) and Adrian Parker (Oxford Brookes University), “Exploring Behavioral Strategies in Late Pleistocene Hunter-Gatherers from the Desert Environments of Southeastern Arabia” (15 min.)
- 11:05 Rémy Crassard (The French National Center for Scientific Research, CNRS) and Yamandú Hilbert (The French National Center for Scientific Research, CNRS), “Naviform Technology from Saudi Arabia” (15 min.)
- 11:25 Thomas Van de Velde (Ghent University), “The Archaeology of the Petroleum Industry: the Surfacing of an Elamite Bitumen Industry in Southeast Arabia” (15 min.)
- 11:45 Marilisa Buta (University of Bologna), Dennys Frenez (University of Bologna), Eugenio Bortolini (IMF-CSIC, Spanish National Research Council), Vincent Charpentier (Maison de l’Archéologie et de l’Ethnologie), and Jonathan Mark Kenoyer (University of Wisconsin–Madison), “Bead Production in the Neolithic Coastal Communities of Southeastern Arabia: A Stylistic, Morphometric, and Technological Assessment” (15 min.)
- 12:05 Olivier Brunet (The French National Center for Scientific Research, CNRS), “Trends of Production of Carnelian Beads during the Bronze Age in the Oman Peninsula” (15 min.)
- 12:25 Jonathan Mark Kenoyer (University of Wisconsin–Madison), Dennys Frenez (University of Bologna), and Randall Law (University of Wisconsin–Madison), “Comparing Arabian and Indus Bead Technology and Trade from the Fourth to First Millennia B.C.E.” (15 min.)

**10B Approaches to Dress and the Body II
Harbor 2**

Theme: Traces of practices relating to dress and the body are present in many ways in the archaeological, textual, and visual records of the ancient world, from the physical remains of dressed bodies, to images depicting them, to texts describing such aspects as textile production and sumptuary customs. Previous scholarship has provided useful typological frameworks but has often viewed these objects as static trappings of status and gender. The goal of this session is to illuminate the dynamic role of dress and the body in the performance and construction of aspects of individual and

social identity, and to encourage collaborative dialogue within the study of dress and the body in antiquity.

CHAIR: Megan Cifarelli (Manhattanville College)

PRESENTERS:

- 10:40 Emily Anderson (Johns Hopkins University), “Formulating Parallels: The Bodies of Man and Beast in Early Aegean Glyptic and Oral Narrative” (20 min.)
- 11:05 Josephine Verduci (University of Melbourne) and Brent Davis (University of Melbourne), “Adornment, Ritual, and Identity: Inscribed Minoan Jewellery” (20 min.)
- 11:30 Melissa Eppihimer (University of Pittsburgh), “Tassels, Cultural Identity, and Historical Memory in Royal Statues from Mari and Eshnunna” (20 min.)
- 11:55 Trudy Kawami (Columbia University), “Sumptuous Garb: Who Wears Fringe in Elamite Iran?” (20 min.)
- 12:20 General Discussion (25 min.)

**10C Archaeology of Anatolia I
Harbor 3**

Theme: This session focuses on current archaeological research in Anatolia and presents the results of excavations and surveys.

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

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Patrick Willett (University at Buffalo), Ralf Vandam (University of Leuven), Peter Biehl (University at Buffalo), and Jeroen Poblome (University of Leuven), “New Results from the Dereköy Archaeological Survey Project: Exploring the Cultural Past in the Marginal Landscapes of the Western Taurus Mountains, SW Turkey” (15 min.)
- 11:05 Levent Atici (University of Nevada, Las Vegas), “Complex Hunter-Gatherers of Upper Tigris Valley: New Zooarchaeological Data from Körtik Tepe, SE Turkey” (15 min.)
- 11:25 Benjamin Arbuckle (University of North Carolina at Chapel Hill), “Prehistoric Horse Exploitation on the Central Anatolian Plateau” (15 min.)
- 11:45 Sharon R. Steadman (SUNY Cortland), Gregory McMahon (University of New Hampshire), Jennifer C. Ross (Hood College), “Recent Investigations at Çadır Höyük on the North Central Anatolian Plateau” (15 min.)
- 12:05 Madelynn von Baeyer (University of Connecticut), “Farming at the Frontier: Plant Use during the Late Chalcolithic at Çadır Höyük, Turkey” (15 min.)
- 12:25 Lolita Nikolova (International Institute of Anthropology), “Anatolia and the Balkans during the Early Bronze Age (ca. 3600–2000 cal B.C.E.)” (15 min.)

10D Archaeologists Engaging Global Challenges Burroughs

CHAIRS: Catherine Foster (Ancient Middle East Education and Research Institute) and Erin Darby (University of Tennessee, Knoxville)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Suzi Wilczynski (Dig-It! Games), “Leveraging the Power of Gaming for Cultural Preservation” (25 min.)
- 11:15 Louise Hitchcock (University of Melbourne), “Aged Tasmanian Whiskey in Boston Is the New Faience Rhyton in Cyprus: Globalization and Plutocracy, Populism, and Piracy” (25 min.)
- 11:45 Mitra Panahipour (University of Arkansas), “Settlement Expansion and Agricultural Intensification: The Case of a Sasanian Hinterland in Upper Diyala/Sirwan River Valley, Kurdistan” (25 min.)
- 12:15 Jody Michael Gordon (Wentworth Institute of Technology), “Globalizing the Past for Humanity’s Future: Globalization and Cosmopolitan Archaeologies” (25 min.)

10E The Tells of Two Cities: Did Tell es-Sultan and Tall el-Hammam Interact during the Middle Bronze Age? Carlton

CHAIRS: Steven Collins (Trinity Southwest University) and Lorenzo Nigro (Sapienza University of Rome)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Steven Collins (Trinity Southwest University), “Tall el-Hammam during the Middle Bronze Age: Data and Insights from 12 Excavation Seasons” (15 min.)
- 11:05 Carroll Kobs (Trinity Southwest University), “The Middle Bronze Age Fortifications of Tall el-Hammam as Seen in Field LA” (15 min.)
- 11:25 Gary Byers (Trinity Southwest University), “2,500 Years of Continuous Occupation Ends: Evidences of Tall el-Hammam’s Terminal Middle Bronze Age Destruction” (15 min.)
- 11:45 Daria Montanari (Sapienza University of Rome), “Weapons in Middle Bronze Age Tombs at Tell es-Sultan/Jericho: Types, Chronology and Implications” (15 min.)
- 12:05 Chiara Fiaccavento (Sapienza University of Rome), “The Fortifications of Tell es-Sultan/Jericho in the Middle Bronze Age: Evolution and Comparisons of a Major Levantine Defense System” (15 min.)
- 12:25 Lorenzo Nigro (Sapienza University of Rome), “Tell es-Sultan/Jericho in the Middle and Late Bronze Ages: A City-State of Palestine during the Second Millennium B.C.E.” (15 min.)

10F Strategies for Cultural Resource Protection in Libya Lewis

CHAIRS: Susan Kane (Oberlin College) and Mohamed Hesein (Omar al Mukhtar University)

PRESENTERS:

- 10:40 Susan Kane (Oberlin College), “Capacity Building for Cultural Resource Protection: The Work of the American Mission in Libya” (20 min.)
- 11:05 Mohamed Hesein (Omar al Mukhtar University), “Initiatives of the Centre for Archaeological Research and Studies, Omar al Mukhtar University in Libya” (20 min.)
- 11:30 Scott Branting (American Schools of Oriental Research; University of Central Florida), Susan Penacho (American Schools of Oriental Research), Angelica Costa (University of Central Florida), Paige Paulsen (University of Central Florida), and Samuel Martin (University of Central Florida), “ASOR CHI Satellite Analysis of Libyan Cultural Heritage” (20 min.)
- 11:55 Robert Bewley (Oxford University), “Endangered Archaeology in the Middle East and North Africa: Approach, Results, and Next Steps in Libya” (20 min.)
- 12:20 Will Reynolds (Columbia University), “Islamic Heritage in Libya: Too Sensitive to Protect?” (20 min.)

10G The Enigma of the Hyksos II Otis

CHAIRS: Manfred Bietak (Austrian Academy of Sciences) and Hanan Charaf (Lebanese University)

PRESENTERS:

- 10:40 Manfred Bietak (Austrian Academy of Sciences), “Tracing the Origins of the Hyksos Elite of Egypt as Seen from a Comparative Study of Sacred Architecture” (15 min.)
- 11:00 Silvia Prell (Austrian Academy of Sciences), “Bronze Age Equid Burials in the Fertile Crescent” (15 min.)
- 11:20 Christine Lilyquist (Metropolitan Museum of Art), “The Impact of the Hyksos as Seen at Thebes” (15 min.)
- 11:40 Anna-Latifa Mourad (Austrian Academy of Sciences), “Cultural Interference? The Impact of the Hyksos Dynasty on Cultic Beliefs and Activities in Egypt” (15 min.)
- 12:00 Felice Israel (University of Genoa), Discussant (20 min.)
- 12:25 General Discussion (20 min.)

10H Archaeology of Islamic Society Stone

CHAIR: Beatrice St. Laurent (Bridgewater State University)

PRESENTERS:

- 10:40 Asa Eger (University of North Carolina at Greensboro), “Bronze Surgical Instruments from Tüpraş Field, Turkey and the Islamic-Byzantine Medical Trade” (20 min.)

- 11:05 Gideon Avni (The Hebrew University of Jerusalem; Israel Antiquities Authority), “The Spread of Qanats in the Early Islamic World—A Case Study for the Transfer of Agricultural and Water Management Technologies” (20 min.)
- 11:30 Veronica Morriss (University of Chicago), “Ribats and the Levantine Coastal Support Network” (20 min.)
- 11:55 Ian Jones (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “An Assemblage without a Slash: Ayyubid Ceramics from Khirbat Nuqayb al-Asaymir, Faynan, Southern Jordan” (20 min.)
- 12:20 Benjamin Saidel (East Carolina University), “Ethnoarchaeological Insights on the Sedentarization of the Terabin Bedouin during the British Mandate Period: A Case Study from the Tze’elim Survey Map (129) in the Western Negev” (20 min.)

- PRESENTERS:
- 10:40 Noemi Borrelli (Università degli Studi di Napoli “l’Orientale”), Palmiro Notizia (CCHS-CSIC, Madrid), “No Man’s Land: Searching What Lies beyond Temple and Palace in the Ur III Period” (25 min.)
 - 11:10 Jesse Casana (Dartmouth College), “Counting Sheep: Wool, Wealth, and Institutionally-Managed Pastoralism in Bronze Age Mesopotamia” (25 min.)
 - 11:40 Eloisa Casadei (Sapienza University of Rome), “Temple Agencies and Temple Economy in Fourth and Third Millennium B.C Southern Mesopotamia: an Archaeological Perspective” (25 min.)
 - 12:10 Melanie Groß (Leiden University), “It Is All about the People: The Workforce of the Palace and Temple Institutions in the Neo-Assyrian Empire” (25 min.)

**10I Gender in the Ancient Near East
Webster**

Theme: Session explores the art, archaeology, and texts of the ancient Near East through the lens of gender issues and the study of gender groups in antiquity. Papers could explore subjects such as the household and domestic life, industry and commerce, religion, etc. Other topics may also be included.

CHAIR: Stephanie M. Langin-Hooper (Southern Methodist University)

PRESENTERS:

- 10:40 Introduction (5 min.)
- 10:45 Becky Martin (Boston University), “Representations of the Goddess Tanit” (15 min.)
- 11:05 Agnes Garcia-Ventura (IPOA, Universitat de Barcelona), “Amazons in Ancient Hattuša? On the Construction of Gender Roles and Stereotypes in the Early 20th Century C.E.” (15 min.)
- 11:25 Delanie Linden (Southern Methodist University), “Confronting the Status Quo: Cross-cultural Gender in the Portraits of the Ptolemies” (15 min.)
- 11:45 Amy Gansell (St. John’s University), “Enthroning the Neo-Assyrian Queen” (15 min.)
- 12:05 Celia Bergoffen (Fashion Institute of Technology), “A New Interpretation of Philistine Ashdoda Figurines as Anthropomorphized Chairs” (15 min.)
- 12:25 Jillianne Laceste (Southern Methodist University), “Antiochus I and Ideal Masculinity at Nemrud Dag” (15 min.)

**10J Mesopotamian Civilizations: The Economic Scope of Institutional Households II
Hancock**

CHAIRS: Claudia Glatz (University of Glasgow), Jacob Lauinger (The Johns Hopkins University), and Piotr Michalowski (University of Michigan)

**10K Maritime Archaeology
Griffin**

CHAIR: Caroline Sauvage (Loyola Marymount University)

PRESENTERS:

- 10:40 Miroslav Bárta (Czech Institute of Egyptology, Charles University) and Douglas Inglis (Institute of Nautical Archaeology, Texas A&M University), “The Discovery of an Old Kingdom Boat at Abusir” (20 min.)
- 11:05 Caroline Sauvage (Loyola Marymount University) and Marie-Louise Nosch (Centre for Textile Research, University of Copenhagen), “The Fabric of the Sea—Sail Manufacture in the Late Bronze Age Eastern Mediterranean” (20 min.)
- 11:30 Amani Abu Hmid (University of Haifa; Israel Antiquities Authority) and Michal Artzy (University of Haifa), “Aegean Mercenaries in Akko during the Persian Period” (20 min.)
- 11:55 Stella Demesticha (University of Cyprus), “The Cargo of the Mazotos Shipwreck, Cyprus” (20 min.)
- 12:20 Zaraza Friedman (University of Haifa), “Ancient Navigation and Seaborne Trade in the Dead Sea, Israel” (20 min.)

12:45–2:00pm

**Projects on Parade Poster Session
Galleria**

12:45–2:00pm

**Initiative on the Status of Women in ASOR Mentoring Meeting: Speed Networking
Marina 1**

Session 11, 2:00–4:05pm**11A Archaeology of Arabia II
Harbor 1**

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Jennifer Swerida (Johns Hopkins University), “Reading the Umm an-Nar Settlement” (15 min.)
- 2:25 Eli Dollarhide (New York University), “Mapping Magan: Investigating the Bronze Age Bat-‘Amlah Region in Oman” (15 min.)
- 2:45 Charlotte Cable (University of New England), Kristina Franke (University of New England), H  l  ne David-Cuny (Independent Scholar), Claire Newton (Universit   du Qu  bec    Rimouski), Steven Karacic (Florida State University), James Roberts (University of New England), Ivan Stepanov (University of New England), Yaaqoub Yousif Al Ali (Dubai Municipality), Mansour Boraik Radwan (Dubai Municipality), and Lloyd Weeks (University of New England), “Saruq al-Hadid: New Insights from Three Years of Field and Laboratory Research” (15 min.)
- 3:05 James Roberts (University of New England), Lloyd Weeks (University of New England), Melanie Fillios (University of New England), Charlotte Cable (University of New England), Yaaqoub Yousif Al Ali (Dubai Municipality), Mansour Boraik Radwan (Dubai Municipality), and Hussein Qandil (Dubai Municipality), “The Faunal Remains from Saruq al-Hadid: a New Insight into Human-Animal Interactions in Prehistoric Southeastern Arabia” (15 min.)
- 3:25 Steven Karacic (Florida State University) and Peter Magee (Bryn Mawr College), “The Production of Common Wares in Iron Age II (1100-600 B.C.E.) Southeastern Arabia” (15 min.)
- 3:45 General Discussion

**11B Material Culture and Identities in the Eastern Mediterranean I
Harbor 2**

Theme: Identities from the Early Bronze to the Iron Ages.

CHAIRS: Helen Malko (Fashion Institute of Technology) and Serdar Yalcin (Macalester College)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Anas Al Khabour (University of Gothenburg), “The Red-Black Burnished Ware (RBBW) People in Kura Araxes” (25 min.)
- 2:35 Jonathan White (University at Buffalo), “Prosthetics for Osiris: Disability and Accommodation in New Kingdom Egypt” (25 min.)
- 3:05 Catherine Steidl (Brown University), “Community Identities in Ionian Sanctuaries” (25 min.)

- 3:35 Leanna Kolonauski (Temple University), “A New Twist on an Old Tradition: Orientalizing Votive Offerings in the Shrine of Eileithya on Crete” (25 min.)

**11C Archaeology of Anatolia II
Harbor 3**

Theme: This session focuses on current archaeological research in Anatolia and presents the results of excavations and surveys.

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

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Cheryl Anderson (Boise State University), Levent Atici (University of Nevada, Las Vegas), Andrew Fairbairn (University of Queensland), and Sachihiko Omura (Japanese Institute of Anatolian Archaeology), “Written in Bone? Testing a Multifaceted Approach to Studying Human Health in the Past” (15 min.)
- 2:25 Lorenzo d’Alfonso (Institute for the Study of the Ancient World, New York University), “The Iron Age in Central Anatolia: New Insights from the Excavations at Niğde-Kıncık H  y  k” (15 min.)
- 2:45 Rachel Starry (Bryn Mawr College), “Arch Monuments in Roman Lycia: A Reconsideration of Architectural Form and Function within the Urban Landscape” (15 min.)
- 3:05 Michael Hoff (University of Nebraska), Rhys Townsend (Clark University), Ece Erdoğmuş (University of Nebraska), Birol Can (Uşak University), and Timothy Howe (St. Olaf College), “Antiochia ad Cragum Excavations: 2015–2017 Seasons” (15 min.)
- 3:25 Peter Cobb (University of Pennsylvania) and Elvan Cobb (Cornell University), “Investigating Routes among the Upper River Valleys of Western Anatolia” (15 min.)
- 3:45 Daniel C. Browning Jr. (University of Southern Mississippi) and David Maltsberger (Wayland Baptist University), “Memes, Moons, or Menorahs? Analysis of Claimed Syncretistic Jewish-Pagan Relief Symbols in Rough Cilicia” (15 min.)

**11D Altered States: Alternative Trajectories to Complexity in the Ancient Middle East I
Burroughs**

CHAIR: Geoff Emberling (University of Michigan)

PRESENTERS:

- 2:00 Introduction (10 min.)
- 2:10 Yael Rotem (University of Pennsylvania), “The Transformation from Complex Village Society to Local Urbanism in the Southern Levant: New Observations in Light of the Evidence from the Central Jordan Valley in the Early Bronze Age I–II” (15 min.)
- 2:30 Meredith S. Chesson (University of Notre Dame), “Urbanism without Cities and Complexity without Elites? Social, Economic and Political Differentiation in the Early Bronze Age Southern Levant” (15 min.)

- 2:50 Aaron Burke (University of California, Los Angeles), "Trajectories in Amorite Hegemony during the Early Middle Bronze Age" (15 min.)
- 3:10 Raphael Greenberg (Tel Aviv University), "Rethinking the Fortified Centers of Second Millennium Canaan" (15 min.)
- 3:30 Elizabeth Minor (Wellesley College), "Invisible Kings: The Development of Royal Nubian Programs of Legitimization in the Classic Kerma Period" (15 min.)

11E Talking about Gender-Related "Situations" in Our Workplaces (Workshop)

Carlton

Theme: The ASOR Initiative on the Status of Women workshop is designed to open the conversation about how to handle "situations." We are thinking broadly about gender-related issues that occur in a wide range of settings: in the field, in grad school, in the academy and other workplaces, and more. Such situations might impede professional development and advancement, hinder or obstruct scholarly engagement, impact family decisions, and/or cause personal trauma or distress. The workshop will include several short presentations – and will leave ample time for discussion. The focus will be on opening conversations, sharing ideas, and considering solutions to problems shared by many of us. Toward that goal, the workshop will steer clear of detailed personal narratives, public accusations, and the like.

CHAIR: Beth Alpert Nakhai (University of Arizona)

PRESENTERS (2:00–3:00)

Emily Miller Bonney (California State University, Fullerton), "Situations in the Academy"

Jennie Ebeling (University of Evansville), "Thoughts from a Woman in the Field Working with Women in the Field"

Laura Mazow (East Carolina University), "Teaching, Research and Service in the University Hallway"

Megan Cifarelli (Manhattanville College), "Mommy Tracks and the Mommy Tax"

Stefanie Elkins-Bates (Andrews University), "A Professional Woman Working in Jordan"

Open Discussion (3:00–4:05pm)

11F Papers in Honor of S. Thomas Parker in Celebration of the Publication of a Festschrift Lewis

CHAIR: Walter Ward (University of Alabama at Birmingham)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 John Oleson (University of Victoria), "The Trajanic Auxiliary Fort at Hauarra (Modern Humayma) in the Context of Recent Frontier Studies" (25 min.)
- 2:35 Andrew Smith II (George Washington University), "Nabataeans in the Hinterland of Petra" (25 min.)
- 3:05 Sarah Wenner (University of Cincinnati), "Wadi Rumm in Arabia Felix: An Analysis of the Ceramic Vessels from the Villa and Bathhouse" (25 min.)

- 3:35 Kenneth Holum* (University of Maryland), "The Economy of Caesarea Palaestinae: Demographics" (25 min.) *Paper to be read as a tribute

11G Israel's Exodus in Transdisciplinary Perspective Otis

This is the 2nd annual Exodus Session at ASOR and is a follow-up panel to the Exodus conference held at the University of California, San Diego, in 2013, which brought together 60 international scholars. The proceedings of the UCSD conference were published in 2015 ("Israel's Exodus in Transdisciplinary Perspective," Springer Nature). The session evaluates motifs of the Exodus narrative and their socio-cultural relevance in the first and second millennia B.C.E. as well as questions of history and historicity. The session thus spotlights new avenues for future research, from the angle of archaeological, historical, textual, cultural and geoscientific disciplines.

CHAIRS: Lawrence Geraty (La Sierra University), Thomas E. Levy (University of California, San Diego), Thomas Schneider (University of British Columbia), and Brad C. Sparks (Archaeological Research Group)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Brad C. Sparks (Archaeological Research Group), "Scientific Chronology of the Exodus: Problems in Astronomy – Invalid Eclipse (25 min.)
- 2:35 Alison Gruseke (Yale University; General Theological Seminary), "Throw Him in the River! A Childist Interpretation of Exodus 2 in the Context of Exodus, the Moses Story, and Modern Exodus Studies" (25 min.)
- 3:05 John Gee (Brigham Young University), "The Canaanite Gods El and Yah in Egypt" (25 min.)
- 3:35 Caterina Moro (Sapienza Università di Roma), "Power and Disasters: The Plague of Earthquake in Artapanus's Narrative of Exodus" (25 min.)

11H Antioch—A Legacy Excavation and Its Aftermath Stone

Theme: Part of an ongoing re-examination of the excavations of Antioch-on-the-Orontes (Antakya, Hatay Province, Turkey) carried out under the leadership of Princeton University from 1932 through 1939.

CHAIR: Alan Stahl (Princeton University)

PRESENTERS:

- 2:00 Andrea U. De Giorgi (Florida State University), "Antioch on the Orontes: the Expedition Records" (20 min.)
- 2:25 Agnès Vokaer (Université Libre de Bruxelles), "The Late Roman Pottery from Sector 17-O in Antioch" (20 min.)
- 2:50 Katherine Eremin (Harvard University, Art Museums), Elizabeth LaDuc (University College London), Elizabeth Molacek (Harvard University, Art Museums), Patrick Degryse (KU Leuven-University), "New Research on a Tethys Pavement at Harvard University" (20 min.)

- 3:15 Kristina Neumann (University of Houston), “Counting Change at Antioch-on-the-Orontes with Digital Numismatics” (20 min.)
- 3:40 Ayse Henry (Bilkent University), “An Antiochene Site through New Antiochene Perspectives: The Site of St. Symeon the Younger” (20 min.)

11I Encoding Data for Digital Discovery I Webster

Theme: This session demonstrates the value of cyber-research as a powerful resource for revealing otherwise imperceptible information about the ancient Near East. It aims to inspire new networks and designs for interdisciplinary digital collaboration and to establish a foundation for a field unified with linked open data projects.

CHAIRS: Amy Gansell (St. John’s University) and Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 David Falk (University of British Columbia), “Evaluating Chronological Hypotheses by Computer Analysis in Light of Low and Middle Chronological Frameworks” (15 min.)
- 2:25 Susanne Rutishauser (University of Bern), Sergio Alivernini (Academy of Science of the Czech Republic), and Edoardo Zanetti (Ludwig-Maximilians-Universität München), “The Rivers of Mesopotamia—Reconstruction of the Hydrology of Sumer” (15 min.)
- 2:45 Adam Anderson (University of California, Berkeley), “Network Analysis for Ancient Archival Reconstruction” (15 min.)
- 3:05 Katrien De Graef (Ghent University), “eSippar: Possibilities and Limitations of Prosopography in the Study of Old Babylonian Society” (15 min.)
- 3:25 Andrea Berlin (Boston University), “The Levantine Ceramics Project” (15 min.)
- 3:45 Marine Beranger (École Pratique des Hautes Études, Paris Sciences et Lettres Research University; Collège de France), “A New Glance at the Old Babylonian Letter-Writing Practice through Digital Technologies” (15 min.)

11J Technology in Archaeology: Recent Work in the Archaeological Sciences Hancock

CHAIR: Andrew J. Koh (Brandeis University)

PRESENTERS:

- 2:00 Introduction (5 min.)
- 2:05 Sahar al Khasawneh (Yarmouk University), Andrew Murray (Aarhus University), Kristina Thomsen (Technical University of Denmark), Dominik Bonatz (Freie Universität Berlin), Wael Abu-Azizeh (Maison de l’Orient et de la Méditerranée), and Mohammad Tarawneh (Al-Hussein Bin Talal University), “Dating a Near Eastern Desert Hunting Trap (Kite) Using Luminescence Rock Surface Dating” (15 min.)

- 2:25 Shawn Bubel (University of Lethbridge), “Phytolith Analysis of Sediment Samples from Tel Beth-Shemesh” (15 min.)
- 2:45 David Ben-Shlomo (Ariel University), “The Production of Cooking Pots in Iron Age II Judah” (15 min.)
- 3:05 Ortal Harosh (The Hebrew University of Jerusalem), “Pots and Potters—Mimicking Ceramic Production in Antiquity” (15 min.)
- 3:25 Adam Prins (Durham University), “Recombinant Archaeology: Retroactive Digital Replacement of Removed or Destroyed Archaeological Remains” (15 min.)
- 3:45 Bradley Erickson (University of North Carolina at Chapel Hill), “Seeing Is Believing: Experiencing Ancient Light through the Reproduction and Digitalization of Byzantine Glass Oil Lamps” (15 min.)

Session 12, 4:20–6:25pm

12A Archaeology of Arabia III Harbor 1

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

PRESENTERS:

- 4:20 Björn Anderson (University of Iowa), “Achaemenid Arabia: The Persian Perspective” (20 min.)
- 4:45 Alexander Nagel (Smithsonian Institution), “The Afterlife of a Qataban: Recent Research on South Arabian Archives and Material Culture from Yemen in Washington, D.C.” (20 min.)
- 5:10 Julian Jansen van Rensburg (Freie Universität), “Ancient Agricultural and Water Management Systems on the Island of Socotra” (20 min.)
- 5:35 Karol Juchniewicz (Polish Centre of Mediterranean Archaeology of the University of Warsaw), “Aynuna Archaeological Project – Some Considerations on the Pre-Islamic Coastal Settlement in Northwestern Arabia” (20 min.)
- 6:00 Ruth Young (University of Leicester), “Memory and Belonging in the Bat Oasis, Oman” (20 min.)

12B Material Culture and Identities in the Eastern Mediterranean II Harbor 2

Theme: Identities from Greco-Roman antiquity to the early modern era.

CHAIRS: Helen Malko (Fashion Institute of Technology) and Serdar Yalcin (Macalester College)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Courtney Innes (University of British Columbia), “The Syncretic Synagogical Syntax: The Hammat Tiberias Synagogue” (25 min.)

- 4:55 Nicholas Al-Jeloo (University of Melbourne), “Shifting Identities: Conceptualizing Assyria and Assyrian Identity between Antiquity and Late Antiquity” (25 min.)
- 5:25 Federica Gigante (Warburg Institute, SOAS University of London), “Cultural Appropriation in the Shaping of Ottoman Identity” (25 min.)
- 5:55 Ebru Fatma Findik (Mustafa Kemal University), “Daily and Luxury among Turks and Greeks in Lycia during the Ottoman Period” (25 min.)
- 5:55 General Discussion

12C Archaeology of Egypt Harbor 3

CHAIR: Krystal V. L. Pierce (Brigham Young University)

PRESENTERS:

- 4:20 Karolina Rosińska-Balik (Jagiellonian University in Krakow) and Joanna Dębowska-Ludwin (Jagiellonian University in Krakow), “Reconstructing Early Egyptian Mortuary Architecture” (20 min.)
- 4:45 George A. Pierce (Brigham Young University) and Krystal V. L. Pierce (Brigham Young University), “An Inscribed Stela from the Stone Monument at Seila in Egypt” (20 min.)
- 5:10 Nicholas Picardo (Harvard University), “‘Where Did THAT Come From?!’ The Giza Project’s Development of Citation and Referencing Standards for 3D Archaeological Visualizations” (20 min.)
- 5:35 Pearce Paul Creasman (University of Arizona), “The 19th Dynasty Temple of Setepenra (Western Thebes, Egypt)” (20 min.)
- 6:00 Yigal Sirty (Zinman Institute of Archaeology, University of Haifa), “Two Pivots of the 7th Century BC from Thebes, Egypt and the Beginning of Woodturning” (20 min.)

12D Altered States: Alternative Trajectories to Complexity in the Ancient Middle East II Burroughs

CHAIR: Geoff Emberling (University of Michigan)

PRESENTERS:

- 4:20 Geoff Emberling (University of Michigan), “Mobility and Political Authority in the Kingdom of Kush” (15 min.)
- 4:40 Adam T. Smith (Cornell University), “Trajectory and Refusal: Societies against the State in the Bronze Age Caucasus” (15 min.)
- 5:00 Lauren Ristvet (University of Pennsylvania), “A State without Cities: Alternate Paths of Complexity in the Caucasus” (15 min.)
- 5:20 Abbas Alizadeh (University of Chicago) and Atefeh Razmjoo (Mazandaran University), “Formation of an Early Territorial State: An Alternative Model of the Formation of the Early State in Southwestern Iran” (15 min.)

- 5:40 Joshua Wright (University of Aberdeen), Cheryl Makarewicz (University of Kiel), William Honeychurch (Yale University), and Amartuvshin Chunag (Mongolian Academy of Sciences), “Local Authority and Regional Gravity in the Formation of Pastoralist States” (15 min.)
- 6:00 Norman Yoffee (University of Michigan), Discussant (15 min.)

12E Bioarchaeology of the Near East Carlton

CHAIR: Lesley Gregoricka (University of South Alabama)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Lesley Gregoricka (University of South Alabama), “Temporal Trends in Mobility and Subsistence Economy among the Tomb Builders of Umm an-Nar Island” (15 min.)
- 4:45 Maryann Calleja (University of Nevada, Las Vegas), “Commingle Tombs and GIS: Analyzing the Mortuary Context and Taphonomy at Bronze Age Tell Abraq” (15 min.)
- 5:05 Kathryn Marklein (The Ohio State University), “Life on the Limes of the Roman Empire: Biological Health in the Rural Town of Oymaağaç, Turkey (Second–Fourth Centuries C.E.)” (15 min.)
- 5:25 Jaime Ullinger (Quinnipiac University), “Health and Stress at Jericho” (15 min.)
- 5:45 Megan Perry (East Carolina University) and Emily Edwards (East Carolina University), “Fragility of Life at Late Ottoman Period Hesban” (15 min.)
- 6:05 Amanda Wissler (Arizona State University), “Absence of Evidence: Bioarchaeology of Mesopotamia” (15 min.)

12F The Soft Power of Place—Cultural Diplomacy, Archaeology, and the Overseas Research Centers Lewis

CHAIR: Morag M. Kersel (DePaul University)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Morag M. Kersel (DePaul University), “The Soft Power of Place—Cultural Diplomacy, Archaeology, and the ORCs (Overseas Research Centers)” (15 min.)
- 4:45 Gerry Scott (American Research Center in Egypt), “People Connecting People: Cultural Diplomacy and the Work of the American Research Center in Egypt” (15 min.)
- 5:05 Jennifer Thum (Brown University), “In Between and Beyond: Working in the Borderlands of ARCE and the Egyptian Empire” (15 min.)
- 5:25 Kathryn Franklin (Oriental Institute, University of Chicago) and Astghik Babajanyan (Institute of Archaeology and Ethnography, Republic of Armenia), “The Power of Making Places: Collaborative Heritage and Working with the ARISC in Armenia” (15 min.)

- 5:45 Sarah Fairman (W. F. Albright Institute of Archaeological Research), Melissa Cradic (University of California, Berkeley), Issa Sarie (Al-Quds University), and Matthew J. Adams (W. F. Albright Institute of Archaeological Research), “Engaging American and Palestinian Cultural Heritage (EAPCH): A Collaborative Cultural Diplomacy Initiative at AIAR” (15 min.)
- 6:05 Matthew J. Adams (W. F. Albright Institute of Archaeological Research), “The Albright Institute of Archaeological Research in East Jerusalem: The Challenges and Opportunities of an Overseas Research Center in Israel and Palestine” (15 min.)

12G The Iron Age I in the Levant: A View from the North Otis

Theme: This session deals with the period of the Iron Age I in the northern Levant. It aims at highlighting inter- and extra- regional interconnections by presenting the archaeological evidence from recent excavations with an emphasis on material characteristics and chronological implications.

CHAIR: Lynn Welton (University of Toronto)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Eric Jean (Hitit University), “Between Late Bronze Age and Iron Age in Cilicia: The Painted Local Wares from a Regional Perspective” (25 min.)
- 4:55 Brita Lorentzen (Cornell University), “A Diachronic Analysis of Wood Use in the Orontes Watershed during the Early Bronze–Iron Ages” (25 min.)
- 5:35 David Ilan (Hebrew Union College), Discussant (15 min.)
- 5:50 Claude Doumet-Serhal (Director, Sidon Excavations), Discussant (15 min.)
- 6:05 Timothy P. Harrison (University of Toronto), Discussant (15 min.)

12H Archaeology of the Byzantine Near East Stone

CHAIR: Melissa Bailey Kutner (University of Maryland, Baltimore County)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Walter Ward (University of Alabama at Birmingham), “Amphorae Distribution as Evidence of Trade Routes in Third Palestine” (15 min.)
- 4:45 Michael Zimmerman (Bridgewater State University), Martha Risser (Trinity College), and Elizabeth Hestand (Independent Scholar), “The Phasing and Stratigraphy of the Northern End of Field C at Caesarea Maritima” (15 min.)
- 5:05 Alan Stahl (Princeton University), “Byzantine Coinage Circulation in the Northeastern Mediterranean” (15 min.)
- 5:25 Melissa Bailey Kutner (University of Maryland, Baltimore County), “Byzantine Economic Networks at Dhiban, Jordan” (15 min.)

- 5:45 Charles Anthony Stewart (University of St. Thomas), “The Alexander-Heraclius Stele: a Byzantine Sculpture Discovered in Cyprus” (15 min.)
- 6:05 Stephen Humphreys (Durham University), “Crosses as Water Purification Devices in the Byzantine Near East” (15 min.)

12I Encoding Data for Digital Discovery II Webster

Theme: This session demonstrates the value of cyber-research as a powerful resource for revealing otherwise imperceptible information about the ancient Near East. It aims to inspire new networks and designs for interdisciplinary digital collaboration and to establish a foundation for a field unified with linked open data projects.

CHAIRS: Amy Gansell (St. John’s University) and Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University)

PRESENTERS:

- 4:20 Introduction (5 min.)
- 4:25 Miller Prosser (University of Chicago), “Modeling Textual Data and Complex Writing Systems to Address Philological Research Questions in OCHRE” (15 min.)
- 4:45 Alessandro di Ludovico (Sapienza University of Rome), “Strategies, Reflections, Suggestions for an Optimized Digital Publication of Western Asiatic Cylinder Seals and Epigraphic Documents” (15 min.)
- 5:05 Sarah Witcher Kansa (Open Context, Alexandria Archive Institute), Eric Kansa (Open Context, Alexandria Archive Institute), William Caraher (University of North Dakota), Kevin McGeough (University of Lethbridge), and Charles E. Jones (Pennsylvania State University), “Integrating Narrative and Data: Synergistic Publishing in the 21st Century” (15 min.)
- 5:25 Émilie Pagé-Perron (University of Toronto) and Terhi Nurmikko-Fuller (Australian National University), “Getting LOADED: Practical Considerations, Tools, and Workflows for Producing Linked Open Assyriological Data” (15 min.)
- 5:45 Gaia Lembi (Brown University) and Michael Satlow (Brown University) “Inscriptions of Israel/Palestine” (15 min.)
- 6:05 Doğu Kaan Eraslan (École Pratique des Hautes Études, Paris Sciences et Lettres Research University), “Notes on Encoding the Achaemenid Elamite Language with EpiDoc-TEI Based on an Encoding of DBa, Its Implications for the Study of the Elamite Language, and Some Guidelines on the Tag Usage for Similar Encoding Projects” (15 min.)

12J Material Interconnections in the Levant during the Second Millennium B.C.E. Hancock

CHAIR: David Schloen (University of Chicago)

PRESENTERS:

- 4:20 David Schloen (University of Chicago) and Virginia Herrmann (University of Tübingen), “The Destruction of Zincirli at the End of the Middle Bronze Age” (25 min.)

- 4:50 Hanan Charaf (Lebanese University), “The Pottery of the LB I at Tell Arqa, Lebanon: A Marked Case of Continuity” (25 min.)
- 5:20 Elisabeth Wagner-Durand (Albert-Ludwigs-Universität Freiburg), “Ups and Downs: The Transition from Middle to Late Bronze Age at Kamid el-Loz” (25 min.)
- 5:50 Shlomit Bechar (The Hebrew University of Jerusalem), “The Transition from Middle to Late Bronze Age at Hazor: A Ceramic Point of View” (25 min.)

Projects on Parade Poster Session

The Projects on Parade Poster Session is an ideal opportunity to see the types of projects (both field and publication) in which ASOR members are involved. Please review the poster abstracts, which are included in the abstracts portion of this book (see p. 188).

The posters will be on display throughout the Annual Meeting in the Galleria Exhibit Hall. On **Saturday, November 18 from 12:45 to 2:00pm**, the presenters will be standing with their posters to answer questions. Please stop by!

CHAIR: Jennifer Ramsay (The College at Brockport, State University of New York)

“Tholos Architecture from the Early Bronze Age to the Umayyad Period”

Dawn Acevedo (La Sierra University)

“Youth and Women Engagement for Sustainable Cultural Heritage in Jordan: ACOR’s USAID SCHEP Initiative”

Nizar Al Adarbeh (American Center of Oriental Research), Jihad Haron (American Center of Oriental Research), Zaid Kashour (American Center of Oriental Research), Shatha Abu Aballi (American Center of Oriental Research), Sofia Smith (American Center of Oriental Research), Fareed Al Shishani (American Center of Oriental Research), Raneen Naimi (American Center of Oriental Research), Hussein Khirfan (American Center of Oriental Research), and Yusuf Ahmad (American Center of Oriental Research)

“The Iron Age Pottery from The Southern Plain of Akko Project”

Carolina Aznar (Saint Louis University)

“Iron Age Weaponry in Western Asia: Diffusion of ‘Maka’ Short Swords”

Narges Bayani (Institute for the Study of the Ancient World)

“Evolving Architectural Function in the ‘Earthquake House’ at Kourion, Cyprus”

Erin Beatty (Tandy Institute for Archaeology) and Laura Swantek (Arizona State University)

“Raw Material Characterization and Lithic Procurement in the Azraq Basin, Jordan, during the Lower–Middle Paleolithic: A Pilot Study from Shishan Marsh 1”

Jeremy Beller (University of Victoria)

“The Stylistic Integration of Egyptian Iconography within Late Bronze Age Canaan”

Amanda Buessecker (Brigham Young University) and Jeffrey Chadwick (Brigham Young University)

“Insight into the Earliest Iron Technology in Southeastern Arabia: Comparative Analysis of the Ferrous Remains from Saruq al-Hadid, Dubai and Muweilah, Sharjah”

Ivan Stepanov (University of New England), Peter Magee (Bryn Mawr College), Kristina A. Franke (University of New England), Charlotte Cable (University of New England), Yaaqoub Yousif Al Aali (Dubai Municipality), Mansour Boraik Radwan Karim (Dubai Municipality), Lloyd Weeks (University of New England)

“Who Set the Standard? Assessing Plain Ware Pottery at Tell Khaiber, Southern Iraq”

Daniel Calderbank (University of Manchester)

“Dust to Dust, Ashes to Ashes: The Charcoal Fertilizers of King Herod the Great”

Mark Cavanagh (Tel Aviv University), Guy Stiebel (Tel Aviv University), and Dafna Langgut (Tel Aviv University)

“The Missing Link? Olive Oil Production in the Ninth Century B.C.E. at Tell es-Safi/Gath”

Chloe Clouse (University of Kansas), Christina Olson (University of Kansas), and Eric Welch (University of Kansas)

“WQ-120: A Middle Bronze Age Farmstead along the Wadi Qusayba, Jordan”

Steven Edwards (University of Toronto)

“If Stones Could Speak: The 2000 Year Old Square at Tell es-Safi/Gath”

Florencia Fustinoni (University of British Columbia)

“Local vs. Global Interaction in the Wadi Rabah Period of the Southern Levant: A Social Network Analysis Approach”

Elizabeth Gibbon (University of Toronto)

“Band-Slip Diversity in Early Bronze Age Jordan”

Natalia Handziuk (University of Toronto)

“Cult of the Philistines: Ethnographic Artistic Reconstruction of Ritual Space”

Madaline Harris-Schober (University of Melbourne)

“Room Function at the Assyrian Provincial Palace at Ziyaret Tepe (Ancient Tušhan): Combining Architectural, Faunal, and Artifactual Data”

Britt Hartenberger (Western Michigan University), Tina Greenfield (University of Saskatchewan), and Dirk Wicke (Goethe-Universität)

“Shaping Cuisines: Variation in Cooking Pot Ware Forms from Iron Age Zincirli Höyük”

Nicole Herzog (University of Tübingen) and Sebastiano Soldi (National Archaeological Museum of Florence)

“Experimental and Experiential Archaeology: Foodways and Plates at LB I Alalakh”

Mara Horowitz (Purchase College, State University of New York)

“Refreshing an Archaeological Site: The Example of Tall Hisban, Jordan”

Jeffrey P. Hudon (Andrews University)

“Between Collapse and Mobility: Quantifying Shifts in the Third Millennium B.C. Southern Levant”

Amy Karoll (University of California, Los Angeles)

“Golden Excavations: Fifty Years of the Madaba Plains Project”

Kristina Reed (La Sierra University), Sarah Burton (Andrews University), Lawrence Geraty (La Sierra University), Oystein LaBianca (Andrews University), Randall Younker (Andrews University), and Douglas R. Clark (La Sierra University)

“An Analysis of Ptolemaic and Roman Period Stamped Amphora Handles from the Fayum, Egypt”

Haley Wilson Lemmon (Brigham Young University), George Pierce (Brigham Young University), and Lincoln Blumell (Brigham Young University)

“Against the Grains: The Story of Early Agriculture in Cyprus”

Leilani Lucas (University College London; College of Southern Nevada) and Dorian Fuller (University College London)

“The Function of Philistine Strainer Jugs”

Caitlin Chartier (East Carolina University), Laura Mazow (East Carolina University), and Siddhartha Mitra (East Carolina University)

“The Ayios Sozomenos Survey 2016: Cypriot Bronze Age Regional Settlement Patterns in a Fortified Landscape”

Eilis Monahan (Cornell University)

“Old Assyrian Cuneiform Palaeography: A New Project”

Jana Mynarova (Charles University) and Petr Zemanek (Charles University)

“Addressing the Loom: How to Count Loom Weights When You Have Too Much of a Good Thing”

Thaddeus Nelson (Stony Brook University)

“The Tombs of Petra in Both Geological and Cosmological Space”

Josie Newbold (Brigham Young University)

“PXRF and Vessel Form Analysis”

Erika Niemann (Mississippi State University) and Billy Wilemon (Mississippi State University)

“Tall al-‘Umayri: 32 Years of Excavations and Discoveries”

Kristina Reed (La Sierra University)

“Kathleen Kenyon and John Allegro: Revealing the Contents of the Dead Sea Scrolls”

Rachel Risk (Baylor University) and Deirdre Fulton (Baylor University)

“The Good China: The Cultural Biography of the Millefiori Plate at Kourion”

Rebekah Ross (Southwestern Baptist Theological Seminary) and Laura Swantek (Arizona State University)

“Peshdar Plain Project 2015–2017: Investigating the Assyrian Province of the Palace Herald on the Frontier to Iran”

Andrea Squitieri (Ludwig-Maximilians-Universität München), Florian Janoscha Kreppner (Ludwig-Maximilians-Universität München), and Karen Radner (Ludwig-Maximilians-Universität München)

“Was the Equinox Year in Use in the Early Part of the Biblical Period?—A Possible Solution to Biblical Chronology”

Veli Voipio (Aalto University)

“Preserved in the Smelt: Analysis of Fabric Impressions on Iron Age Technological Ceramics from Faynan’s Copper District”

Vanessa Workman (Tel Aviv University), Orit Shamir (Israel Antiquities Authority), Thomas E. Levy (University of California, San Diego), and Erez Ben-Yosef (Tel Aviv University)

“Highlights from the Heights of Jalul”

Randall Younker (Andrews University)

“Cultural Treasures from the Cave Shelters of Southern Oman: A Digital Humanities Preservation Initiative of the Painted Rock Art and South Arabian Inscriptions of Dhofar”

William Zimmerle (Fairleigh Dickinson University; Sultan Qaboos Cultural Centre)

Digital Archaeology Demo Showcase Posters

The King Abdullah University of Science and Technology together with the University of California, San Diego's Center for Cyber-Archaeology and Sustainability and the Scripps Center for Marine Archaeology are co-hosting the Digital Archaeology Demo Showcase. The Showcase provides a unique opportunity for the ASOR community to see, learn, touch, and try the state of the art in digital archaeology.

Projects on Parade and Digital Archaeology Demo Showcase posters will be on display throughout the Annual Meeting in the Galleria Exhibit Hall. On **Friday, November 17 from 6:30 to 10:30pm**, the presenters will be giving demonstrations of their projects in Marina Ballroom 2–4. There will be a hosted reception from 8:00 to 10:00pm. Please stop by!

CHAIRS: Thomas E. Levy (University of California, San Diego) and Neil Smith (King Abdullah University for Science and Technology)

Tina Greenfield (University of Saskatchewan), Jane Sanford (University College London), Haskel Greenfield (University of Manitoba), Shira Albaz (Bar-Ilan University), and Aren Maeir (Bar-Ilan University)

“Aerial Mapping and 3D Restoration of Cultural Heritage”

Mohamed Shalaby (King Abdullah University for Science and Technology; FalconViz), Ahmed AlHasanat (FalconViz), Khaled Abdelgawad (FalconViz), Luca Passone (King Abdullah University for Science and Technology; FalconViz), Travis Cline (FalconViz), and Neil Smith (King Abdullah University for Science and Technology)

“Examining the Concept of Hinterland in Antiquity in Arid Regions of the Levant Using Archaeobotanical Data and GIS Analysis”

Jennifer Ramsay (The College at Brockport, State University of New York) and Noah Haber (State University of New York Geneseo)

“Crafting Narratives: Experimentations in Ethnographic Storytelling and Ethnoarchaeological Analogy”

Sowparnika Balaswaminathan (University of California, San Diego), Aditya Sampath (University of California, San Diego), Subhankar Panda (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“HUJI Computerized Archaeology Laboratory: 3D Analysis of Archaeological Artifacts and Engravings”

Ortal Harush (The Hebrew University of Jerusalem), Lena Dubinsky (The Hebrew University of Jerusalem), and Leore Grosman (The Hebrew University of Jerusalem)

“Erosion and *Longue Durée* 3D Modeling of Wadi Fidan 61, A Late Neolithic Site in Southern Jordan”

Kathleen Bennalack (University of California, San Diego), Matthew Howland (University of California, San Diego), Isabel Rivera-Collazo (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Developing a Standardized Workflow for Digital Preservation and Analysis of Archaeological Ceramics”

Matthew Howland (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“GIS and Photogrammetry: Digital Mapping and Documenting Ancient Copper Mining and Smelting Sites by the Central Timna Valley Project”

Aaron Greener (University of Haifa; Albright Institute of Archaeological Research), Nathaniel Deaton (Tel Aviv University), Omri Yagel (Tel Aviv University), Craig Smitheram (University of California, San Diego), Vanessa Workman (Bar-Ilan University), Casandra Sobieralski (University of California, Santa Cruz), Mark Cavanagh (Tel Aviv University), Willie Ondricek (Tel Aviv University), and Erez Ben-Yosef (Tel Aviv University)

“Qlone—A Revolutionary Mobile App for 3D Scanning of Artifacts”

Ran Kaftory (EyeCue Vision Technologies; University of Haifa)

“Digital Storytelling as Public Archaeology”

Travis Corwin (University of Central Florida) and Tiffany Earley-Spadoni (University of Central Florida)

“A Satellite Remote Sensing Approach for the Determination of Early Bronze Age Traffic”

Tuna Kalayci (Istituto Per I Beni Archeologici e Monumentali [IBAM]—Consiglio Nazionale delle Ricerche)

“Envisioning the Past: Digital Documentation and Visualization at ‘Ayn Gharandal”

Bradley Erickson (University of North Carolina at Chapel Hill)

“Open Context: Publishing Research Data on the Web”

Eric Kansa (Open Context, Alexandria Archive Institute) and Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute)

“Engineering Earthquake Resilience: Restoration and Reconstruction in Post-Earthquake Akrotiri and Pompeii”

Amanda Gaggioli (Stanford University)

“Plants and Bones in Context: The Spatial Distribution of Floral and Faunal Remains in the Neo-Assyrian Sacred Precinct at Tell Tayinat, Amuq Valley, South-Central Turkey”

Doga Karakaya (University of Tübingen) and David Lipovitch (Wilfrid Laurier University)

“Morphometrics and Sheep Goat Breeds in the Early Bronze Age of Tell es-Safi/Gath”

“Automatic Classification of Ceramics: User Interface”

Avshalom Karasik (Israel Antiquities Authority) and Ortal Harush (The Hebrew University of Jerusalem)

“The Archaeology of Rural Landscapes: Surface Survey and Magnetic Anomaly Test Excavations at Maroni, Cyprus”

Catherine Kearns (University of Chicago), Peregrine Gerard-Little (Cornell University), Anna Georgiadou (University of Cyprus), and Georgia Andreou (Cornell University)

“Geophysical Prospection of Land-Use Features in Transitional Ecological Zones, Kurdish Region, Iraq”

Elise Jakoby Laugier (Dartmouth College)

“The University of California Office of the President’s Research Catalyst Project: Digital Documentation, Preservation, and Dissemination of At-Risk World Cultural Heritage”

Thomas E. Levy (University of California, San Diego) and Margie M. Burton (University of California, San Diego)

“Marine Geophysical Survey in the Gulf of Corinth, Greece—Implications for the Late Bronze Age Kastrouli–Antikyra Bay Land and Sea Project”

George Papatheodorou (University of Patras), Maria Geraga (University of Patras), Dimitris Christodoulou (University of Patras), Nikos Georgiou (University of Patras), Xenophon Dimas (University of Patras), Spyros Sergiou (University of Patras), Ioannis Lirizis (University of the Aegean), Richard Norris (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Go Big, and Stay Home: Testing Google Earth Engine for Satellite Imagery Analysis on a Regional Scale in the Southern Levant”

Brady Liss (University of California, San Diego), Matthew Howland (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Curating Cultural Heritage Data for Long-Term Access and Discovery in a Library Digital Repository”

Ho Jung Yoo (University of California, San Diego), Brady Liss (University of California, San Diego), Rosemary Elliott Smith (University of California, San Diego), Ryan Johnson (University of California, San Diego), Chris McFarland (University of California, San Diego), Falko Kuester (University of California, San Diego), Thomas DeFanti (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“D.o.R.—Illustration of Complex Archaeological Objects Based on 3D Models”

Sveta Matskevich (The Hebrew University of Jerusalem), Ayellet Tal (Technion–Israel Institute of Technology), Ilan Shimshoni (University of Haifa), Michael Kolomenkin (Technion–Israel Institute of Technology), and Ayelet Gilboa (University of Haifa)

“CAVEBase: Preserving and Accessing Digital Cultural Heritage through 3D Virtual Reality Environments: Case Studies from the Eastern Mediterranean”

Christopher McFarland (University of California, San Diego), Thomas DeFanti (University of California, San Diego), Thomas E. Levy (University of California, San Diego), and Falko Kuester (University of California, San Diego)

“Multiscale Aerial Cyber-Archaeology in Israel”

Dominique E. Meyer (University of California, San Diego), Assaf Yasur-Landau (University of Haifa), Erez Ben-Yosef (Tel Aviv University), Anthony T. Tamberino (University of California, San Diego), Falko Kuester (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“ArchaeoSTOR: A User-Friendly Web-Based Archaeological Database”

Rosemary Elliot Smith (University of California, San Diego), Franklin Reece (University of California, San Diego), Carolyn Breeze (University of California, San Diego), Taylor Harman (University of California, San Diego), Michael Tolentino (University of California, San Diego), Brady J. Liss (University of California, San Diego), Ho Jung Yoo (University of California, San Diego), Margie M. Burton (University of California, San Diego),

Aaron Gidding (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Landscapes, Human Activity, and Sediment Profiles in Antikyra Bay, Phokis, Greece: Land and Sea Connections Through Marine Geoarchaeology and Geo-Spatial Databases”

Isabel Rivera-Collazo (University of California, San Diego), Richard Norris (University of California, San Diego), George Papatheodorou (University of Patras), Ioannis Lirizis (University of the Aegean), and Thomas E. Levy (University of California, San Diego)

“The ASOR Cultural Heritage Initiative TerraWatchers Collaborative”

Stephen Savage (University of California, San Diego), Thomas E. Levy (University of California, San Diego), Andrew C. Johnson (University of California, San Diego), and Michael Tolentino (University of California, San Diego)

“GIS Features in the Online Cultural and Historical Research Environment (OCHRE)”

Sandra Schloen (Oriental Institute, University of Chicago) and Miller Prosser (Oriental Institute, University of Chicago)

“The Value of Travelers’ Itineraries in Archaeological Research: A GIS Analysis of Pathways through the Mani Peninsula, Greece”

Rebecca Seifried (Institute for Mediterranean Studies) and Chelsea A. M. Gardner (Mount Allison University)

“Big VR Environments and Personal VR Devices for At-Risk Cultural Heritage in the Eastern Mediterranean—From Conservation to Hackathon”

Connor Smith (University of California, San Diego), Jurgen Schulze (University of California, San Diego), Kristin Agcaoili (University of California, San Diego), Anish Kannan (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“UE4Archaeology”

Neil Smith (King Abdullah University for Science and Technology)

“3D Printing for Cultural Heritage Preservation and Education”

Anthony T. Tamberino (University of California, San Diego), Scott McAvoy (University of California, San Diego), Matthew Howland (University of California, San Diego), Brady J. Liss (University of California, San Diego), Kathleen C. Bennalack (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Integrated Remote Sensing and Archaeological Field Survey on the Erbil Plain, Kurdistan Region of Iraq”

Khalil Barzinji (Directorate of Antiquities, Erbil Governorate, Iraq), Nader Babakr (Directorate of Antiquities, Erbil Governorate, Iraq), and Jason Ur (Harvard University)

“Underwater Imaging for the Israel Archaeology Land and Sea Project”

Assaf Yasur-Landau (University of Haifa), Tali Treibitz (University of Haifa), Christian McDonald (University of California, San Diego), Anthony T. Tamberino (University of California, San Diego), and Thomas E. Levy (University of California, San Diego)

“Shared Visual Exploration of Archaeological Images across Temporal and Spatial Scales Using SuAVE: Examples from the Eastern Mediterranean”

Ilya Zaslavsky (University of California, San Diego), Margie M. Burton (University of California, San Diego), Patrick S. Quinn (University College London), and Thomas E. Levy (University of California, San Diego)

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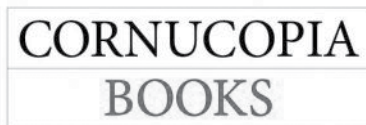
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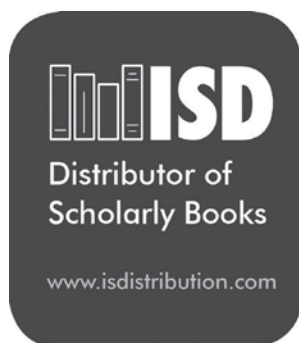
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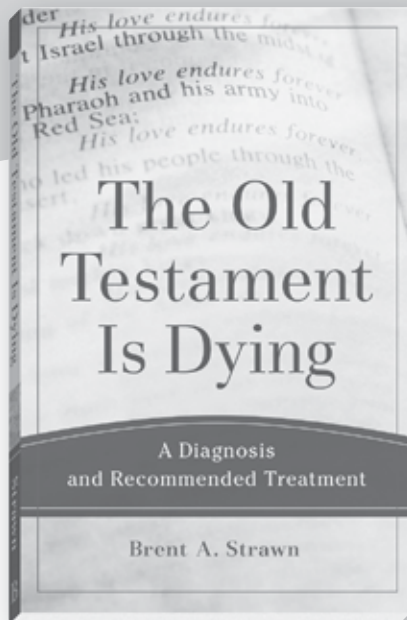


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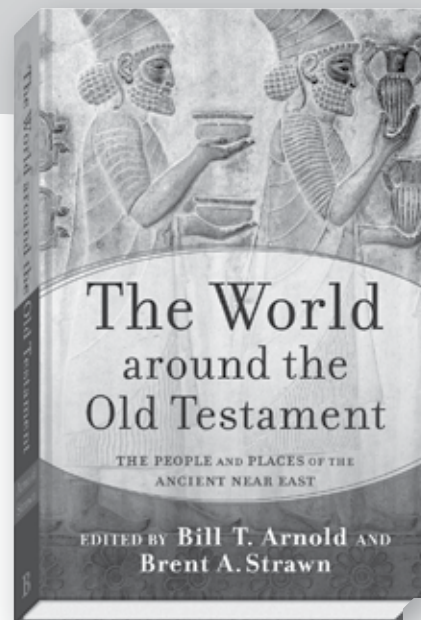
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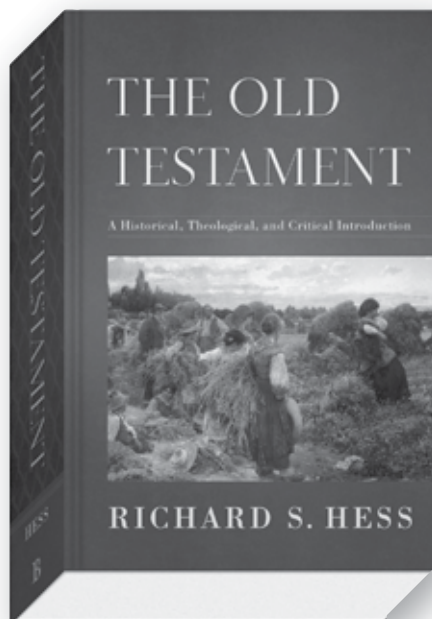
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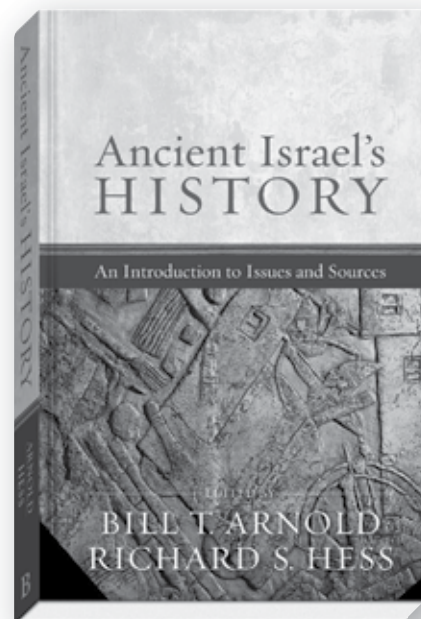
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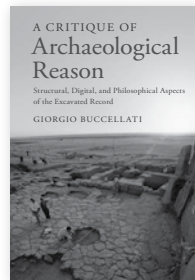
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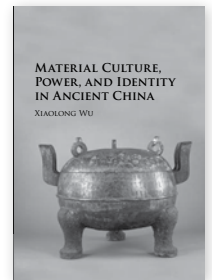
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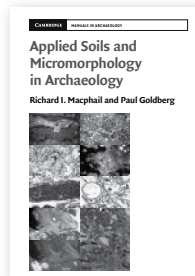
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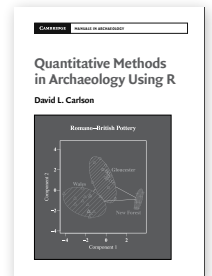
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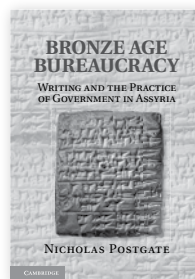
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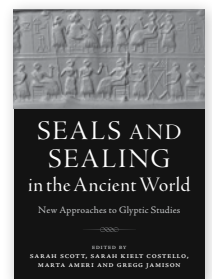
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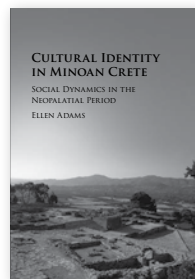
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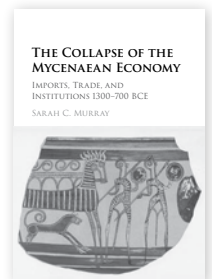
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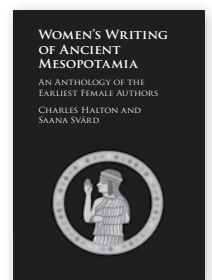
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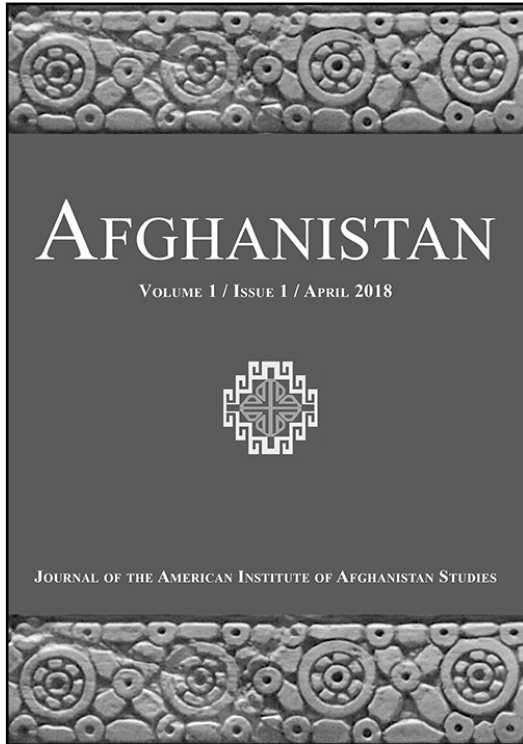


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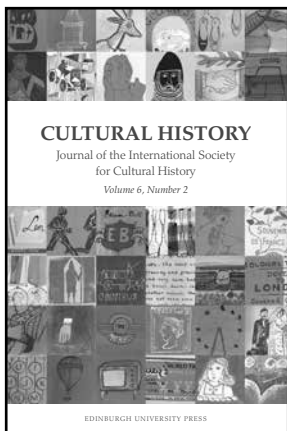
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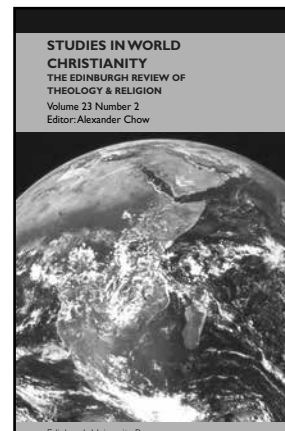
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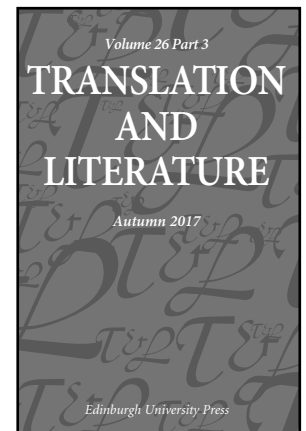
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2016 HONORS AND AWARDS

The following awards were presented at ASOR's 2016 Annual Meeting in San Antonio.

The Charles U. Harris Service Award – Vivian Bull

The P. E. MacAllister Field Archaeology Award – Larry Herr

The W. F. Albright Service Award (ACOR) – Humi Ayoubi

The W. F. Albright Service Award (AIAR) – John Spencer

ASOR Membership Service Award – Eric H. Cline

ASOR Membership Service Award – Sheila Bishop

ASOR Membership Service Award – Douglas R. Clark

The G. Ernest Wright Award – Seymour Gitin, editor, for *The Ancient Pottery of Israel and its Neighbors from the Iron Age through the Hellenistic Period* (Israel Exploration Society)

The Frank Moore Cross Award – Mark S. Smith for *Where the Gods Are: Spatial Dimensions of Anthropomorphism in the Biblical World* (Yale University Press)

The Nancy Lapp Popular Book Award – Reinhard Pummer for *The Samaritans: A Profile* (Eerdmans)

The Joy Ungerleider Poster Award – Robert S. Homsher (W. F. Albright Institute of Archaeological Research and the Center for Geographic Analysis, Harvard University), Adam B. Prins (W. F. Albright Institute of Archaeological Research and Durham University), Melissa S. Cradic (W. F. Albright Institute of Archaeological Research and the University of California, Berkeley), and Matthew J. Adams (W. F. Albright Institute of Archaeological Research) for “New Dimensions in Digital Documentation: Tomb 50 of Megiddo”

Descriptions of the Honors and Awards

The Richard J. Scheuer Medal. This award honors an individual who has provided truly outstanding, long-term support and service contributions to ASOR. This medal is awarded when such an individual is identified.

The Charles U. Harris Service Award. This award is given in recognition of long-term and/or special service as an ASOR officer or Trustee. One award is given annually.

The P. E. MacAllister Field Archaeology Award. This award honors an archaeologist who, during his/her career, has made outstanding contributions to ancient Near Eastern and eastern Mediterranean archaeology. One award is given annually.

The W. F. Albright Award. This award honors an individual who has shown special support or made outstanding service contributions to one of the overseas centers, ACOR, AIAR, CAARI, or to one of the overseas committees—the Baghdad Committee and the Damascus Committee. This award is given when such an individual is identified.

ASOR Membership Service Award. This award recognizes individuals who have made special contributions on behalf of the ASOR membership, through committee, editorial, or office services. Up to three awards are given annually.

The G. Ernest Wright Award. This award is given to the editor/author of the most substantial volume(s) dealing with archaeological material, excavation reports, and material culture from the ancient Near East and eastern Mediterranean. This work must be the result of original research published within the past two years. One award is given annually.

The Frank Moore Cross Award. This award is presented to the editor/author of the most substantial volume(s) related to one of the following categories: (1) the history and/or religion of ancient Israel; (2) ancient Near Eastern and eastern Mediterranean epigraphy; (3) textual studies on the Hebrew Bible; or (4) comparative studies of the Hebrew Bible and ancient Near Eastern literature. This work must be the result of original research published during the past two years. One award given annually.

The Nancy Lapp Popular Book Award. This award is presented to the author/editor of a book published in the last two years that offers a new synthesis of archaeological data intended to reach an audience of scholars as well as students and the broader public. One award is given annually.

The Joy Ungerleider Poster Award. This award is conferred upon the author(s) of the poster presenting the results of a study about ancient Near Eastern societies in a clear, legible fashion using original graphic content. Subject matter may be based in archaeological sciences, history, anthropology, epigraphy, ethnography, heritage, or other scholarly approaches to understanding ancient people in the areas covered by ASOR. One award is given annually.

Looking Ahead to the 2018 Annual Meeting

(Denver, CO, November 14–17, 2018)

For the 2018 Annual Meeting, our Academic Program will continue to provide four ways to present and discuss your research and discoveries: standing ASOR sessions, member-organized sessions, workshops, and posters.

1. **ASOR Sessions:** These are standing sessions representing the major temporal, regional, and disciplinary areas represented by ASOR. They provide a framework to support individual paper submissions. A list of ASOR sessions is below and also on our website (<http://www.asor.org/am/list-of-approved-sessions-2018>).
2. **Member-Organized Sessions:** These are sessions organized by ASOR Members who wish to explore a special topic or theme at the Annual Meeting for a term of one to three years. A list of sessions already approved for 2018 is below, and all members are invited to propose sessions through a simple application on our website (<http://www.asor.org/am>).
3. **Member-Organized Workshops:** Workshops are interactive sessions organized by members around a tightly focused topic or theme or around an archaeological site; in these, formal presentations and/or demonstrations are kept to a minimum in favor of open discussion between session chairs, presenters, and members of the audience.

4. **Posters:** The Poster Session (Projects on Parade) offers a less formal venue for ASOR members to get the word out about their research and also provides student and junior members an opportunity for greater involvement in the program of the ASOR Annual Meeting.

We encourage all members to contribute to the 2018 Annual Meeting's academic program and welcome new Member-Organized Session and Workshop proposals, as well as individual paper submissions. Please keep in mind the following deadlines:

December 15, 2017	New Member-Organized Session and Workshop proposals due
February 15, 2018	Deadline for abstract submission for those wishing to participate in sessions and workshops at the 2018 ASOR Annual Meeting
May 1, 2018	ASOR office emails official acceptance/rejection notice to presenters
August 1, 2018	Proposals for Projects on Parade Poster Session due

Standing ASOR Sessions

Ancient Inscriptions
 Approaches to Dress and the Body
 Archaeology and Biblical Studies
 Archaeology and History of Feasting and Foodways
 Archaeology of Anatolia
 Archaeology of Arabia
 Archaeology of the Black Sea and the Caucasus
 Archaeology of the Byzantine Near East
 Archaeology of Cyprus
 Archaeology of Egypt
 Archaeology of Iran
 Archaeology of Islamic Society
 Archaeology of Israel
 Archaeology of Jordan
 Archaeology of Lebanon
 Archaeology of Mesopotamia
 Archaeology of the Natural Environment: Archaeobotany and Zooarchaeology in the Near East

Archaeology of the Near East: Bronze and Iron Ages
 Archaeology of the Near East: The Classical Periods
 Archaeology of the Southern Levant
 Archaeology of Syria
 Art Historical Approaches to the Near East
 Bioarchaeology in the Near East
 Cultural Heritage Management: Methods, Practices, and Case Studies
 Gender in the Ancient Near East
 GIS and Remote Sensing in Archaeology
 History of Archaeology
 Landscapes of Settlement in the Ancient Near East
 Maritime Archaeology
 Prehistoric Archaeology
 Reports on Current Excavations: ASOR Affiliated
 Reports on Current Excavations: Non-ASOR Affiliated
 Technology in Archaeology: Recent Work in the Archaeological Sciences

Theoretical and Anthropological Approaches to the Near East

Member-Organized Sessions Currently Approved for the 2018 Annual Meeting

Antioch—A Legacy Excavation and Its Aftermath
 Archaeology of the Kurdistan Region of Iraq
 Career Options for ASOR Members: The Academy and Beyond
 Developing Isotopic Investigations in the Ancient Near East and Caucasus
 Encoding Data for Digital Discovery
 Houses and Households in the Near East: Archaeology and History
 Meeting the Expenses: Ancient Near Eastern Economies
 Senses and Sensibility in the Near East
 Study of Violence from the Region of the Ancient Near East and Its Neighbors
 The History of the Early Alphabet

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We hope that all ASOR members will consider including ASOR in their will or making another type of planned gift. Not only will your gift be put to good use, benefitting generations of dedicated and deserving students and scholars of the Near East, but you may also save significant tax dollars through the charitable deduction and the avoidance of capital gains. In some cases, you may even increase your income.

Please let ASOR know if you have made a planned gift of \$2,500.00 or more, and we will add your name to ASOR's Legacy Circle. For more information, please contact ASOR's executive director, Andrew Vaughn (executive-director@asor.org).



2017 ACOR Jordanian Travel Scholarship Recipients

In 2010, ACOR initiated this scholarship opportunity to encourage Jordanian scholars to attend the ASOR Annual Meeting. ACOR offers two travel scholarships of \$3,500 each to assist Jordanians planning to deliver a paper. Each award is intended to cover the ASOR annual membership fee, registration fee for the Annual Meeting, the cost of a US visa, international airfare from Jordan, and hotel accommodations.

Abstracts should be submitted to ASOR by February 1, 2018. It is recommended that session chairs be consulted if appropriate. Contact Britta Abeln (info@asor.org) for assistance in the application process.

Recipients of the ACOR Jordanian Travel Scholarship for the ASOR 2017 Annual Meeting are:

Mrs. Arwa Massa'deh, Head of Publication, Registration and Library, Department of Antiquities of Jordan, for the paper "Al Balu'a between the Site and People," to be presented in the Archaeology of Jordan session

and

Dr. Sahar al Khasawneh, Yarmouk University, for the paper "Dating a Near Eastern Desert Hunting Trap (Kite) Using Luminescence Rock Surface Dating," to be presented in the Technology in Archaeology: Recent Work in the Archaeological Sciences session

2017 Fellowship Recipients

ASOR is committed to providing fellowships for students and scholars. This year, we awarded \$72,700 to ASOR affiliates participating in archaeological fieldwork projects and to colleagues attending the ASOR Annual Meeting. ASOR's donors played a crucial role in making sure that these important fellowships could be given. The feedback that we have received from students indicates that these funds make the difference in their plans. We were amazed by how many of them told us that they would not be able to participate in a field season or the Annual Meeting without an ASOR fellowship.

Once again, the 2017–2018 academic year appears to be a challenging one in terms of grant funding, so the generous contributions of donors will be greatly appreciated. Please contact ASOR Executive Director, Andrew Vaughn, if you would like more information on how you can help fund a fellowship.

Friends of ASOR Excavation Fellowship Recipient

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2017 Annual Meeting Scholarship Recipients

The Foundation for Biblical Archaeology Grant Recipients

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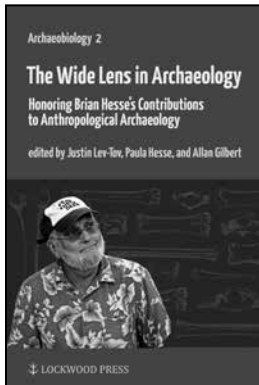
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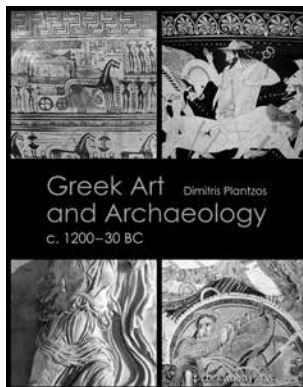
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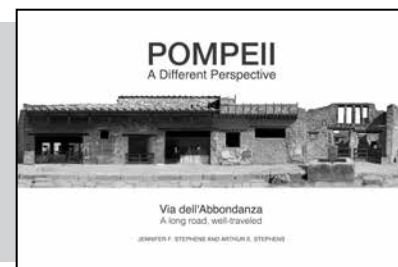
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PAPER ABSTRACTS

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Plenary Address

Irene J. Winter, (Professor Emerita, former William Dorr Boardman Professor of Fine Arts, Harvard University), “Archaeology, Object History, Art History: Questions of Definition and Discipline”

If one understands archaeology as the practice of systematic unearthing and recording of both works and information from the field, then the resultant products of that practice may, indeed *should*, be subject to study with respect not only to the context of discovery, but also to the discipline (or disciplines) of analysis. A distinction is therefore sought between the materiality of the object *per se* and its analysis through the use of disciplinary tools. At the same time, questions arise with respect to the necessary and sufficient tools and data required for an adequate understanding of a work in the context of its original time, place, and culture, not merely our own, which has in turn given rise to the interdisciplinary approaches of today. It will be argued that the present-day search for meaning through material culture impels us to deploy a multiplicity of lenses—as competent practitioners, as informed consumers, as engagers with appropriate technologies, and as members of collaborative enterprises. The role of art history in the pursuit of our knowledge of the past will be examined with these considerations in mind.

THURSDAY, NOVEMBER 16

IA. Archaeology of Mesopotamia

CHAIR: Lauren Ristvet (University of Pennsylvania)

Emily Hammer (University of Pennsylvania), “The City and Landscape of Ur: An Aerial, Satellite, and Ground Reassessment”

Despite its status as one of the best-excavated cities in Mesopotamia, the city of Ur was passed over entirely by the archaeological revolution in landscape archaeology. Woolley’s investigations were long in the past by the time intensive surface collections were undertaken at Uruk, Mashkan-shapir, and Kish. Wright’s survey of the Eridu basin provided some regional context for the site, but he did not undertake systematic work at Ur. With the return of archaeological research to the site, it is an appropriate time to take stock of what is known about the demographic and structural history of urbanism there, based on a spatial reassessment of the excavations and a close analysis of remote sensing datasets, including declassified intelligence imagery from the CORONA satellite program (1960-1972) and the U2 aerial program (1959). This review shows the particular challenges to landscape archaeology presented by a complex site like Ur. It also suggests that the settlement complex was much larger than previously supposed by 20th century surveyors. Preliminary results from a surface survey undertaken in spring 2017 allow for evaluation of hypotheses derived from the imagery.

Andrea Polcaro (University of Perugia) and Davide Nadali (Sapienza University of Rome), “Results of the First Three Campaigns of Excavation (2015–2017) to Tell Zurghul, Ancient Nigin, in Southern Iraq”

The paper will present the results of the first three campaigns of the Italian Archaeological Expedition to Tell Zurghul, ancient Nigin. The site is about 70 hectares, characterized by two main mounds (Mound A and Mound B); it was briefly excavated by Robert Koldewey in 1887 and identified with the ancient settlement of Nigin, the third city of the Sumerian state of Lagash. The city, mentioned in many cuneiform texts of the Early Dynastic and Neo-Sumerian periods, is famous for the presence of the Sirara temple, dedicated to the goddess Nanshe, sister of Ningirsu and daughter of Enki. The architectonic

features and the findings from four excavation areas will be analyzed: Area C, located on the northwestern border of the site; Area B, located on the top of Mound B; Area A, located close to the southern side of Mound A; and Area D, located on the top and on the southern slope of Mound A. The excavations of the Italian Archaeological Expedition indicate that the site was first settled during Ubaid Period. Evidence from the Late Uruk, Jemdet Nasr, and Early Dynastic I periods have been discovered in the Lower City, while on the top of Mound A and in Area D, remains of the last phase of occupation of the city during the Neo-Sumerian Period have been unearthed.

Darren Ashby (University of Pennsylvania), “A New Interpretation of the Bagara and the Ibgal, Two Religious Complexes from Tell al-Hiba, Ancient Lagash”

This paper presents a new interpretation of two Early Dynastic (ED) III temple complexes, the Bagara of Ningirsu and the Ibgal of Inana, at the site of Tell al-Hiba, ancient Lagash. Excavated by the Al-Hiba Expedition between 1968 and 1976, portions of both complexes appeared in preliminary reports but have never been fully published. As part of my dissertation on ED III religious architecture, I reconstructed the sequence of building levels in the complexes as well as the contexts of the materials found inside using the original excavation records. This work led to new conclusions on the dating, function, and significance of the excavated remains.

In this paper, I will focus on three topics: first, the dating of the Bagara remains to the ED III–Akkadian periods on the basis of ceramic evidence; second, the existence of an architectural tradition that can serve as an index of religious architecture in the region of Lagash; third, the material remains of intensive food production in religious contexts. Due to poor excavation methodology and limited final publication of remains, ED III religious architecture in the state of Lagash is poorly understood. In contrast, the activities of ED III religious institutions in the state are relatively well-known thanks to contemporary textual sources. My analysis of the Bagara and the Ibgal helps narrow the gap in our knowledge and provides a point of reference as archaeological excavation begins again in the state of Lagash.

Jennifer R. Pournelle (University of South Carolina), Liviu Giosan (Woods Hole Oceanographic Institution), and Aimen Al Rubaie (University of Basra), “A Brain Coral’s Memoir of a Mesopotamian Port”

Exciting recent University of Manchester surveys at Jebel Khayabir (Charax Spasinou; Alexandria on the Tigris) already indicate that meters of flood-deposited silt accumulated during and after the (relatively) brief interval of that site’s florescence, from the time of its Seleucid foundation to its later Sassanian decline. A near-shore seaport in 323 B.C.E., by the turn of the millennium, when Pliny the Elder wrote his *Natural History*, the river delta had already prograded some 180 km further seaward. “In no part of the world,” he wrote, “have alluvial deposits been formed more rapidly by the rivers, and to a greater extent, than here” (Pliny VI.31 *The Tigris*). Charax nevertheless continued as a river port entrepôt, maintaining control of its position as a sea-trading hub in part (we argue) by shifting inter-regional transit functions downstream to Mughlub (Fora, Forath, Forat). We present new proxy evidence, derived from sediments and bottom-dwelling marine corals excavated from Forat’s fore-harbor, for Forat’s probably functional duration as a gateway seaport serving Charax—as well as its eventual siltation and abandonment.

Arthur Stefanski (University of Toronto), “State Formation and the Emergence of Imperialism in the Akkadian Period at Khafajah”

The material culture of the Akkadian period remains poorly understood by scholars, despite its being the first historically attested centralized territorial political entity. Available textual and archaeological sources indicate that the core area of the Akkadian empire was in the Diyala region. This paper will be based on a re-analysis of the archaeological data from Khafajah, a site in the lower Diyala. Comprehensive vectorized plans of the Khafajah excavation areas

have been created, incorporating elevations and some artifact positions from the original field drawings, notes, and locus cards. Using this reconstructed stratigraphy, a spatial analysis on the principles of space syntax (Hillier and Hanson 1984) has revealed architectural repurposing and reorganization in a number of areas associated with the appearance of new material cultural forms. This analysis has also shed light on the significance of the walled compound east of the Temple Oval III. It has no domestic graves, unlike the preceding phases, it is built over the Nintu temple, and it has orthogonal streets, strongly suggesting that it was a planned construction by a new population unattached to preceding architectural units, cultural practices, and sacred spaces. A strong argument can be made that the Akkadian period at Khafajah is characterized by a degree of population influx and socio-economic restructuring in relation to spatial and architectural changes associated with the development of centralization in the Akkadian state.

Mark Schwartz (Grand Valley State University) and David Hollander (University of South Florida), “Evolving Colonies: A Reconstruction of Middle to Late Uruk Exchange Dynamics as Seen through Analyses of Ancient Trade Goods”

This research examines broad regional patterns of inter-regional trade for the world’s first colonial trading system, the economic expansion of southern Mesopotamia into southwestern Iran and southeastern Anatolia. Stable carbon and deuterium isotope analyses of bitumen artifacts from several Uruk enclaves and colonies suggest diachronic changes in trade routes as well as changes in the nature of the Uruk expansion from the Middle to Late Uruk periods. In the late Middle Uruk Period, during the Uruk expansion, bitumen found in trade colonies in the northern Euphrates regions derived mainly from central and southern Mesopotamia, while colonies from the Late Uruk period acquired most of their material from the northern Mesopotamian sources. The changes over the course of the Uruk expansion demonstrate shifting emphases in the upper Euphrates from riverine trade routes oriented north-south back to overland trade routes running east-west. These changes are consistent with the idea that Late Uruk colonies were focused on settlement and colonization rather than exchange.

1B. Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods I

CHAIR: Yuval Gadot (Tel Aviv University)

Israel Finkelstein (Tel Aviv University), Oded Lipschits (Tel Aviv University), and Ido Koch (Tel-Aviv University), “The Mound on the Mount: A Possible Solution to the Problem with Jerusalem”

The conventional wisdom regards the City of David ridge as the original mound of Jerusalem. Yet, intensive archaeological research in the last century—with excavations in many parts of the ca. 6 hectare ridge—has proven that between the Middle Bronze Age and Roman times, this site was fully occupied only in two relatively short periods: in the Iron Age IIB–C (between ca. the mid-eighth century and 586 B.C.E.) and in the late Hellenistic period (starting in the second half of the second century B.C.E.). Occupation in other periods was partial and sparse—and concentrated mainly in the central sector of the ridge, near and above the Gihon spring. This has presented scholars with a problem regarding periods for which there is either textual documentation or circumstantial evidence for significant occupation in Jerusalem; we refer mainly to the Late Bronze Age, the Iron Age IIA, and the Persian and early Hellenistic periods.

In this paper we wish to put forward a solution to this riddle. Following the suggestion of Knauf regarding the Late Bronze Age and Iron Age I, we raise the possibility that similar to other hilly sites, the mound of Jerusalem was located on the summit of the ridge, in the center of the area that was boxed-in under the Herodian platform in the late first century B.C.E.

Yuval Baruch (Israel Antiquities Authority), “The Temple Mount: Results of the Archaeological Investigations of the Past Decade”

The unique religious nature of the Temple Mount has hindered its archaeological exploration, creating a lacuna in reconstructing the history of the mound and its status throughout Jerusalem’s past. The lack of data from the Temple Mount has also allowed for the proposal of theories based on the lack of evidence originating from well-defined archaeological contexts, which have been difficult to prove or disprove as a result of the missing data. Despite the difficulties and limitations, archaeological observations, inspections, and small-scale excavations have retrieved significant data, which in conjunction with previous research of the mound, can shed light on the sequence of human activity on the mound and its nature, and influence the proposed theories mentioned above. The following paper will present the archaeological materials produced over the last decade originating on the Temple Mount, and consider how these data influence hypotheses on the nature of the mound.

David Gurevich (The Hebrew University of Jerusalem) “Ancient Water Supply, GIS, and Archives: The Northern Aqueduct of the Temple Mount”

In 1871, during development works in the Old City of Jerusalem, the German scholar C. Schick discovered a fragment of the previously unknown Northern Aqueduct. The starting point of this fragment (also known as ‘The Damascus Gate Channel,’ and ‘The Hasmonean Channel’) is situated near the Damascus Gate, from where the rock-cut channel descends to the southeast, until it is intersected by the west wall of the Temple Mount compound. The water source of this aqueduct and its route outside the city walls remain unknown today.

However, in the 19th century, Schick continued searching for the remains of the Northern Aqueduct outside the city walls, conducting surveys and excavations, and reporting consistently on his progress to the Palestine Exploration Fund (PEF) in London. This paper studies the unpublished reports of Schick’s work that the author left in the PEF archives. The research aims to reconstruct the route of the aqueduct by putting together Schick’s information. The research applies methods of Geographic Information System (GIS) analysis to the data of 19th century archaeological work, historic documents, and topographical information. The conclusions propose locating the possible water source for the Northern Aqueduct at a site ca. 1 km north of the Old City.

Guy Steibel (Tel Aviv University), “A Light Unto the Nations”—Symbolic Architecture of Religious Buildings”

The construction of three religious compounds is ascribed to Herod the Great: The Temple Mount in Jerusalem, the Cave of the Patriarchs, and the Terebinths of Mamre (Alonei Mamre). The architectural denominator that is common to all three of these buildings is the use of pilasters in decorating their outer walls. Until recently research has stressed the monumentalism and the aesthetic considerations in the use of this element. Nonetheless in this paper I wish to examine the meaning of the use of the pilaster motif from a stylistic and iconographic viewpoint and stress the inset spaces between the engaged pillars. I will trace the roots of this tradition, which has its beginnings in the Temple of Solomon and in the somewhat obscure expression “windows with recessed frames,” the Temple Scroll, the Babylonian Talmud, and Midrashic teachings. These will help to illustrate that behind the decorative motif that adorns the walls of the Temple Mount compound stands an ideology that signifies Jewish religious construction; it testifies to the restrictions the architects that designed the religious buildings faced and the solution that was presented to allow an interface between the divine and the human worshippers. Lastly, the reuse of the pilasters in the construction of the Roman temple that precedes the building of the Holy Sepulchre indicates the transformation of holiness within the city of Jerusalem.

Beatrice St. Laurent (Bridgewater State University), “Mu’awiya’s Urban Vision for Early Islamic Jerusalem, 638–680”

This paper explores the monumental and urban development of early Islamic Jerusalem or Beit al-Maqdis by Mu’awiya—the first Umayyad caliph or (his preferred title) Commander of the Faithful. From 638 to 680, he

envisioned and initiated an expansive program of religious and administrative growth of the city. What he found on arrival was a site in partial ruin, including the sanctuary's southeast wall, remnants of the Triple and Double Gates in the south wall, and the Golden Gate in the east wall. The sanctuary's eastern side was much lower than the level of the Golden Gate to the south wall. He first reconstructed the southeast wall and constructed his mosque in the southeast corner on ruins of earlier construction employing materials from those ruins in secondary usage—a method employed earlier in his palace of Sinnabra by the Sea of Galilee. He further rebuilt the Triple and Double Gates, added the Single Gate and its underground passage to his palace, and renovated the Golden Gate. There is legitimacy (not explored here) to attribute to Mu'awiya the planning and initial construction of the Dome of the Rock and its platform dictated by the topography of the site, as well as the northern and western entrances to the sanctuary leading to the upper platform. He built his palace south of the mosque and possibly initiated construction of the administrative structures to the west. A current excavation in one of those later Umayyad structures may support foundational construction of the seventh century.

1C. Integrating Organic Residue Analysis into Archaeology (Workshop)

CHAIRS: Andrew J. Koh (Brandeis University) and Kate J. Birney (Wesleyan University)

Elsa Perruchini (University of Glasgow), Claudia Glatz (University of Glasgow), and Jaime Toney (University of Glasgow), “Can't Touch This!: Preventing Excavation and Post-Excavation Contamination”

Organic residue analysis (ORA) today is an established analytical approach in archaeology, enabling us to engage with questions of ancient diet, artifact function, and cultural identity and practice more broadly. There is a growing trend in the archaeological literature to present ORA data as both easily obtainable and interpretable. The reality, however, is not so simple. There are still many challenges in ORA field research that are rarely, if at all, addressed in print and, thus, remain little understood. This is especially the case for issues related to the contamination of ORA samples during post-excavation handling and storage and how this affects analytical results.

Based on the results of ORA samples collected as a part of the Sirwan Regional Project at the Khani Masi excavations in the Kurdish region of northeastern Iraq, this presentation highlights some of the most significant sources of excavation and post-excavation sample contamination, illustrates their potential for misinterpretation, and proposes an on-site sampling protocol to minimize contamination.

Zuzana Chovanec (Tulsa Community College), “Transforming Chemistry into Anthropology: Issues in the Interpretation of Analytical Results”

The role of organic residue analysis (ORA) in archaeological research has shifted from being an intermittent side project of interested analytical specialists to becoming a standard component of an archaeological research program. As an increasing number of archaeologists are trained in both excavation and analytical techniques, ORA becomes increasingly technical and specialized, with much explanatory time being directed towards integrating scientific data with archaeological material correlates. Less attention may be given to the interpretative progression from archaeological site, through scientific analysis, and ending in broader anthropological applications. This discussion will address some potential issues to consider.

Alison M. Crandall (University of California, Los Angeles), “Field ORA in the Storerooms of Tel Kabri”

As one of the longest sustained organic residue analysis (ORA) fieldwork initiatives, fourteen field seasons of the ARCHEM project allow for some reflection pertaining to how students can approach scientific analysis in archaeology by examining the evolution of lab-field integration within established archaeological networks and structures. The ARCHEM team's recent work at the archaeological site of Tel Kabri, an excavation led by co-directors Assaf Yasur-Landau and Eric H. Cline, offers a model for carrying

out ORA in “real time” in the field. This presentation will use examples from the three latest field seasons at the Middle Bronze Age Canaanite palace at Tel Kabri, focusing on the wine complex first discovered in 2013 and subsequently elucidated by ORA. This presentation offers a brief overview of the methodologies, practices, and problems presented by the integration of lab and field, and how these approaches can be adapted to suit established networks and structures.

Andrew J. Koh (Brandeis University) and Kate J. Birney (Wesleyan University), “The Value of Legacy ORA Data and Objects: Case Studies”

How old is too old? How outdated is too outdated? This short presentation highlights the value of both legacy objects as well as “legacy” organic residue analysis (ORA) data through the exploration of a few meaningful case studies. These include objects excavated—or sampled—some time ago, as well as more recent objects stored in what might be considered less than ideal conditions for scientific study. We offer a fresh look at these diverse legacy sources of ORA data, and address how they can inform ongoing archaeological research and how legacy ORA data and newly acquired data from legacy objects can best be incorporated into the OpenARCHEM archaeometric database.

Andrea M. Berlin (Boston University), “The Levantine Ceramics Project”

I will offer brief remarks on the feasibility of adapting the open-access, crowd-sourced format of the Levantine Ceramics Project digital application to other types of archaeological data.

Anna K. Krohn (Brandeis University), “Designing the OpenARCHEM Archaeometric Database”

This portion of the workshop will address the various stages of the OpenARCHEM platform and database from conception to beta rollout. It will cover the various challenges encountered throughout the process, the features of the platform, a look at data storage, and an explanation of how data entry and retrieval were envisioned in such a way to encourage ongoing adaptability for maximum openness and participation.

1D. Ancient Inscriptions I

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

Brent Davis (University of Melbourne), “The Phaistos Disk: A New Way of Viewing the Language behind the Script”

In this presentation, I introduce a new, linguistics-based method of analyzing the behavior of signs in the Aegean family of scripts (Linear A, Linear B, Cypro-Minoan, the Cypriot Syllabary, and the script on the Phaistos Disk). Using this method on two scripts at once results in metrics expressing the likelihood that both scripts encode the same language. As the method is based solely on the behavior of the signs (not their phonetic values), it can be applied to the undeciphered scripts as well as the deciphered ones.

When this method is applied to the two deciphered scripts (Linear B and the Cypriot Syllabary, which both encode Greek), the results indicate a 97% probability that the two scripts encode the same language, without the analyst needing to know the phonetic values of any of the signs. When the Cypriot Syllabary and Linear A are analyzed together, this probability falls to 55%, indicating that Linear A does not encode Greek. A similarly low result (45%) is obtained when Linear B and the Phaistos Disk are analyzed together.

When Linear A and the Phaistos Disk are analyzed together, however, the probability that both encode the same language rises to over 98%. This is new. Though it has long been recognized that both scripts are Minoan inventions, no one has yet been able to demonstrate in a convincing way whether or not they encode the same language. This is an important step forward in the study of both scripts, with implications for eventual decipherment.

Federico Zangani (Brown University), “The Satirical Letter of Hori on 8 Ostraca from the Museo Egizio of Turin”

This paper sets out to present eight hieratic ostraca from Deir el-Medina

bearing passages from the Satirical Letter of Hori, currently kept in the Museo Egizio of Turin. This text is known mainly from P. Anastasi I, and has received far less attention than it would deserve due to the linguistic and interpretational challenges it poses. This paper will study these ostraca philologically and assess how they relate to the main manuscript and how they contribute to our knowledge of this text. Broader considerations will be made concerning its language, content, and cultural significance within the context of a workmen's community in the late New Kingdom.

Aren Wilson-Wright (Universität Zürich), “Māt Gets a Promotion: A Revised Reading of Sinai 349”

At seven lines, Sinai 349 is one of the longest early alphabetic texts from the Egyptian mining district at Serabit el-Khadem and an important piece of evidence for alphabetic writing in the early second millennium B.C.E. Unfortunately, time has not been kind to Sinai 349. The last four lines of the inscription are badly pitted and abraded. In 2013, I examined a plaster cast of Sinai 349 held in the Harvard Semitic Museum and produced an RTI (Reflectance Transformation Imaging) image of it. This new image allows us to recover additional letters from the last four lines of the inscription and clarify the reading of the first three lines. Based on these new readings, I argue that Sinai 349 is a commemorative inscription that records a votive act performed by Māt, Chief of Miners (*rb nqbn m*) for the goddess Ba'lat. Māt also appears in four other inscriptions from Serabit el-Khadem, two of which—Sinai 351 and 353—were inscribed in the vicinity of Sinai 349. In Sinai 351, Māt refers to himself as a humble ‘miner and extractor’ (*nqb w-lt*). I suggest therefore that Māt performed a votive action and produced Sinai 349 to commemorate his promotion from miner to chief of miners.

Douglas Petrovich (The Bible Seminary), “Egyptian Elements in the Proto-Consonantal Hebrew Inscriptions of the Bronze Age”

Orly Goldwasser (*Biblical Archaeology Review* online, 2010) has suggested that the world's first alphabet was invented by illiterate miners from Sinai. However, external and internal evidence related to the proto-consonantal Hebrew inscriptions of Egypt's Middle and New Kingdoms provides ample reasons to suggest that the alphabet's Semitic originators instead were residing in Egypt proper, not in Sinai. The focus will be restricted to four inscriptions: the Lahun Bilingual Ostrakon, Sinai 345a, Sinai 351, and Sinai 375a. The Lahun Bilingual Ostrakon includes a commonly used Egyptian regnal dating formula written in hieroglyphics, and the alphabetic inscription ends with a *nsw* glyph that refers to the Egyptian king. Sinai 345a features Egyptian iconography and a bi-lingual text that was inscribed in Middle Egyptian and alphabetic Hebrew. Sinai 351 clearly alludes to the damaging effects of a Nile inundation that caused the floodplain to be “twice as swollen” as normally was experienced along its banks. Sinai 375a includes typical Egyptian iconography, hieroglyphs interspersed among the alphabetic letters, and a standard Egyptian administrative office.

Jessie DeGrado (University of Chicago), “The God ŠYY in the Second Amulet from Arslan Tash”

Of the two amulets acquired by R. du Mesnil du Buisson at Arslan Tash in 1933, the second (AT2) is less well understood. Among the difficulties posed by the text is the identification of the divine entities and epithets on the amulet's obverse. MZH, the demonic adversary in line 1, is otherwise unattested in the epigraphic record. Also unknown is the identity of the god ŠYY {il šyy} who appears in lines 3 and 6. I argue that this deity should be identified with the god Š'Y {il .šiy}, attested in KTU 1.12: 22 (= RS 2.[012]). In addition to providing context for the habitat and activities of MZH, the identification of the god ŠYY has implications for the debate surrounding the amulet's authenticity. The *editio princeps* of KTU 1.12, which contains the only other reference to this divine figure, did not appear until 1935, two years after du Mesnil du Buisson acquired the Arslan Tash amulets. This speaks strongly in favor of the amulets' authenticity.

Tracy Spurrier (University of Toronto), “Not Just Another Brick in the Wall: New Shalmaneser III Inscriptions in the Nimrud Tombs”

When the Iraqi Department of Antiquities excavated Tomb II at Nimrud, they found inscribed grave goods for three different Neo-Assyrian queens. However, only two adult female skeletons were present, both interred in the same stone sarcophagus but at different times. The objects name Yaba', Banitu, and Ataliya, documented as being the wives of Tiglath-Pileser [III] (744-727 B.C.), Shalmaneser [V] (726-722 B.C.), and Sargon [II] (721-705 B.C.), respectively. Regarding the skeletons, the palaeopathology report indicated they were buried 20–50 years apart. Based on this data and the presumed dates of the inscriptions, it has been thought the skeletons must be that of Yaba' and Ataliya with Banitu's body missing.

Recently, by looking at 2008 photographs of the Nimrud Tombs from an assessment done by the US Army and Iraqi Department of Antiquities, I have identified previously unpublished brick inscriptions in situ in the tomb walls naming Shalmaneser III (858-824 B.C.). This evidence suggests he built Tomb II moving the construction date 100 years earlier. Based on this new information, I propose he constructed it for his wife, Banitu, who should be associated with him and not his later namesake Shalmaneser V.

This paper presents the new brick inscriptions with a reexamination of the grave goods, in particular the inscribed items, and the osteological evidence. It will include a revised chronology for tomb use, and re-use, as well as attempt to identify the skeletons hypothesizing which queens' bodies are present and who is missing.

1E. Reports on Current Excavations

CHAIRS: Jack Green (Cornell University) and Robert Homsher (Harvard University)

Carrie Duncan (University of Missouri), Robert Darby (University of Tennessee, Knoxville), and Erin Darby (University of Tennessee, Knoxville), “The 2017 Season at the ‘Ayn Gharandal Archaeological Project, Jordan”

Since 2010, the 'Ayn Gharandal Archaeological Project has focused on the excavation of a fourth century Roman fort and ancillary buildings in southern Jordan. In 2017, the project anticipates completing the excavation of a structure first partially revealed during the 2015 season, which initial indications suggest is a small church. The construction of churches within Roman forts is a typical practice beginning in the fifth and sixth centuries in Jordan, with examples at Deir el-Khaf, Qasr el-Ba'iq, and Udruh, among many others. While the hypothetical church at 'Ayn Gharandal fits within this general architectural trend, there is reason to believe it is a very early example of this phenomenon: five seasons of excavation have yielded no conclusive evidence of occupation at 'Ayn Gharandal beyond the fourth or early fifth century. A fourth century church at Gharandal would be among the earliest purpose-built Christian structures in a military context found in the eastern Roman Empire and offer insight into changes in religious practices among soldiers stationed along the eastern frontier.

James Riley Strange (Samford University), “A Report of the 2016 and 2017 Shikhin Excavation Project”

This report will lay out the evidence for pottery and lamp production at the Hellenistic and Roman site of Shikhin that were uncovered in the 2016 and 2017 excavation seasons. It will also discuss the excavation of the badly robbed out public building at the site, probably a synagogue.

Michael G. Hasel (Institute of Archaeology, Southern Adventist University), “Socoh of the Judean Shephelah: The 2010 Survey”

In 2010 an intensive survey was completed of the site of Khirbet Shuweikah/Socoh on the southern edge of the Elah Valley in Israel. This paper will present an overview of research at the site and a summary of the final conclusions of the project. Finally, it will suggest how the history of the site of biblical Socoh adds to our understanding of regional developments in Iron Age Judah.

Nicholaus Pumphrey (Baker University) and Ann E. Killebrew (Pennsylvania State University), “Tel Akko Total Archaeology Project: Preliminary Report on Eight Seasons of Excavation and Survey”

Throughout its 3000 year history, Tel Akko (Israel) has served as a major Canaanite and Phoenician maritime center in the eastern Mediterranean. Situated where the Naaman River and Mediterranean Sea meet, the tell was a major ancient commercial and industrial site for the Akko Plain and beyond, producing glass, dyes, pottery, and metals. This paper presents the results of eight seasons of excavation (2010–2017) in Area A and the pedestrian survey of the mound under the direction of Ann E. Killebrew (Pennsylvania State University) and Michal Artzy (University of Haifa), with a focus on the first millennium B.C.E. Phoenician remains at the site. These findings are considered together with the unpublished results of Moshe Dothan’s large-scale investigation of the mound between 1973 and 1989. The highlights include the presentation of the substantial iron working industrial area that dominates the crest of the tell, a re-examination of the Phoenician inscriptions from Area A, and an analysis of Akko’s role in the region during the Neo-Assyrian, Neo-Babylonian, Persian, and Hellenistic periods.

Erez Ben-Yosef (Tel Aviv University), Sabine Kleiman (Tel Aviv University), and Assaf Kleiman (Tel Aviv University), “Social and Chronological Aspects of Early Iron Age Copper Production in the Southern Arabah: New Ceramic and Radiocarbon Studies of the Central Timna Valley Project (CTV)”

Commenced in 2012, the Central Timna Valley Project of Tel Aviv University is focused on elucidating various aspects of the archaeological record in the vicinity of the copper ore deposits of the southern Arabah, employing a multidisciplinary approach (<http://archaeology.tau.ac.il/ben-yosef/CTV/>). Here we report on the rich ceramic assemblage retrieved from Site 34 (“Slaves’ Hill”)—one of the largest smelting camps in the region—and the accompanying suite of radiocarbon dates, which confines the site’s occupation between the late 11th and late tenth centuries B.C.E. A detailed analysis of hundreds of indicative sherds indicates that the pottery assemblage can be typologically defined as Iron Age I, and that the occupation of the isolated hilltop was limited to activities related to copper smelting, further strengthening the hypothesis that habitation took place in transient encampments nearby. Coupled with the radiocarbon results and historical considerations regarding the impact of Shishak’s campaign on the copper industry, the study provides important evidence for continuation of Iron Age I pottery tradition into the second half of the tenth century B.C.E. Typological comparison to other sites in Timna (e.g., Sites 2, 30, and 200) demonstrates that the peak in production in the valley occurred during the period represented by Site 34, i.e., the first half of the tenth century B.C.E. The radiometric dating, together with the richness of the ceramic assemblage and the presence of imported Qurayyah Painted Ware, places Site 34 in a key position to study the early Iron Age in the Arabah Valley and adjacent regions.

Daniel Warner (New Orleans Baptist Theological Seminary), “One Thing Leads to Another’: New Insights on the Development of Tel Gezer from Eight Seasons of Excavations of the Gezer Water System”

After eight seasons of excavations of the Gezer water system, it became necessary to expand out beyond the water system itself in order to help determine its date. This has led to new discoveries that have a significant impact for the dating of the water system and the overall development of the site of Tel Gezer. The new discoveries are the result of the complete exposure of fills and features under the interior façade of the gate complex all the way down to bedrock. This had not been seen since Macalister exposed this area in the early 20th century, but even then it was never photographed or talked about in any of his reports. Hence new information is revealed starting with the Chalcolithic occupation of the site to the sequence of construction for the Canaanite gate.

IF. Archaeology of the Ancient Near East: Bronze and Iron Ages I

CHAIR: Eric Lee Welch (University of Kansas)

Susan Cohen (Montana State University), “Diet, Drink, and Death: The Transition from the Intermediate to the Middle Bronze Age in the Southern Levant”

Both continuity and change mark the transition from the Intermediate Bronze Age to the Middle Bronze Age I in the southern Levant, and evidence for both connection and disjunction may be found in social customs, settlement patterns, and economic organization in both eras. These associations and transitions are particularly notable in certain social practices, namely, diet, drinking, and the customs surrounding the disposal of the dead, the last of which frequently also incorporates the first two. Evidence from both settlement and mortuary contexts suggests that there were considerable changes in subsistence, diet, and the consumption of food and drink between these two eras, yet, at the same time, mortuary practices and settlement patterns also exhibit considerable continuity, suggesting more variable process of transition between periods than previously has been understood. Analysis of these social practices, using comparative data from excavated Intermediate Bronze Age and Middle Bronze Age I sites, further illustrates the transition between these eras.

Naama Yahalom-Mack (The Hebrew University of Jerusalem), Irina Segal (Geological Survey of Israel), and Israel Finkelstein (Tel Aviv University), “The Complexity of the Late Bronze Age Mediterranean Copper Trade: A View from the Southern Levant”

Cyprus was the most important source of copper for the Mediterranean region during the Late Bronze Age. This is indicated by textual evidence with numerous references to copper from Alashiya and by material evidence, mainly in the form of oxhide ingots that have been found in large amounts throughout and beyond the Mediterranean basin, including in Mycenaean Greece. Oxhide ingots have also been found in several cargos off the Carmel coast of modern Israel. This, and the evidence of significant trade with Cyprus, including much traded pottery, suggested that Cyprus was the main source of copper for the southern Levant during the Late Bronze Age. It thus has been surprising to see that the results of chemical and isotopic analyses of finished bronze objects from various Late Bronze Age sites in Israel, such as Hazor, Megiddo, and Tel Rehov, suggest otherwise. Besides Timna in the Arabah valley, which was under Egyptian hegemony during this time and responsible for some of the copper in the region, copper deposits on mainland Greece and on the Greek islands are considered as viable sources.

Igor Kreimerman (The Hebrew University of Jerusalem), “Destructions at the End of the Late Bronze Age: A Comparison between the Northern Levant, the Southern Levant, and Cyprus”

The end of the Late Bronze Age is characterized by many violent destruction layers. Recent studies have demonstrated that destruction layers reflect the processes that generated the destruction event they represent and that a careful examination of these destruction layers may identify these processes, such as earthquakes, social crisis, or conflict. The paper will present the results of a study that examined over a hundred destruction layers from the northern Levant, the southern Levant and Cyprus dating to the end of the Late Bronze Age. It will be argued that the collapse resulted from a number of processes, some related to internal conflicts between neighboring cities, while others could be related to groups of migrants. Furthermore, by applying a new tool, a typology for destruction layers, it is possible to outline the development of these processes and to suggest which specific sites were destroyed as part of each of these processes.

Margreet Steiner (Independent Scholar), “The Late Bronze Age Temple at Deir Alla: A Reassessment”

From 1960–1964 Henk Franken of Leiden University excavated a large Late Bronze Age temple at Tell Deir Alla in the eastern Jordan Valley; the finds were published in 1992. All in all some 16 rooms were exposed, including a cella, a treasury, a chapel, and several living spaces. The number of excavated

objects was staggering and included hundreds of ceremonial and household vessels, dozens of objects of faience, gold, bronze, alabaster and bone, several Mycenaean juglets, Mitannian seals, Egyptian scarabs, bronze scale armor fragments, and hundreds of beads, as well as ten clay tablets, some inscribed with a yet not deciphered script, and five so-called shrine pots. According to the excavator the temple was a trade sanctuary, not attached to any settlement, and used by local tribal traders and Egyptian middlemen.

However, much more information has since become available on Late Bronze Age temples in the Jordan Valley and beyond, and on the contemporary settlement excavated at Deir Alla. Several new comparative and technological studies of the finds have been published. It is time for a re-assessment of the temple, its architecture and layout, the distribution of the hundreds of objects found in it, the function of the complex, and its connection to the larger world of the Late Bronze Age empires. This new study is an offshoot of a book I am currently writing on the first five excavation seasons at Deir Alla (1960–1967), based on the personal archive of Henk Franken.

Tiffany Earley-Spadoni (University of Central Florida), Arthur Petrosyan (Institute of Archaeology and Ethnography, National Academy of Sciences, Armenia), and Boris Gasparyan (Institute of Archaeology and Ethnography, National Academy of Sciences, Armenia), “Digital Storytelling as Public Archaeology: Results from the 2017 Vayots Dzor Fortress Landscapes Project (Armenia)”

This paper will present preliminary results from the 2017 season of the Vayots Dzor Fortress Landscapes Project, a multi-year study which is investigating the historical development of fortress culture along a high alpine corridor in southern Armenia. Fortress culture peaked in this valley during the Iron Age and the medieval Silk Roads period. The survey area consists of a north-south corridor that runs along the Yeghegis River north to the Selim Pass (2400 MASL). An extensive survey was focused upon broad regional settlement and accomplished by vehicle-based discovery, pedestrian site exploration, and drone-assisted reconnaissance in remote, hilltop areas. Surface collection at sites and the documentation of visible architecture at forts and fortresses was a particular focus of the 2017 season of research. The presentation will conclude with an overview of a digital storytelling project completed by team members that aims to engage the public in the research that the team is doing in the region.

1G. Study of Violence from the Region of the Ancient Near East and Its Neighbors I

CHAIRS: Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University) and Leann Pace (Wake Forest University)

Tracy Lemos (Huron University College; University of Western Ontario), “Order from Chaos: The Mental and the Material in Explanations of Ancient Near Eastern Violence”

In the discipline of anthropology, the study of violence has undergone many of the same trends other areas have, with functionalist, instrumentalist, structuralist, materialist, poststructuralist, and postcolonial approaches all emerging and finding sway at different times and in different circles. In the study of the ancient Near East, however, approaches to violence and warfare have been seemingly far less varied. In both biblical studies and

Assyriology, what could be termed “mentalist” or “idealist” approaches that privilege ideas and beliefs have been far more important than materialist ones. Materialist methods, when they have been utilized, have tended toward the simplistic and the overly reductive.

This paper will seek to provide an overview of major proposals regarding violence and why it took the forms it did in ancient West Asia, as well as an assessment of which approaches have been the most fruitful. The paper will argue that the overemphasis on mythological and other idealist approaches has skewed understanding of violence in this region and that historians and text scholars of the ancient Near East would do well to incorporate frameworks such as “structural violence” and “new materialism” that take seriously both

material constraints on a population and cultural features in explaining violence. By doing this, biblical scholars, historians, archaeologists, and others can move beyond naïve proposals that display a lack of awareness of the aetiologies and contours of violence as it occurs in real societies.

Amanda Morrow (University of Wisconsin–Madison), “Poetics of Violence in Neo-Babylonian Period Judah: An Anthropological Approach to Violence in the Archaeological and Textual Record”

Saying that Judahite history is full of warfare and violence is an understatement. The texts from this period detail stories of physical, emotional, psychological, spiritual, cultural, and sexual violence by modern standards. Yet, can modern scholars discuss and interpret actions and events from antiquity as violence? Yes, but it requires that we remove our cultural conceptions of violence. Violence is a rhetoric that should be understood as a form of cultural expression. However, modern scholars are removed from ancient culture. Therefore, we have to find ways to discuss violence from the cultural framework of the ancient authors, actors, and receivers.

This paper looks at the anthropological approach pioneered by Neil Whitehead on the “poetics” of violence. Using Whitehead’s methodology in combination with similar anthropological approaches, I hope to create a framework to begin the discussion of violence in antiquity from both an archaeological and textual perspective. For practical application, I will focus on the archaeology of the Neo-Babylonian period in combination with texts from about the same period (i.e., the biblical books of Jeremiah and Ezekiel). With regard to the archaeological evidence, I will look at the various examples, including the way in which military operations other than war can be seen as a form of structural violence. For textual evidence, I will discuss the gendering of cities as female and the way this rhetoric is used to metaphorically promote domestic violence. Similarly, I will discuss the way the text uses monstification images as a form of othering.

Seth Richardson (University of Chicago) and Steven Garfinkle (Western Washington University), “Community Violence in the Middle Bronze Age”

This paper seeks to bridge a gap between, on the one hand, the spectacular and mass violence associated with ancient states, and, on the other, the relatively low incidence and intensity of “community violence”—the violence within households, between neighbors, and in judicial contexts. By focusing on the representation of the latter type in Middle Bronze Age Mesopotamian sources, we hope to put in context the very different moral

claims that states and communities put on bodies, first by documenting the infrequency and limited nature of violence in face-to-face communities, and then by giving attention to the force of alternative sanctions that made violence relatively unnecessary: stigma, shame, and damage to reputation.

Laura Battini (Laboratoire PROCLAC–Collège de France, Paris), “The Message of Violence and Its Audience in Third Millennium B.C. Mesopotamia”

This paper investigates the message of violence from iconological and textual data in third millennium Mesopotamia, with comparisons to other periods, especially the Neo-Assyrian one.

1H. Madaba Plains Project at 50: Tall Hisban

CHAIRS: Oystein S. LaBianca (Andrews University) and Lawrence Geraty (La Sierra University)

Lawrence Geraty (La Sierra University), “Contextualizing the Quest for Biblical Heshbon at Tall Hisban”

To what extent were the goals and accomplishments of the original Heshbon Expedition shaped by the expedition’s leadership’s efforts to navigate the goals and expectations of their academic colleagues, denominational sponsors, and Jordanian hosts? The paper will offer a brief overview of the hopes and aspirations of each of these groups of stakeholders and explain how the expedition’s leadership sought to satisfy, as far as possible, each one of them

while also advancing their own academic aspirations. To this end biographical details from the lives and careers of each of the founding directors, Siegfried S. Horn and Lawrence T. Geraty, (both at the time of the Theological Seminary at Andrews University) and certain of their core staff will be drawn upon to illustrate the shaping influence on the expedition of personal qualities and histories of individual leaders; of often conflicting ideas among core staff about priorities when it came to the goals of the expedition and to best practices for doing fieldwork; of the strains and stresses of limited finances and the hardships of camp life; and, last but not least, of visits by teams of ASOR CAP committee members. The paper will conclude by highlighting ways in which the original Heshbon Expedition set the stage for and provided the scientific vision, the know-how, and the leadership for what eventually became the Madaba Plains Project.

Bert de Vries (Calvin College), “Contextualizing the Quest for Early Christianity at Esbus”

To what extent was the quest for evidence of Early Christianity an explicit goal of the original Heshbon Expedition? The paper will inquire into the reasons why a partnership was formed with Calvin College and Calvin Theological Seminary, and several of their faculty, as part of the planning and execution of the original Heshbon Expedition. In particular the paper will examine the career and contribution of Bastiaan van Elderen, Professor New Testament at Calvin Theological Seminary, focusing especially on his role in leading the excavation of the Early Christian basilica at the Hisban summit. The priority given to careful documentation of architectural remains and to the recording of mosaics by a team of architects and conservators will be highlighted. The paper will conclude by contextualizing the contribution of the Heshbon Expedition to advancing research on the history of the Late Antique period in Jordan and beyond.

Bethany Walker (University of Bonn), “Contextualizing the Quest for Islamic Housban at Tall Hisban”

To what extent did the original Heshbon Expedition help pave the way for Islamic archaeology in Jordan and what are some highlights of recent research focused on this era at the site? The paper will reflect on the circumstances that opened a way forward for an archaeology of the Islamic period at Tall Hisban by the original Heshbon Expedition, despite the fact that such an emphasis was not part of the original research agenda. These include the large amount of pottery and architecture found at the site by the original Heshbon Expedition; the project’s location in an Islamic country; the meticulous manner in which excavations were carried out no matter the historical context; and the participation on the project of an extra-ordinary ceramics expert, namely James Sauer. These and related factors will be critically examined and contextualized in light of the state of Islamic archaeology at the time of the original Heshbon Expedition. The paper will conclude by a look at what is happening presently in Islamic archaeology at Hisban and elsewhere in Jordan and what the opportunities are that lie ahead.

Frode Jacobsen (Western Norway University of Applied Sciences), “Al Musallah: Local Ideas about Tall Hisban”

What sort of a place was Tall Hisban before the foreign expedition arrived, and how did this change with the arrival of the team, in the imaginings of its present population? The paper will report on interviews with local residents about this question over three field seasons by the presenter, a social anthropologist and ethnographer. Of special interest is the name by which the site is known locally, namely Al Musallah, place of prayer. The extent to which the summit of Hisban was a indeed a place of prayer for locals will be dealt with as part of a more general discussion of sacred aspects of Tall Hisban in the conceptions of present-day local inhabitants. The paper will conclude by offering reflections on the process of place-making by different groups: local residents, immigrants, the archaeological team, NGOs, and the government of Jordan and its tourism ministry and officials. This includes discussing how local people make sense of the past, present, and possible future of the mound and the surrounding village of Hisban by taking all those actors into account.

Oystein LaBianca (Andrews University), “Contextualizing the Quest for Theories of the *Longue Durée* at Tall Hisban”

To what extent has the quest for theories of the *longue durée* at Tall Hisban produced cumulative understanding of patterns of diachronic cultural change in Jordan? Past efforts to theorize the dynamics of long-term cultural changes at Tall Hisban began with the food systems perspective and the related notions of cycles of intensification and abatement and episodes of sedentarization and nomadization. While useful for understanding the adaptive strategies of the population to their local environment, the perspective tended to minimize the role of historical factors. To overcome this limitation Robert Redfield’s structure of traditions framework was found to be useful, especially his notions of Great and Little Traditions. More recently it has become clear that both the food systems and the structure of traditions framework could be incorporated within an even broader theoretical perspective, namely that of global history and the Anthropocene, which is concerned with tracing the processes whereby humans acquired the ability to overwhelm natural forces.

II. Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands I

CHAIRS: Uri Davidovich (The Hebrew University of Jerusalem) and Ido Wachtel (The Hebrew University of Jerusalem)

Dina Shalem (Kinneret College on the Sea of Galilee), “Was There a Galilean Cultural Entity in the Late Chalcolithic Period?”

Rapid demographic, cultural, and technological changes occurred during the middle of the fifth millennium B.C.E. in the southern Levant. In the Galilee, settlements in the coastal plain were abandoned while an increase in the number and size of settlements can be seen in the mountainous area. At the same time, secondary burials became the common burial custom, as demonstrated in Peq’in Cave. Ceramic shapes that appeared in the early fifth millennium (e.g., churns, triangular handles) were now predominant, while regional traits such as red slip and rope decoration distinguish Galilean ceramic assemblages from more southerly ones. Typical ‘northern’ flint discs are found in Galilee, but also copper-, hematite-, and ivory-based artifacts that find parallels in the southern areas. Reviewing the entire spectrum of material culture, several questions arise concerning the Late Chalcolithic in Galilee: Was this region part of the Ghassulian culture known from southern and central Cis- and Trans-Jordan, or should it be considered a different (‘Galilean’) culture, similarly to the so-called “Golanian” located to the east? Alternatively, should the classical division of regional cultures be reconsidered? And, above all, did Galilee play a significant role in developing and spreading new cultural traditions?

Austin Hill (Dartmouth College), Yorke Rowan (Oriental Institute, University of Chicago), and Morag Kersel (DePaul University), “Filling in the Gaps: Fifth Millennium B.C.E. Villages in the Galilee”

Current research on the Chalcolithic period in the southern Levant is at a key juncture. There remains no consensus on where Chalcolithic society fits within neo-evolutionary types (e.g. egalitarian, chiefdom), and most data derive from sites located in the Negev and Jordan Valley, most incompletely published. The Galilee continues to represent an under-studied area, although archaeologists acknowledge that the region was occupied and used for novel human burial practices. The expansion of populations during the Chalcolithic is evident elsewhere by the increased number of settlements in the marginal zones; is this pattern true for the Galilee? In this paper we examine the patterns of known Chalcolithic sites in the Upper and Lower Galilee. We will discuss how these sites are situated on the landscape relative to patterns identified in other surveyed areas, particularly the northern Negev.

Uri Davidovich (The Hebrew University of Jerusalem), “The Emergence of Highland Politics: Qadesh and the Upper Galilee during the Early Bronze Age”

The transition from the EB I to the EB II in the southern Levant (ca. 3000

B.C.E.) is marked by wide-ranging changes in settlement patterns, highlighted by the emergence of numerous fortified settlements, as well as in material culture production, distribution, and consumption modes. These changes indicate a deep social transformation and constitute the basis for the definition of the EB II as the first urban period in the Levant. One of the primary regions of investigation of the urbanization process is northern Canaan, where the system of walled towns was economically interconnected by the distribution of the North Canaanite Metallic Ware (NCMW) pottery. This paper presents the results of a systematic survey and a pilot excavation in the newly identified Early Bronze Age mega-site of Qedesh, surrounding the biblical mound of Qedesh in the Upper Galilee, and discusses its probable role as the social and economic center of a large territorial polity, possibly heading the NCMW-related settlement system. It further examines the settlement dynamics in the Galilean highlands throughout the Early Bronze Age based on a re-evaluation of past surveys, and portrays its distinct regional trajectory towards urbanism.

Ido Wachtel (The Hebrew University of Jerusalem), “Settlement Shifts and Demographic Changes in the Upper Galilee during the Bronze and Iron Ages”

My research examines afresh the settlement patterns of the mountainous Upper Galilee (northern Israel) during the Bronze and Iron Ages (ca. 3700–732 B.C.E.). It is based on a new fieldwork project and novel approaches that were developed specifically for this research in order to investigate how broad socio-political changes are reflected in the mountainous Galilee in comparison to neighboring areas and other highland regions in the southern Levant. The new data were collected during a systematic site survey, the results of which were analysed using various GIS and locational modeling methods. The analyses enabled a better evaluation of settlement size and intensity during different periods, as well as more nuanced identification of locational preferences and subsistence strategies. These, together with more accurate chronology based on larger survey collections compared with previous surveys in the region, constitute the basic variables needed in order to discuss changes in settlement patterns, ancient demography, and human exploitation of natural resources through time.

Karen Covello-Paran (Israel Antiquities Authority), “Socio-economic Strategies at Ramat Razim, a Mid-second Millennium B.C.E. Site on the Slopes of Mt. Canaan, Upper Galilee”

The ancient settlement of Ramat Razim is located on the southern slopes of Mt. Canaan, southeast of Zefat. The slopes of Ramat Razim are built of hard Eocene limestone, creating a rough terrain of exposed rocks. Excavations at Ramat Razim uncovered well-preserved architectural remains of a small hamlet that was founded in the Middle Bronze Age and abandoned during the Middle Bronze–Late Bronze Age transition. Nineteen rooms of a large multi-room building were exposed, while only half of it was excavated. The building was constructed on a slope, resulting in terraced or stepped architecture. The walls, often preserved 1 m high, were partly protruding above the modern surface prior to excavation. The massive stone collapse in most rooms provided evidence for a stone superstructure. Preserved installations include circular storage bins, ovens, and stone slab worktables. Large quantities of storage vessels were found in situ along the walls. In other cases, large pithoi were embedded into the floors and served as non-mobile installations. Following the site’s abandonment it was never resettled, most likely due to the challenging landscape or socio-political changes. This paper will discuss the settlement dynamics of this short-lived rural settlement, with emphasis on its perceived socio-economic connections with Tel Hazor.

IJ. The Cultural Mosaic of Maresha: Reconstructing Domestic and Ritual Life from Subterranean Contexts

CHAIR: Ian Stern (Hebrew Union College; Archaeological Seminars Institute)

Ian Stern (Hebrew Union College-Jewish Institute of Religion, Jerusalem; Archaeological Seminars Institute), “The Cultic Remains from Maresha Subterranean Complex 169”

Maresha is located in the Judean Shephelah, 35 km east of Ashkelon and 40 km southwest of Jerusalem. Our discovery of Subterranean Complex 169 occurred in 2000, when we noticed a small entrance to this cave next to plastic bottles left behind by antiquity robbers. They had apparently worked in the complex just before we discovered it. During the past 16 years, in this excavation directed by Bernie Alpert and myself, we have uncovered an almost unprecedented number of cultic finds that will be discussed in this session. Much of the material presented here will be part of our forthcoming final report on this subterranean complex.

We have discovered approximately 500 Greek and Aramaic ostraca, including ca. 140 Aramaic divination texts. In addition, we have uncovered hundreds of stamped amphora handles, as well as a large variety of figurines, astragali, altars, aniconic kernos lamps, seals, and stamps. In this paper I will try to not only introduce the cultic finds (some of which will be elaborated on in the other papers in this session) but also expand upon their relationship to other areas in Lower Maresha. More specifically, I will focus on the connection of our finds to Subterranean Complex 57 where we discovered the Heliodorus stele as well as to the nearby shrine.

Adi Erlich (University of Haifa), “Terracotta Figurines from SC 169: Between Koine and Local Traditions”

Subterranean Complex 169 has yielded hundreds of terracotta figurines and fragments dated to the fourth–second centuries B.C.E. Most of the figurines are of Hellenistic types, whereas only a small group is of Persian period types. The Hellenistic assemblage is varied and composed of images of deities, as well as figurines that reflect ritual and daily life. Greek, Ptolemaic, and Asiatic gods and goddesses are common in the assemblage. A rather large group of female busts was found in the cave, as well as a mold, attesting to the manufacture on site of protomes. Large-scale figurines may have belonged to ritual and portray cult images. Cult is further attested to in the depiction of kouroi and dancers. Rhyta shaped as horses and camels may have also been related to ceremonies. The daily life of Maresha is expressed through images of children, pupils, and actors. The economy of Maresha is reflected in images of camels and chicken, including a rare type of a young man holding two chickens. Along with the Greek-Hellenistic types, there are also local types unique to Maresha and its surroundings, such as Hellenistic pillar figurines, as well as a red-slipped standing woman in a hieratic pose. The rich and diverse repertoire of figurines from Subterranean Complex 169 attests to the cult and daily life at the site. The city took part in the Hellenistic koine, but at the same time continued to preserve its local character and traditions.

Gerald Finkielsztein (Israel Antiquity Authority), “Hellenistic Maresha: Instrumenta, Trade, Administration, and History”

The Hellenistic city of Maresha, abandoned in 108/7 B.C.E., produced thousands of artifacts of all sorts, often complete or restorable, in situ in dwellings and shops of the Lower City or in subterranean complexes connected to them, mostly refuse dumps following the disuse of their installations. Among them, imported amphoras, stamped (and therefore dated) or not, are evidence for trade with all the Mediterranean and Aegean seas. Local inscribed and often dated scale weights (from excavations and private collections) provide information on the organization of supply, especially its control by the *agoranomos*, the only known magistrate of the city, and the metrology on which it was based. So does a *sekoma* for delivering measured quantities of liquids found in a shop, inscribed with the names of two *agoranomoi*, acting in 143/2 B.C.E. Besides trade, by themselves these *instrumenta* provide information on the fluctuation of activities in the city (stamped amphoras, ca. 240–108

B.C.E.), and the origin of its standards (ca. 173–108 B.C.E.). Comparisons of these data with literature and contemporary *instrumenta* and coins of the Seleucids or neighboring cities (mostly Phoenician) show that they can be linked with historical events, such as local conflicts or the imposition of the weight standard by Antiochus IV. To a limited extent, the data compensate the absence of civic stone inscriptions in the southern Levant, concomitant with that of the traditional Greek city public buildings (so far). Still lacking is the study of the “bag-shaped” amphoras to understand the regional trade.

Esther Eshel (Bar Ilan University), “The Aramaic Texts from Maresha”

During the course of our excavations in the lower city of Maresha a significant number of finds that can be categorized as “cultic items” have been uncovered. Most of these finds are from subterranean complexes that contain anthropogenic debris dumped inside during the Hellenistic period from surface dwellings and therefore, unfortunately, lack a clear stratigraphic context. Nevertheless, the finds in these “dumps” can still be dated typologically. They range chronologically from the fourth to late second centuries B.C.E. These include 50 astragali, aniconic kernos lamps, and models of chalk phalli. A very large concentration of these items was discovered in one particular subterranean complex, SC 169.

In addition to these discoveries we also found in this particular cave system over 400 ostraca, 356 of them in Aramaic and 55 in Greek. Included in this collection is a group of more than 100 Aramaic ostraca, dating to the third century B.C.E., that share a common formula. This group of texts is not homogeneous in content, and is to be sub-divided into various genres, which remain to be determined. We tentatively suggest two possible identifications. The assembly of ostraca might originally have been part of a scribal school’s curriculum. Another, more credible possibility is that they were connected with a temple. In this case, the ostraca would be identified as texts recording divination and similar activities.

The question that must arise is what connection, if any, can be found between these cultic items and the epigraphic material found with them.

2A. The Archaeology of the Kurdistan Region of Iraq I

CHAIR: Jason Ur (Harvard University)

Gil Stein (University of Chicago), “Kurdish Chalcolithic Conundra: Regional Identities and Local Variation at Surezha and Greater Mesopotamia”

Although much scholarship has focused on the emergence of towns and cities in southern Mesopotamia, archaeologists still know little about comparable developments in northern Mesopotamia and especially Iraqi Kurdistan, due to the rarity of archaeological fieldwork focused on Chalcolithic developments in this region. A key impediment to our understanding of the late prehistory of Iraqi Kurdistan has been the imposition on northern regions of chronologies grounded in southern Mesopotamia. These chronologies ignore the importance of local developmental sequences and local complexes of material culture. Excavations by the University of Chicago Oriental Institute at the sixth–fourth millennium B.C.E. site of Surezha on the Erbil plain aim to contribute to our understanding of Chalcolithic northern Mesopotamia by defining the local ceramic sequences and radiocarbon based absolute chronology for the Erbil plain. Initial results from the 2013 and 2016 field seasons have begun to define the characteristic local Chalcolithic ceramic assemblages of the Erbil plain. Our data suggest divergent developmental trajectories between the north and the south, especially in the “post Ubaid” LC1–4 periods. At the same time, identification of the characteristic local Chalcolithic assemblages can be used to re-evaluate surface survey data on regional settlement patterns and developmental change in this region during the crucial periods when social complexity first developed in northern Mesopotamia.

Agnese Vacca (Sapienza University of Rome), “Recent Results from Ongoing Archaeological Researches at Helawa, Southwest Erbil Plain, Iraqi Kurdistan: New Data on the Late Chalcolithic and Late Bronze Age Periods”

Since 2013, the Italian Archaeological Expedition in the Erbil Plain (MAIPE) of the IULM University of Milan has carried out an intensive survey and soundings at Helawa, a site of c. 10 ha located in the southwestern part of the plain. Results from preliminary intensive surface collection indicate an occupation spanning from the Halaf to the Late Chalcolithic 3, with a later re-occupation of the site in the second and first millennia B.C. The 2016 excavations at Helawa defined this sequence, revealing an LC 2 multi-layer occupation on the top and southern slopes of the main mound (Area B). Other stratified deposits dating to the Late Bronze Age and to LC 3 periods, associated with mud brick structures, were excavated in Area D, a small secondary mound located to the northeast. This paper will present and discuss this evidence within a regional framework of analysis, focusing on the Late Chalcolithic and Late Bronze Age developments and the local trajectories in the Trans-Tigris area. This evidence will be compared with data gathered from surveys and excavations in the Erbil Plain (e.g., the EPAS and UGZAR Reconnaissance Projects), the Middle Tigris region and, finally, the Syrian and Iraqi Jazirah.

Tim Skuldbøl (University of Copenhagen), Carlo Colantoni (University of Leicester), and Mette Marie Hald (National Museum of Denmark), “Exploring the Anatomy and Development of Early Urbanism in NE Iraq. Five Years of Investigations by the Danish Archaeological Expedition to Iraq (DAEI)”

The Danish Archaeological Expedition to Iraq (DAEI) has completed six seasons of research (2012–2017) exploring the anatomy and temporal development of urbanism during the Late Chalcolithic period (late fifth–fourth millennia B.C.) on the Rania Plain of northeastern Iraq. This paper discusses the results. The research is significant as it challenges assumptions regarding the spatial patterning of communities at the inception of urbanism.

Urbanization entails radical transformations in societies’ organizational practices and use of space. On the plain we see dense occupation for the period, burgeoning complexity not only in the spatial organization of settlements, but also in the patterns of settlement interdependence with the clustering of sites. DAEI’s research shows that urban growth during this period transformed the surroundings of urbanizing settlements. These became an urban-edge zone consisting of complex human activities. New insights into the organizational dynamics of societies suggest rapid transformations and the destructive exploitation of the landscape.

DAEI is employing an innovative multi-scalar approach to probe, delimit, and reconstruct urban settlements and their specialized landscapes. It is unraveling early urbanism in the region by targeting evidence of landscape exploitation—urban sprawl, mass-trash dumping, and industrialised activities.

DAEI believes that a clearer understanding of the earliest incarnations of the spatial and organizational phenomena that make up urbanism is possible by identifying their nature and temporal development. The spatial patterning of these communities is an outcome of the transformations that have come to characterize urbanizing societies past and present. The goal is to construct a new interpretative framework for understanding the human geography of early urbanism.

Martin Uildriks (Brown University), “Living on the Edge: Calculating Flood Damage in the Dukan Reservoir”

During the mid- to late 1950s a number of scholars explored the reservoir area of the hydro-electric dam at Dukan in Iraqi Kurdistan. Some 40 sites were inventoried, of which a few were selected for fuller archaeological exploration in the years to follow; the others disappeared under the water of Lake Dukan when the dam was finished in 1959. Recent investigations and wider regional surveys within the lake’s basin have started to address the question of flood effects on the preservation and remaining potential of submerged sites. This paper draws from historical data and five seasons of fieldwork in and around the catchment area of Lake Dukan to assess and evaluate some processes of

erosion found at annually inundated tell sites. By analysis of satellite imagery, photogrammetric reconstructions, and volumetric calculations, I outline a quantification of flood damage at some of these sites and argue that sites currently submerged by the water of Lake Dukan are likely to still persist and may perhaps even be in better condition than thought possible. In conclusion I will argue that flooding and submergence not only damage archaeological sites, but also have the potential to protect them under the right circumstances.

Marshall Schurtz (University of Pennsylvania), “Locating Kakmum: Searching for the Bronze Age Polity of the Northern Zagros”

During the Bronze Age, a number of states in the Zagros Mountains of Kurdistan fought among each other. Some, like Lullubum and Simurru, are discussed extensively in the literature but others are rarely mentioned, like Kakmum. The earliest mention of Kakmum comes from a rebellion of states in the Zagros Mountains against the Akkadian king Naram-Sin. References to the kingdom appear episodically, until its final mention in Hammurabi’s 37th year. Soldiers from Kakmum are acclaimed for their fighting ability in texts from Shamsi-Adad’s time. Texts from Tell Shemshara and recently published stone inscriptions attest to the power of Kakmum, but its exact location remains unknown. Kozad Ahmed, in his dissertation, postulates that Kakmum was located near or around Rowanduz, in Iraqi Kurdistan.

Since 2013, the Rowanduz Archaeological Program (RAP) has surveyed and excavated in the Soran district of the Erbil province of Iraq. RAP’s research supports the theory that Rowanduz and the Soran district was the location of Kakmum. Excavations at Gird-i Dasht, in particular, suggest a thriving Bronze Age culture in the second millennium, contemporaneous to Kakmum’s greatest accomplishments. Although the later Early Iron Age kingdom of Musasir was likely located in nearby Sidekan, the end of Kakmum does not overlap with references to Musasir. Through an overview of historical sources and an analysis of the archaeological material from Soran and Rowanduz, this paper will argue Kakmum was located in that area.

Jason Ur (Harvard University) and Nader Babakr (Directorate of Antiquities, Erbil Governorate, Kurdistan Region of Iraq), “The Evolution of the Assyrian Landscape in the 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 region has proved to be an extraordinarily dense archaeological landscape, with density approaching one site per square kilometer. This presentation will highlight our four seasons of research, with particular emphasis on settlement and land use at the time of the Neo-Assyrian empire, when the Erbil plain was part of the imperial core. It will describe a range of probable Neo-Assyrian water features and the project’s drone-based field recording techniques.

2B. Yerushalayim, Al Quds, Jerusalem: Recent Developments and Problems in the Archaeological and Historical Studies from the Bronze Age to Medieval Periods II

CHAIR: Gideon Avni (Israel Antiquities Authority)

Omer Sergi (Tel Aviv University) “The Emergence of Judah as a Political Entity between Jerusalem and Benjamin”

Jerusalem was the seat of local rulers as early as the second millennium B.C.E., but the extent of the territory ruled from Jerusalem is disputed. The main point of dispute concerns the political affiliation of the Benjamin Plateau, north of Jerusalem: while some scholars argue that it was affiliated with the territory of Shechem in the northern Canaanite hill country, others argue that it should be seen as part of the core territory of Jerusalem. Interestingly, the discussion of the political affiliation of this region has often overlooked the archaeological evidence from the Iron Age I–IIA in Benjamin and, especially, in Jerusalem itself. In this presentation, I shall reexamine the settlement pattern of the Iron Age I–IIA in both Jerusalem and Benjamin, demonstrating that from a sheer archaeological point of view, Benjamin came under the rule

of Jerusalem by the tenth century at the latest. Discussing the socio-political meaning of the archaeological evidence, I shall further reflect on the early beginnings of state formation in this region and the emergence of Judah.

Yuval Gadot (Tel Aviv University) and Johanna Regev (Weizmann Institute of Science), “The Elusive Stratum 13: Evaluating New Finds from Iron Age Levels in Jerusalem and Their Contribution for Understanding the City’s Growth”

The Iron Age IIA–B periods mark a significant historical moment in the history of Jerusalem. From a small political center restricted in its size and location, the city expanded into an unprecedented size of 60 hectares and into a dominant political, cultic, and economic center. While some scholars claim Jerusalem’s growth occurred only at the end of the eighth century B.C.E., following the fall of the kingdom of Israel, others claim the growth was the result of a long process throughout the eighth century B.C.E. At the center of the debate stands the question of Shiloh’s Stratum 13, recognized only as patches of floors in one square in Area E, and the traditional dating of archaeological strata by historical considerations and relative chronology of pottery assemblages.

In this paper we wish to present the recent work undertaken in Jerusalem and its contribution to understanding the city during the ninth and eighth centuries B.C.E. Special emphasis will be given to the presentation of goals and method of C14 targeted excavations conducted by the authors of two sections left unexcavated by Shiloh in Area E and their possible contribution to the absolute chronology of Jerusalem. The lecture will reflect on the importance of undertaking studies of micro-archaeological tools alongside macro-archaeological tools, in order to properly define multi-layered sites, particularly those lacking destruction layers, as is the case in Jerusalem.

Abra Spiciarich (Tel Aviv University), Omri Lernau (Independent Scholar), and Lidar Sapir-Hen (Tel Aviv University), “Animal Economy of Jerusalem in the Eighth Century B.C.E. in Light of 30 Years of Publications”

During the eighth century B.C.E. Jerusalem experienced a growth that can be seen through the population expansion to the Southwestern Hill, among other things. It is the use of animals in Jerusalem for religious and subsistence reasons that makes studying faunal remains key to understanding the overall economic position of Jerusalem during this time. In this lecture we will present the results of the new Iron Age II faunal assemblage originating in a dwelling in Area D3 on the slopes of the Southeastern Ridge, where meticulous methods of bone recovery through wet sieving allowed for the full recovery of bones of all sizes, including a surprising number of fish remains. By combining the new results with previously published faunal remains from other public and residential areas, a complete inter-site analysis of Jerusalem’s society and economy will be presented.

Zubair Adawi (Israel Antiquities Authority), “Biblical Netofa, Byzantine Metoba, and Early Islamic Umm Tuba—A Multi-period Settlement on the Road from Bethlehem to Jerusalem

Kh. Umm Tuba is located about 5 km south of the Old City of Jerusalem and 4 km north of Bethlehem. Results of multiple seasons of excavation and documentation work revealed remains of rural settlements from different periods, including an Iron Age II farmhouse consisting of several rooms surrounding an inner courtyard, which contained silos. The ceramic finds include a significant number of stamp seals, such as four LMLK seal impressions. The settlement was rebuilt in the Hellenistic period, when a pottery kiln/workshop and farmhouse were built. Beneath the floor of the farmhouse, a large columbarium (one of seven such features at the site) was discovered. During the Byzantine period, the site was part of the extensive rural landscape of monasteries and farms in the area between Jerusalem and Bethlehem. Impressive remains include mainly a monastery, which continued to function in the Early Islamic Period.

The following paper will present the finds from the various periods and how these finds have contributed to the identification of the site as Biblical Netofa as well as Byzantine Metoba, both of which are preserved in the modern

name of the site—Umm Tuba. The site identification will be considered according to the toponymic, geographic, and archaeological evidence.

Helena Roth (Tel Aviv University), “Talking Trash: The Role of Botanical Remains in the Identification of Garbage in Archaeology”

Ever since humanity turned to sedentism, garbage management posed a challenge for all ancient societies worldwide. This challenge only escalated with the emergence of large urban settlements, and more so in regional centers, such as capitals and economic and cultic centers. For an archaeologist, on the other hand, ancient garbage constitutes an opportunity: it can serve as a key context for understanding everyday life while offering insights into a society’s cultural predilections as well as its relationship with its material culture.

The identification of a context as the site of an intentional ancient garbage disposal space is highly challenging. With the help of wood species identified from charcoal preserved in garbage dumps, and by comparing the results to 1) charcoal assemblages from various other contexts, 2) the natural arboreal environment, and 3) the textual evidence, a method of identifying garbage dumps in urban contexts was developed. This method was applied to Early Roman Jerusalem as a case study, where a city dump—the first of its kind—was discovered. Using this method, it was possible to show that the variety of species constituting an assemblage and their relative quantity can help define a context as ‘garbage.’ This method may be applied to urban settlements throughout the Roman world.

Amit Re'em (Israeli Antiquity Authority), “The Tomb of David and the Room of the Last Supper on Mount Zion: New Findings—Theories vs. Reality”

The Holy Compound of Mount Zion stands at the very summit of the mountain. At its centerpiece is a two-storied building. On the lower floor ancient tradition identifies the tomb of King David. On the upper floor, roofed with elaborate Gothic rib vaults, is the Cenacle—the site of the Last Supper. This, together with numerous other early traditions and folk stories, make the Holy Compound of Mount Zion into one of the most enigmatic structures in the Old City of Jerusalem.

In ancient times the compound was part of two important ecclesial buildings. The first is the Byzantine Hagia Sion church from the fourth century, and the other is the twelfth-century Crusader basilica of Our Lady of Mount Zion. The lack of more concrete archaeological evidence has not prevented numerous explanations regarding the origin and the nature of the ancient building. These past suggestions were often motivated by religious and political needs.

As the building is revered as a holy site by all three monotheistic religions, archaeological excavations are currently out of the question. Recently small-scale excavations were conducted inside the actual compound and, in parallel, sophisticated technological equipment was brought in to survey and document the walls and the vicinity of the building. These revealed substantial new archaeological data. This paper will introduce the new findings and will put them in their architectural and chronological context relating to the zenith periods of the compound, the Byzantine and the Crusader periods.

2C. Archaeology of Israel I

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

Aren Maier (Bar-Ilan University), “The 2017 Season of Excavations at Tell es-Safi/Gath”

This year marks the 22nd year of the Tell es-Safi/Gath Archaeological Project. During the 2017 season, excavations were conducted in both the upper and lower city, with finds dating to various phases of the Bronze and Iron Ages, representing Canaanite, Philistine, and other cultures. This was the final season of excavations in the upper city, and in the coming years, until the cessation of the current project, excavations will focus on the various areas in the lower city. In this presentation, I will focus on the primary finds from this season.

Nava Panitz-Cohen (The Hebrew University of Jerusalem), “A Unique Architectural Quarter at Ninth Century B.C.E. Tel Rehov”

Tel Rehov, in the Beth-Shean Valley in Israel, is a large prominent site that was occupied continuously from the LB I until the end of Iron Age IIB in 732 B.C.E. The zenith of occupation was during the Iron Age IIA, when a densely built city covered the entire site. The excavation of Area C in the northwest part of the tell revealed three main strata belonging to the tenth and ninth centuries B.C.E. The latest, Stratum IV, was violently destroyed at around 830 B.C.E., leaving the buildings and their contents intact. This quarter is characterized by many unique features, including the exclusive use of mud brick, one-of-a-kind architectural plans, and items of material culture that are unparalleled elsewhere. At the same time, other features correlate with the material culture of the northern kingdom of Israel. As the excavations, directed by Professor Amihai Mazar, are nearing final publication, this lecture will present the Iron Age IIA occupation sequence and focus on the ninth century B.C.E. buildings in Area C, particularly one that is called the “Elisha House,” that has a possible cultic function.

Avraham Faust (Bar-Ilan University), “Tel ‘Eton in the Tenth Century B.C.E.: The Resettlement of the Shephelah in the Iron Age IIA and the United Monarchy”

Tel ‘Eton was transformed in the tenth century B.C.E. While the Iron Age I site was fairly small and remains concentrated on the upper part of the mound, the Iron Age IIA settlement expanded significantly, reaching the lower slopes of the tell. This expansion was accompanied by the erection of a massive city wall, as well as with the construction of a large four-room residency on the top of the mound. Notably, the Shephelah as a whole went through a somewhat similar process, and after being only sparsely settled during the Iron Age I the region began its gradual transformation in the tenth century. Existing settlements, like Beth-Shemesh and Tell Beit Mirsim, also grew in importance in the course of the Iron Age IIA, and at the same time a resettlement process was initiated and dozens of new sites were founded in the region in the course of the tenth–eighth centuries, the vast majority of which had clear connections to the highlands polity (e.g., Lachish, Tel Zayit, Tel Burna, and others). The changes experienced by the few existing settlements in the Shephelah (Tel ‘Eton, Beth-Shemesh, and Tell Beit Mirsim) should be viewed in combination with the resettlement process, but the date and nature of the processes are hotly debated. The new evidence from Tel ‘Eton, however, provides solid data regarding the date of the changes, and also about their causes, shedding new light on the process through which the Shephelah was colonized by the highland polity in the tenth century.

Robert Mullins (Azusa Pacific University), Naama Yahalom-Mack (The Hebrew University of Jerusalem), and Nava Panitz-Cohen (The Hebrew University of Jerusalem), “Results of the Fifth Season of Excavations at Tel Abel Beth Maacah”

The continuing excavations at Abel Beth Maacah shed new and important light on the site’s occupation during Iron Ages I and II, as well as the Middle and Late Bronze Ages. In Area A, the extensive administrative/industrial complex with its unique architecture was found to continue farther to the west and north. Moreover, for the first time, traces of destruction were identified, indicating that the building complex came to an end during the terminal phase of the lower city in the late 11th to early tenth century B.C.E. Further remains from Iron Age I were exposed in Area B in the upper city. In the latter, new and important details on nature of the Iron Age II occupation were uncovered, focusing on massive walls that might be part of a citadel or fortification. Further work in Area O in the southwest have added new and important details concerning the site’s occupation sequence during the Bronze and Iron Ages. The new data contribute to our understanding of the role of Abel Beth Maacah in the Huleh Valley settlement system vis-à-vis Dan and Hazor in the Middle Bronze, Late Bronze, and Iron Ages, as well as its relationship with the Phoenicians and Arameans to the west and north during the Iron Age.

Assaf Yasur-Landau (University of Haifa), Eric H. Cline (George Washington University), and Andrew Koh (Brandeis University), “Preliminary Report on the Results of the 2017 Excavation Season at Tel Kabri”

Our excavation of four storage rooms found in the Middle Bronze Age Canaanite palace at Tel Kabri has so far yielded nearly 110 large jars, each capable of holding just over 100 liters. The organic residue analysis (ORA) done on the 40 jars found in a single room during the 2013 season indicated that they all held resinated wine, leading to the tentative identification of the room as a wine cellar, the oldest and largest yet found from the ancient Near East. Three additional rooms and nearly 70 more jars were excavated during the 2015 season, with ORA analysis confirming that these too held red wine, but in varying amounts depending upon their location in the rooms. We anticipate that we will be able to excavate more rooms and jars during the 2017 season that will help us to determine the function of this area (i.e., wine cellar vs. winery) and continue our examination of the palatial economy at the site. We also hope to retrieve more grape pips from the drains, which might allow us to conduct DNA analysis and determine the varietal of grapes that was used in the wine. We will also radiocarbon date the seeds and other organic material retrieved from both this level and the phase below, in order to check the dates obtained from material excavated during previous seasons (now published), which indicate that the palace may date a century or so earlier than expected. This paper will present the results from our season.

2D. Ancient Inscriptions II

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

K. Lawson Younger, Jr. (Trinity International University–Divinity School), “Arameans in the Zagros: The Cuneiform and Aramaic Evidence”

In 1998, with the publication of the Bukān Inscription (an Aramaic inscription from the ancient land of Mannea, located in the Zagros mountains), scholarly attention focused immediately on how the Aramaic language found its way into this region. This paper will address the issue anew in light of the cuneiform evidence, which has not yet been fully integrated into the analysis.

Jan Dušek (Charles University, Prague), “Dating the Aramaic Stela Sefire I”

Different dates have been proposed for the Aramaic stela Sefire I: ca. mid-eighth century B.C.E. (Dupont-Sommer and Starcky 1960: 202), ca. 772 B.C.E. (Lemaire and Durand 1984: 58), ca. 775 B.C.E. (Kitchen and Lawrence 2012: 917), etc. These dates are essentially based on the palaeography and on the supposed relative chronology of the three stelae from Sefire. During the work on a new edition of the Sefire inscriptions, after the reexamination of the squeezes of the inscriptions and their ancient photographs, I was able to discern in the text of Sefire I a part of a proper name of one of the Assyrian kings of the eighth century B.C.E. This new reading constitutes a fix point for more precise dating of this inscription. In combination with a relative chronology of the preserved sides A, B and C of Sefire I, and in combination with other available data, furnished especially by the Neo-Assyrian lists of eponyms and the *adê*-treaty of Aššur-nārāri V with Mati'el of Arpad, I am able to propose a much more precise date of the whole stela Sefire I than the previous editors of the Sefire inscriptions: 754 B.C.E.

Matthew Richey (University of Chicago), “A Bull Figurine with an Old Aramaic Inscription”

The British Museum acquired from Reverend Greville John Chester a small bronze figurine, allegedly from Tartus on the Syrian coast, bearing five incised graphemes on its left side. The figurine has a hole bored through the width of its body, likely for use as a wearable amulet. The animal's general morphology is similar to that of contemporary representations of bovines, an identification supported by the first lexeme of its two-word inscription. This identifies the animal as a “bull,” followed by an additional epithet denoting “provision.” Palaeographic features suggest a date in the eighth or seventh

century B.C.E., and orthographic features require a dialectal definition of the inscription as Old or Imperial Aramaic.

The proposed communication will be based on the author's in-preparation *editio princeps* of this short inscription, itself founded on in-person examination of the figurine at the British Museum in October 2016. Full palaeographic, orthographic, and lexicographic descriptions will be provided. The question of the inscription's referent and the figurine's possible associations will also be discussed in light of Akkadian, Ugaritic, Aramaic, and Hebrew descriptions of high and storm deities and their bovine representations in various corpora.

Bezalel Porten (The Hebrew University of Jerusalem), “Provenanced Aramaic Ostraca from the Land of Israel”

The provenanced Aramaic ostraca from the Land of Israel represent a body of 348 texts from 34 archaeological digs that have never before been brought together. They are scattered in collections around the world and published piece-meal in over three dozen books and articles. As individual pieces, the ostraca give limited insight. However, as a unified inventory, they provide a significant historical record because they come from a time and place with a dearth of other primary sources.

The provenanced ostraca reflect the same milieu as over 2,000 unprovenanced ostraca from Idumea being published by Ada Yardeni and myself. Two volumes have appeared so far and a third is in print (*Textbook of Aramaic Ostraca*, vols. 1 and 2). The lecture will present an inventory of 348 provenanced ostraca, including 52 commodity chits from 13 sites, 56 payment orders from three sites, 25 accounts from five sites, three workers texts from two sites, 27 names lists from 11 sites, 39 jar inscriptions from 15 sites, three letters from two sites, and nine land descriptions from six sites. Using charts from *TAO* and illustrative photos and handcopies from published digs, I shall indicate how we may analyze the provenanced ostraca as a coherent corpus.

A combined analysis of the provenanced ostraca contributes to a better understanding of the fourth-third century Land of Israel, allowing conclusions about scribal practice, onomastics, daily life, economy, and politics. Comparison with *TAO* shows how unprovenanced material can teach us about the significance of provenanced texts.

Robert Deutsch (Independent Scholar), “Revising the Reading of Recently Published Hebrew Seals and Seal Impressions”

Recently discovered Hebrew seals and seal impressions from Judah and particularly from Jerusalem, dated to the Iron Age II, late eighth and seventh centuries B.C.E., have been published by excavators, sometimes together with expert archaeologists, curators, or petrographers, who have very little or no skills or knowledge in epigraphy and paleography. This new method of publishing epigraphic material by the person who was licensed by the Israel Antiquities Authority to excavate a site, instead of passing the epigraphic material to a professional epigrapher, is a damaging approach. Consequently, many errors and misinterpretations have been printed in the most prestigious magazines and excavation reports producing defective publication and contaminating the field of epigraphy. Several such cases will be presented and corrected readings will be offered.

Samantha Lindgren (Johns Hopkins University), “Siloam Tunnel Inscription, among Its Contemporaries”

The Siloam Inscription is a broken six-line inscription from the Siloam Tunnel or Hezekiah's Tunnel in Jerusalem. Dating to the eighth century B.C.E. (Iron Age), this inscription was written in stone in the Hebrew vernacular of the period. The text itself details the construction of the tunnel, used to ensure a steady supply of water into the city of Jerusalem underground. This inscription is extremely valuable to researchers as it is the only multi-line stone inscription from Jerusalem during the Iron Age. There are contemporary examples of stone inscriptions from neighbouring kingdoms that researchers study to understand this writing tradition, and the question is, how does the Siloam Inscription fit into our understanding of this tradition?

2E. Career Options for ASOR Members: The Academy and Beyond

CHAIR: Emily Miller Bonney (California State University, Fullerton)

Johanna Best (Smithsonian Institution), “Working ‘For The Increase and Diffusion of Knowledge’: Being A Public Fellow at the Smithsonian”

My previous educational, research, and work experiences have all contributed to my career path thus far, taking me from graduate studies in Classical and Near Eastern Archaeology to my current position as Program Manager for Scholarly and Public Engagement in the Smithsonian Provenance Research Initiative (SPRI). While my current position places me outside the traditional academy, my responsibilities at SPRI allow me to serve simultaneously as a researcher, an administrator, and an educator—a balance of roles that I find rewarding and fulfilling. My talk will focus on how I approached my job search, how I learned about the Mellon/ACLS Public Fellows program, and how I have navigated the transition from academic to Public Fellow.

Andrew Cohen (U.S. Department of State), “The Federal Government as a Career Option: A Perspective from the State Department’s Civil Service”

This paper discusses how I came to work at the U.S. Department of State’s Cultural Heritage Center and some of the things that I learned while working there. Students seeking an academic career might view post-doctoral fellowships, seasons spent on excavations, and part-time jobs needed to “make ends meet” in a declining order of importance, but federal Human Resources officers may see things differently. Landing a job in the federal sector might require taking a part-time job or doing volunteer work that involves managing money, projects, or people. The paper also explores the differences between an academic job and a federal job, and shares observations on where those in the federal government find meaning in their careers.

Charles Jones (Pennsylvania State University), “Living an #Alt-Ac Life”

Reflections on an unorthodox career in the Academy.

Suzi Wilczynski (Dig-It! Games), “From the Known to the Unknown: Utilizing Archaeology in Software Development”

What do the study of archaeology and educational software development have in common? Ostensibly, not much; however, with further scrutiny, surprising similarities appear. At its core, archaeology is a process of creative problem solving, analyzing patterns and data, making connections, and communicating clearly and concisely: skills that translate to numerous other fields, including software development. The skills developed through the study of archaeology, such as the ability to analyze large amounts of information and the desire to search for answers to complex questions, have helped me build a company with a growing catalog of best-in-class K-12 learning games, many of which focus on archaeology.

Bringing archaeology into the K-12 classroom provides an important opportunity for students to see clearly the value of studying the past. The study of archaeology is a powerful tool to help students understand diverse topics, including culture, government, belief systems, and societal development. Our goal is to introduce elementary and middle school students to ancient civilizations in a way that is meaningful and understandable within their lives and to truly engage children in the science of archaeology. We seek to educate children about civilizations and cultures in an immersive way that goes beyond what they can experience from a textbook or film.

As my journey illustrates, there are numerous creative ways to use archaeological learning outside the traditional academic path. In this presentation I will discuss that journey and investigate the ways in which my study of archaeology has helped me build award-winning educational games.

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

CHAIR: Eric Lee Welch (University of Kansas)

Ian Cipin (University College London), “EB III Jezreel and its Significance in a Regional Context”

The site of Jezreel is strategically located immediately above a perennial spring, about mid-way between Megiddo and Beth Shean in the Jezreel Valley. Recent excavations at the site of ‘Ein Jezreel have unearthed large quantities of Khirbet Kerak Ware, giving rise to questions as to the type and nature of settlement at the site during the EB III period. The lack of in situ architecture or floors from this period makes analysis on a micro scale impossible. It is therefore necessary to adopt a regional approach in order to make inferences about the role of Jezreel in the Jezreel Valley and beyond.

In order to address these issues, this presentation will review the nature, spread, and function of EB III settlement in the North Jordan and Jezreel Valleys, focusing on the main routes of communication. An examination of the sites along these routes reveals that the distribution of Khirbet Kerak Ware is far from uniform. Does this represent a dispersal of populations from the site of Khirbet Kerak itself, or is this more indicative of local populations adopting a different material culture, or is it a combination of both? Understanding the mechanisms of this distribution together with the nature, spread, and variability of settlements enables us to situate the site of Jezreel within a larger context during the EB III period.

Nadeshda Knudsen (Tel Aviv University), “The Terracotta Herd: Zoomorphic Figurines in the Early Bronze Age Southern Levant”

The Early Bronze Age zoomorphic figurines of the Levant have been the subject of little scholarly attention and even less relevant published analysis. Through ongoing research, my aim is to enhance our understanding of these artifacts through high-resolution analysis of various aspects of their manufacture.

The specific focus of this presentation is the diverse figurines from Tel Bet Yerah (Khirbet Kerak) in the southern Levant. These animals represent aspects of two co-existing cultures found at the site. The theoretical framework of the chaîne opératoire underpins this study in combination with an experimental programme of figurine replication and reconstruction. The technological and cognitive aspects of figurine production will be introduced, including the acquisition of raw materials, production, and some considerations of use-life. Wider considerations and relationships to other groups of material culture will also be taken into account.

In regarding the figurines not as artifacts in isolation, but as a medium of communication within the totality of their original context, this project intends to seek a coherent narrative of figurine biographies that sheds light on the socio-cultural significance of these diminutive objects within the context of the society that produced them.

Gilad Itach (Israel Antiquities Authority; Bar-Ilan University), Dor Golan (Israel Antiquities Authority), “The Thinker’: A Unique Middle Bronze II Burial Complex from Tel Yehud”

Tel Yehud is located in the coastal plain of Israel, 12 km east of the Mediterranean Sea and north of the Ayalon Valley. In the last ten years several salvage excavations have been conducted on the tell. In some of the excavations, hundreds of Middle Bronze (MB I, MB II) and Late Bronze burials have been unearthed. In the fall of 2016, excavations revealed many features dated to the Late Chalcolithic period and a single MB II grave, dug into the hard dark soil. The entrance was through a shaft in the northern part of the complex leading to the burial chamber. The chamber measures 1.6 m wide and almost 4 m long. The grave contains a rich assemblage of burial goods, including vessels and metal objects with at least two sheep and a larger animal, maybe a donkey. The ceramic vessels include a storage jar, a juglet, a large open bowl, and a unique anthropomorphic jug. On the top of this jug is a human figure with a detailed face, with one hand on his knee and one on his cheek. To the best of our knowledge, no such vessels have been found at any contemporary sites

at Levant. The metal objects include: three daggers, two spear heads, one axe head, and a knife. The paper will present the excavation and analyze the burial goods, and will also deal with questions such as who may be buried there and what the anthropomorphic jug in the grave symbolizes.

Jeffrey Chadwick (Brigham Young University Jerusalem Center), “How to Build a Glacis: Construction Dynamics of the MB II Fortifications at Tell es-Safi/Gath”

In 2006 the foundation of an MB II city fortification wall was discovered at Tell es-Safi (Tel Tzafit), the site of ancient Canaanite and Philistine Gath. The excavation was carried out in Area F, on the upper west side of the tell. The 2.7 m wide wall foundation was constructed atop remains of an earlier EB III city wall. On the exterior side of the MB II structure, a sloping glacis was discovered, consisting of hardened kurkar sand covered by a layer of soil. Excavations between 2006 and 2016 revealed the MB II wall foundation and glacis along a 22 m length in Area F, and the course of the city wall was able to be determined around the rest of the west side of the tell. The city of Gath appears to have been about 8 hectares in size during MB II, within its city wall line. The wall, with a brick superstructure, appears to have been in use, with repairs, from MB II through the Late Bronze, Iron I, and Iron IIA periods, around nine centuries. Numerous finds unearthed both inside and outside the wall line allow us to understand the processes and order of construction for both the wall and the glacis, beginning with the wall foundation, then the pouring of the kurkar sand for the glacis, the deposit of the soil cap atop the glacis, and then the building of the brick superstructure of the wall, finalized with a plaster coating. This sequence will be explained and detailed in the ASOR 2017 presentation.

Robert Homsher (Harvard University) and Melissa Cradic (University of California, Berkeley), “Rethinking Amorites”

Who were the inhabitants of the land of Canaan at the beginning of the second millennium B.C.E.? More to the point, were the socio-cultural transformations of the Middle Bronze Age the result of an influx of a new population to the southern Levant? A longstanding notion that has persisted among some scholars maintains that there was a mass migration of population, namely Amorites, from Syro-Mesopotamia during this period. These Amorites were then responsible for introducing many of the changes that followed in the Middle Bronze Age. Yet, who were these Amorites, and what do we know about them? What is the threshold of evidence needed to identify them in the material record and interpret their impact on the Middle Bronze Age? Much like the biblical conquest of Canaan and issues surrounding the emergence of the Israelites, a priori assumptions and ad hoc interpretations regarding Amorites are fraught with historical maximalism and circular logic. This paper scrutinizes the textual and material records upon which problematic assumptions of Amorite ethnicity and shared material culture are based. Based on a *longue durée* contextual approach to the archaeological record, we rather argue for local trajectories toward social complexity in the southern Levant. Upon a critical look at aspects of socio-cultural practices, such as burial practices, urban architectural concepts, settlement patterns, and specialized production, it becomes abundantly clear that none of these phenomena were distinctively Amorite, nor should any be reduced to linear causality.

Golan Shalvi (University of Haifa), Shay Bar (University of Haifa), Shlomo Shoval (The Open University of Israel), and Ayelet Gilboa (University of Haifa), “The Tel Esur Courtyard House: A Glimpse into the Lives of the Lower Classes in Rural Areas in Late Bronze Age Canaan”

A courtyard house dating to the Late Bronze Age IB–IIA was uncovered at Tel Esur, located in the Sharon coastal plain region in Israel. The collapsed structure preserved many finds in situ. The paper presents an activity area analysis of the house, which, we argue, provides a glimpse into the lives of rural Canaanites during this period. Generally speaking, such analyses, for structures retaining their systemic activity contexts, have not yet been carried out for early Late Bronze Age structures in Canaan. The analysis enabled the identification not only of patterns in a house set-up, but also of the social strata

and social influences reflected in the household. Storage rooms for different types of produce were identified, as well as food preparation and serving areas. In addition, the analysis allowed us to identify specific phenomena, such as an unusual wealth of pithoi, Egyptian-style vessels in the rural sphere, and Cypriot and Aegean influences on the Canaanite pottery decorations. Reconstruction of the household wealth, by analyzing the architecture and other media, shows that the inhabitants were common people, who did not belong to the elite classes. The presence of Egyptian-style vessels, at such a social level, is inconsistent with the two existing theoretical models seeking to explain the presence of locally made Egyptian-style pottery in Canaanite cities (the ‘direct rule’ and the ‘elite emulation’ models). Consequently, we offer here a new model for understanding the dispersion of Egyptian-style vessels and the cultural meaning of this dispersal.

2G. Study of Violence from the Region of the Ancient Near East and Its Neighbors II

CHAIRS: Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University) and Leann Pace (Wake Forest University)

Niv Allon (The Metropolitan Museum of Art), “Cruel Art: Ancient Egyptian Violence in Literary Texts and Tomb Art”

Violence has reemerged in recent years as a matter of controversy regarding its definition, ranging from limited purviews of physical harm to more fluid demarcations that involve more abstract acts of transgression and oppression. Building on these discussions, my project engages with the conceptualization of violence among the elite of the New Kingdom (1550–1070 B.C.E.) and its relation to the elite’s self-representation.

Discussions of violence in the ancient world often draw from the legal sphere, in which demarcations are clearly made for the purpose of deciding what is punishable. Visual and literary sources provide, however, a rich and often overlooked corpus for the thematization and negotiation of violence and its definitions. These sources reveal a more complex and varied image, one in which significant criteria like legitimacy of the act and physical harm are called into question. These sources, moreover, highlight a close relationship between violence and literacy that calls us to reconsider often assumed divisions of powerful:powerless and literate:illiterate, building on discussions of this relationship by Claude Lévi-Strauss, Jacques Derrida, and most recently Akhil Gupta.

In order to discuss these conceptualizations of violence, this paper will focus on two sources: a literary text of the New Kingdom and a scene from the tomb of Haremhab. The latter represents non-royal violence in the aftermath of war, and the former violence within the administration. These will allow us to explore different patterns of representation and those who engage in them, taking note of the contexts and agencies involved in their production.

Angelos Papadopoulos (College Year in Athens [CYA] Greece), “Images of Battle and Hunting in the Late Bronze Age: Why Is the Aegean So Different from Its Eastern Neighbors?”

During the Late Bronze Age (ca. 1700–1050 B.C.), images of battles, duels, hunting, and violent sporting activities seem to constitute a dominant part of the Aegean iconographic repertoire. Contextual analysis through geographical and chronological considerations clearly suggests that these representations were used by the ruling elites as individual and communal insignia of high status, prestige, and prowess. In fact, it is possible to trace the evolution of certain motifs and iconographic themes from the 17th all the way to the 12th century B.C. Of particular interest is that, especially during the 14th and 13th centuries B.C., a time of international communications throughout the Eastern Mediterranean, the Aegean iconography of violence seems to be very different when compared with the imagery of the neighboring regions, such as Cyprus, Egypt, and the Levant. Despite its pluralism of themes and artistic media of representation, Aegean art seems to ignore depictions of actual bloodshed and massacre, while no victorious army or individual is shown and a central figure is notoriously absent.

This paper will focus on the similarities, but mainly on the differences, between Aegean and Eastern Mediterranean iconography of warfare and hunting, in order to discuss the special character of the Aegean artistic repertoire and its place within the wider Eastern

Mediterranean socio-political context, and it will also explore how violence can be employed to promote the political ideology of a ruling upper class.

Anne-Caroline Rendu Loisel (University of Strasbourg), “Senses and Violence in Cuneiform Texts (Second–First Millennium B.C.)”

Hearing the noise made by the royal army approaching the city, the enemies are so afraid that they fall into a deathly silence; they cry aloud whereas the storm god Adad roars like a bull in the sky, warning of the forthcoming destruction . . . The surrounding environment creates a particular atmosphere, highlighting the destruction caused by the king. Violence finds its expression in powerful sensory effects. Constructing a particular atmosphere, sensory phenomena express and/or induce a modification of the emotional state of the various participants of the story, whether they are gods or humans. It is because of the loud noise humans made that the great god Enlil became so angry that he decided to destroy all of them in the Babylonian story of the Flood.

In the present paper, my aim is to investigate sensory phenomena and their description in the cuneiform literature, to understand how they participate in the rhetorical dynamic of the hierarchical relations between the king, the hero, the god(s), and the enemy.

Terhi Nurmikko-Fuller (Australian National University) and Sanna Nurmikko-Metsola (Brunel University London), “A Strategy of Violence? Using Game Theory to Analyze Political Power in the Ancient Near East”

Violence can be argued to be a powerful tool in securing and maintaining political power. In this interdisciplinary paper, a game-theoretical model is used in order to evaluate the role that the threat of violence has in the establishment and maintenance of control of a population, even when it is detrimental to collective well-being. The model is motivated by Assyriological data on violence. We use the model with a regional approach to describe the possible opportunities for maintenance of power that repression of the opposition and possible bribery of the military may enable. We also discuss the challenges to this analysis presented by the heterogeneous and incomplete historical data.

2H. Madaba Plains Project at 50: Tall al-‘Umayri

CHAIRS: Douglas R. Clark (La Sierra University) and Larry Herr (Burman University)

Timothy P. Harrison (University of Toronto), “Contextualizing MPP at Tall al-‘Umayri: The Early Bronze Age”

To what extent do the archaeological finds from the Early Bronze Age at Tall al-‘Umayri fit the meta-narrative of the beginning of urbanization in the Levant? This paper will highlight results that support this narrative (such as the evidence for a regional site hierarchy, a planned settlement, and the presence of Khirbat Karak Ware and evidence of long distance trade) and finds that diverge from this narrative (such as the absence of fortifications, and large scale craft production). The paper will also examine whether this meta-narrative was part of the thinking of core staff on the project from the outset, or was a latecomer in the effort to interpret the site. Note will also be taken of other narratives that were discussed in relation to Early Bronze Age finds at Tall al-‘Umayri.

Kent Bramlett (La Sierra University), “Contextualizing MPP at Tall al-‘Umayri: The Late Bronze Age”

To what extent do the archaeological finds from the Late Bronze Age at Tall al-‘Umayri fit the meta-narrative of the end of civilization and collapse in the Levant during this period? The paper will highlight finds (such as the destruction and abandonment of an LB II temple) that support this narrative and finds that diverge from this narrative (such as indications of continuity with the succeeding settlement). The paper will also inquire into whether and to what extent engagement with this meta-narrative was a part of the thinking of core staff on the project from the outset, or whether it was a latecomer to

efforts to interpret the site. Note will also be taken of other narratives that were discussed in relation to Late Bronze Age finds at Tall al-‘Umayri, particularly the Glueck hypothesis that posited a paucity of settlement in the central and southern Transjordanian Highlands.

Douglas R. Clark (La Sierra University), “Contextualizing MPP at Tall al-‘Umayri: The Early Iron Age”

To what extent do the archaeological finds from the Early Iron Age at Tall al-‘Umayri fit the meta-narrative of the socio-political dynamics in the shift from tribal societies to emerging states in the Levant during this period? The paper will highlight finds (such as the “four-room” house and neighboring domestic structures and remains, and the defense system) that support this meta-narrative and finds that diverge from this narrative (such as some of the elite goods represented early in this period). The paper will also inquire into whether and to what extent engagement with this meta-narrative was a part of the thinking of core staff on the project from the outset, or whether it was a latecomer to efforts to interpret the site. Note will also be taken of other narratives that were discussed in relation to Early Iron Age finds at Tall al-‘Umayri.

Larry Herr (Burman University), “Contextualizing MPP at Tall al-‘Umayri: The Late Iron Age and Early Persian Period”

To what extent do the archaeological finds from the Iron Age IIB–C and Persian periods fit the meta-narrative of Levantine secondary states under the domination of Assyria, Babylon, and Persia during this period? The paper will highlight finds such as the Iron Age IIB house, the Iron Age IIC Ammonite administrative complex with its seals and seal impressions, and its relationship to various Iron Age IIC hinterland farmsteads in the vicinity that support this meta-narrative, as well as finds that diverge from it, such as the village nature of the site during the periods involved. The paper will also inquire into whether and to what extent engagement with this meta-narrative was a part of the thinking of core staff from the outset or whether it developed later. Note will also be taken of other narratives that were discussed in relation to the finds from these periods at Tall al-‘Umayri.

Gary Christopherson (University of Arizona), “What Happened When the Tall al-‘Umayri Regional Survey Met Fernand Braudel’s Temporal Hierarchy?”

During the course of the Tall al-‘Umayri Regional Survey, multi-temporal strands of data were recovered. Temporal fragments ranging from geographic time to individual events/artifacts rattled around in the back of survey vehicles and in the head of the author. Then one day Bill Dever introduced the fragments to Fernand Braudel’s temporal hierarchy and the rattling stopped. This paper will revisit and evaluate the pros and cons of the multi-disciplinary approach to survey methodology utilized by the Madaba Plains Project and reflect on ways in which what was discovered has impacted understanding of Braudel’s temporal hierarchy—and how Braudel brought order to all those fragments.

2I. Peoples of the Mountain: Settlement Dynamics in the Galilean Highlands II

CHAIR: Andrea M. Berlin (Boston University)

Uzi Leibner (The Hebrew University of Jerusalem), “Material Culture, Settlement, and Ethnicity in Hellenistic Period Galilee”

Historical sources regarding Hellenistic Galilee are few and ambiguous, and do not provide a clear picture of the population’s identity. Rich Hellenistic strata have been uncovered at sites on the borders of the Galilee (e.g., Scythopolis and Tel Anafa), but very little is known about the inner, mountainous parts of the region. While we have ample evidence for a dense Jewish population in the area in the Early Roman period, we do not know if and how it relates to that of the Hellenistic era. This information is imperative for understanding the ethnic and cultural background in which Second Temple period Judaism and early Christianity developed in the Galilee.

The Hellenistic Galilee Project was initiated in an attempt to shed light on these questions through an investigation of the material culture and settlement dynamics in Hellenistic period Galilee. The research includes an excavation of the key site of Khirbet el-'Eika, in the eastern Lower Galilee, and a survey of Hellenistic sites across the Galilee. The material culture revealed at Khirbet el-'Eika points to a pagan population, with close ties to the Phoenician coast. The site came to a sudden end in a dramatic destruction dated to ca. 145/4 B.C.E. and additional sites abandoned in this period were identified in our survey. This paper will examine the material culture and settlement patterns in the Galilee during the Hellenistic and Hasmonean periods and the conclusions that can be drawn regarding the shift in ethnic identity and political power during the transition between these two periods.

Roi Sabar (The Hebrew University of Jerusalem), “Ethnic Boundaries and Settlement History in the Eastern Upper Galilee during the Hellenistic, Roman, and Byzantine Periods: Results of a High Resolution Site Survey”

This paper presents the results of a high resolution site survey conducted at 12 sites in the eastern Upper Galilee. Historical accounts and accumulated archaeological data both indicate that this region housed two different ethnic groups during the Roman period: the northern area was part of Tyre's $\chi\omega\rho\alpha$ and was populated by pagans, while the southern area was populated by Jews. These two territories were divided by the deep creek of Nahal Dishon, which served as an ethnic boundary in this part of the Galilee.

The survey aimed to examine two interrelated issues: 1) the settlement history of the northeastern Upper Galilee during the Hellenistic, Roman, and Byzantine periods; 2) the representation of local ethnicities through material culture, and particularly in the pottery assemblages. During the survey, more than 1,800 identifiable pottery sherds dated to the Hellenistic, Roman, and Byzantine periods were collected, and numerous architectural elements, installations and tombs were documented.

The survey results indicate that a major regional change occurred during the transition from the Hellenistic to the Roman period. This change is probably related to the annexation of the eastern Galilee by the Hasmoneans and the subsequent settlement of Jewish populations in the region, which resulted in the formation of a geographic-ethnic boundary at Nahal Dishon. Another major change occurred at the beginning of the Byzantine period, attested by a settlement decline in several sites on both sides of Nahal Dishon, which reflects a wider, cross-ethnic settlement crisis.

Mordechai Aviam (Kinneret College on the Sea of Galilee), “Phoenician Material Culture Influence in Upper Galilee during the Hellenistic, Roman, and Byzantine Periods”

In several periods through its history, the Upper Galilee was the southernmost part of Phoenicia, and it is therefore possible to trace the remains of Phoenician influence on the local material culture in those periods. While this has been partly acknowledged in the past, in this paper I will survey the main lines of evidence, focusing on several key sites, inscriptions, and cultural traits spanning 1000 years of history:

- Hellenistic period: A Phoenician inscription of a temple in Pi-Mazuva; the administrative center at Tel Kedesh.
- Roman period: The temple at Kedesh; free-standing sarcophagi; burial goods.
- Byzantine period: Olive-oil industry; churches.

Using these components, I will try to demonstrate that Phoenician influence can be clearly identified in the highlands of Upper Galilee, and that it does not penetrate into the Lower Galilee, especially from the end of the second century B.C.E. onwards, when the Lower Galilee becomes Jewish following the Hasmonean annexation. It seems as if Jews rejected the material traits of the gentle Phoenician sphere, resulting in the formation of a borderline between the latter and the Jewish territory.

Jacob Ashkenazi (Kinneret College on the Sea of Galilee) and Mordechai Aviam (Kinneret College on the Sea of Galilee), “Economic Growth and Religious Materiality in Christian Galilee in Late Antiquity”

To date, the built environment of the rural Christian Galilee in Late Antiquity has garnered sparse archaeological attention. While several churches have been unearthed, none of them has been contextualized or weaved into a broader picture of the region during Late Antiquity. An over-arching interdisciplinary study of the Late Antique rural Christian Galilee provides a frame of reference for understanding contemporaneous Christian society in this area and throughout Palestine. This study promises to shed light on the causal relations between economic growth and the proliferation of ecclesiastical buildings. By introducing local and regional factors to the academic discourse on Late Antique Galilee and by comparing them with their counterparts in other parts of the Orient, we will expound on the influence of monastic and other ecclesiastical ventures on the rural societies under review.

The catalyst behind the upsurge in religious building initiatives throughout the rural eastern Mediterranean basin during the fifth and sixth centuries C.E. was local, bottom-up socio-economic forces, rather than top-down ecclesiastical or imperial policies. As such, we contend that the material developments in villages and monasteries, especially in Western Upper Galilee, were not mutually exclusive, but rather interdependent religious and economic phenomena. Monks and peasants in mountainous Galilee had close economic, social, and, of course, devotional ties. Accordingly, the region's growing prosperity, in our estimation, was triggered by local factors, not least the expanding presence of Christianity.

A.D. Riddle (Trinity International University), “The Evidentiary Bases for Mapping Ancient Roads in Southern Lebanon”

This paper presents research into reconstructing the ancient road network in Lebanon, with particular emphasis on the biblical periods. While various regions of Lebanon have been the focus of scholarly attention, no attempt has been made to synthesize our current knowledge into a systematic, country-wide study of ancient roads, along the lines of Dorsey's work in Israel or Bekker-Nielsen's work in Cyprus. For the purposes of this session, treatment is restricted to the Tyre–Nabatieh plateau, between the Qasimiyeh (Litani) River in the north and the southern border with Israel.

The principle of “geographic determinism” combined with Lebanon's dramatic topography will ground the claim that roads from later periods followed the same course as earlier roads, and therefore justify the use of later evidence to reconstruct the earlier road network. Direct lines of evidence for ancient roads include road remains and milestones, ancient itineraries, and ancient maps. Evidence for inferring the course of ancient roads includes the locations of ancient sites (determined by archaeology or toponymy) vis-à-vis topography, GIS analyses, and modern road constructions.

2J. Houses and Households in the Near East: Archaeology and History I

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

Miriam Müller (Leiden University), “Foundation Ceremonies in Near Eastern and Egyptian Domestic Architecture”

Foundation ceremonies are well known from the Egyptian royal and sacred sphere. They mark the beginning of construction work and ensure the effectiveness and longevity of the building to which they belong. One important component of these ceremonies consists of so-called foundation deposits. These are often placed under the corners of a temple or tomb and contain various items, for instance, model tools, containers for offerings, precious materials, or faience plaques with the cartouche of a pharaoh. Although these are also attested in connection with profane architecture such as storage buildings belonging to the royal household, foundation deposits are uncommon in the non-elite sphere. Therefore little attention has been given to the presence of foundation deposits in domestic architecture. This paper will discuss the evidence of this practice from a neighborhood of the ancient

city of Avaris in the eastern Nile Delta, where many foundation deposits containing, for instance, model vessels, bronze pins, and food offerings have been discovered in connection with houses. The evidence from Avaris will be evaluated in light of comparative material from other parts of Egypt and the Near East and give insight into a new area of research in Egyptian domestic architecture.

Yağmur Heffron (University College London), “Domestic Space and Religious Admixture in Kültepe-Kanesh”

The Middle Bronze Age city of Kanesh (modern Kültepe in south central Anatolia) is principally famous for the incredibly rich corpus of cuneiform documents retrieved from the private business archives of its expatriate Assyrian residents. Equally significant are the neighbourhoods in which Assyrian merchants lived alongside the local inhabitants, often in the same households as Mesopotamian and Anatolian communities intermingled through marriage and business interests. Over half a century of continuous excavation here has exposed large portions of an extremely well-preserved lower town, with detailed ground plans and in situ domestic assemblages including not only the much celebrated tablet archives but also rich inventories of household items. Among these, portable cult paraphernalia as well as permanent ritual installations are conspicuous, but have not received much interpretative analysis. This paper examines the distribution of ritually significant artifacts across domestic space within the private houses of Kanesh as a basis for discussing the multiple ways in which otherwise ordinary domestic space served as permanent and/or ad hoc sacred settings. Focus is placed especially on correspondences between different types of private rituals that may be reconstructed from the archaeological evidence in light of textual references. As issues of ethnic identity and cultural hybridization within the mixed community of ancient Kanesh gain momentum in scholarly discourse, the paper will offer a critical analysis of the possibilities and limitations of the archaeological evidence for understanding how ritual behavior may have been negotiated within domestic settings.

Haskel Greenfield (University of Manitoba), Tina Greenfield (University of Saskatchewan), Elizabeth Arnold (Grand Valley State University), Aren Maeir (Bar-Ilan University), “A Bunch of Asses: Recent Asinine Discoveries from Early Bronze Tell es-Safi/Gath”

A few years ago, we presented the discovery of a donkey that was sacrificed and buried as a foundation deposit beneath the floor of an EB III house at Tell es-Safi/Gath. Since then, the remains of three additional complete domestic female donkey skeletons have been discovered buried beneath the floors of other houses in the same neighborhood of the EB III settlement. The complete skeletons represent a variety of ages, all of which are relatively young (one infant, one subadult, and one young adult). In addition, various other parts of donkey skeletons have been recovered across the excavation area. This paper will present the archaeological context, zooarchaeological analysis, and isotopic analysis of these new specimens, and discuss their significance in light of Early Bronze Age diet, society and economy in the region, and household ritual behavior.

Melissa Cradic (University of California, Berkeley), “Residential Burial and Social Memory in the Middle Bronze Age Levant”

Disposal of the dead within occupied buildings of the Middle Bronze Age Levant offered inhabitants an intimate new way of interacting with the physical remains of the deceased. Residential burials provided permanent spatial connections between the living and the dead and served as loci of social memory for the intergenerational household. This paper analyzes archaeological evidence for intramural funerary rituals and commemoration, focusing on Building 12/K/15 from Tel Megiddo. This domestic building housed 10–15 residents who buried at least 45 individuals below the floors over a continuous period of ca. 150 years. Although the osteological assemblage fits mortality profiles for an extended family, the burials varied in terms of type, architecture, body disposal method, and grave goods. I examine evidence of post-interment visitation to the grave sites in order to determine which

individuals may have been commemorated after burial. In several cases, burials were re-opened periodically to re-position corpses while others never disturbed. I argue that the high degree of diversity within this mortuary corpus relates to roles of the deceased after burial, who were treated differently according to their membership within the household lineage. Drawing on theories of embodiment, I demonstrate how mourners’ close encounters with certain deceased bodies transformed the status of the dead at different scales of time, from months to decades after burial. Ritualized visitation of burial sites was an integral component of commemorating ancestors who belonged to a specific lineage within the co-residential group.

Timothy Matney (University of Akron), “Infant Burial Practices as Domestic Funerary Ritual at Early Bronze Age Titriş Höyük”

The Early Bronze Age tradition of intramural tombs at settlements in the Middle Euphrates region is well established and examples are known from many excavations. Often these intramural tombs comprise stone-built cist chambers with adult or juvenile occupants and a range of funerary offerings. They are located within domestic residences and interpreted as family crypts. Less well explored are contemporary infant burials which, in addition to poor preservation, are often located beneath the living floors of domestic houses but not within the cist tombs, making them difficult to find and record. In this paper, evidence for the intramural burial of infants at the mid- to late Early Bronze Age (ca. 2600–2100 B.C.) site of Titriş Höyük in southeastern Turkey is reviewed in the context of broader funerary traditions at the site and in the region. The implications of these often overlooked or missing burials for our understanding of domestic funerary rituals and household cults are explored.

Burcu Yıldırım (Middle East Technical University), Laurel D. Hackley (Brown University), and Sharon R. Steadman (SUNY Cortland), “Sanctifying the House: Child Burial in Prehistoric Anatolia”

The practice of placing foundation deposits under walls, floors, or door thresholds is almost “standard practice” in some ancient cultures, including many found in the ancient Middle East. In ancient Anatolia and the Levant, particularly in the prehistoric periods, burial of individuals beneath floors suggests kinship connections with the dead, and perhaps the belief that their presence protected the living. While some may have been interred prior to the building of the house, many were buried while residents inhabited the home. In other cases animal remains were emplaced under walls and thresholds prior to construction, perhaps derived from feasts meant to celebrate the construction of the new home. The Late Chalcolithic levels at the north central Anatolian site of Çadır Höyük have presented a slight twist on these more conventional (for this region and period) foundations deposits and burials. Well over one dozen infant jar burials have been discovered in the Early Bronze Age and Late Chalcolithic levels at this site. Some of these seem to have been placed into existing corners of rooms, perhaps at the time of abandonment of the house, while others were intentionally placed in areas that may have had ritual functions. Others, however, were found *within* the constructed corners of buildings, clearly placed at the time of the house construction. This paper will explore the meaning and function of foundation deposits in the ancient Middle East in general, and the relatively unique practices present at Çadır Höyük will be examined in detail.

3A. The Archaeology of the Kurdistan Region of Iraq II

CHAIR: Jason Ur (Harvard University)

Claudia Glatz (University of Glasgow), and Jesse Casana (Dartmouth College), “Sketching out Imperial Handlungsräume in the Zagros-Mesopotamian Interface—Recent Results from the Sirwan Regional Project and Khani Masi Excavations”

Imperial encounters in the ancient Near East are traditionally envisaged as the enactment of essentialized political forms that purposefully transform, often in their totality, the communities they come to incorporate. In this

paper, we interrogate the pervasiveness of Kassite imperial sovereignty on the Upper Diyala and the perdurance of local forms of community and identity. Combining the results of our ongoing regional research in the course of the Sirwan Regional Project and recent excavations at the Late Bronze Age monumental complex of Khani Masi, we present a preliminary appraisal of several spatially overlapping and intersecting arenas of cultural production, interrogating their association with the creation and maintenance of political authority and identity. Our results begin to sketch the varying *Handlungsräume* that arose from the tensions of external imperial interest and local practice in the Zagros-Mesopotamian interface during final centuries of the second millennium B.C.

Hasam Qasim (Directorate of Antiquities, Duhok Governorate, Kurdistan Region of Iraq), “A New Neo-Assyrian Palace at Sêmêl Hill Rescue Excavations of the Duhok Directorate of Antiquities in the Kurdistan Region of Iraq”

Rescue excavations conducted by the Directorate of Antiquities of Duhok at Sêmêl Hill in 2011 have revealed unexpected evidence of the site’s important history. Sêmêl Hill is a small mound (3.20 ha) located about 16 km west of the city of Dohuk along the modern highway leading to Zakho and was settled almost continuously from the Halaf to the Islamic periods. 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 modern town is seriously endangering the archaeological site and modern houses have already partly covered 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, a brick with a three-line cuneiform inscription of Shalmaneser III, and cylinder seals were also found in the building.

Shin Nishiyama (Chubu University), “Iron Age Village and City in Iraqi Kurdistan: Results from Qalat Said Ahmadian and Yasin Tepe”

Since 2014, the Japanese Archaeological Expedition (University of Tsukuba and Chubu University) has been conducting the excavations of two Iron Age sites in the Sulaymaniyah province, Iraqi Kurdistan: One is Qalat Said Ahmadian (QSA) located in the Peshdar Plain and the other is Yasin Tepe (YT) in the Shahrizor Plain. The former is a village-sized site, but revealed to have a peculiar stone-built fortification constructed around the mound. The latter is a city-sized site which was confirmed to have an extensive “lower town” dated to the Bronze and Iron Ages.

The paper discusses the possible functions and historical roles of the two settlements based on the latest analysis of archaeological evidence as well as information from the available textual records. Both the Peshdar and Shahrizor Plains are close to the Iraq-Iran border and the material culture shows the “international” influence not only from Mesopotamia but also from the Iranian side. The excavation has revealed that both settlements were present during the eighth and seventh centuries B.C.E. when the region was largely controlled by the Assyrian Empire. It is likely that QSA was a fortified settlement with a military/religious function, while YT was an administrative center like the provincial capitals that the Assyrians established in its western territory.

Maria Grazia Masetti-Rouault (École Pratique des Hautes Études / Paris Sciences et Lettres Research University), “Before the Assyrians, After the Assyrians: News from Qasr Shemamok”

The French Archaeological Mission at Qasr Shemamok has been working at this site, situated 25 km southwest of Erbil (Kurdistan, Iraq), since 2011. Identified already at the beginning of the archaeological exploration of Mesopotamia as the Neo-Assyrian city of Kilizu, this large urban settlement has already shown to have a much longer history. Starting in the late Chalcolithic period, its evolution is marked, in the stratigraphy as well as in the form of the site, mainly by Assyrian and post-Assyrian occupations. Security conditions

have been difficult in recent years, due to the proximity of Qasr Shemamok to the Mosul area, but with the support of the Erbil Directorate of Antiquities, the mission has carried out a program centered not only on the excavations on the main tell, but also on the study of the landscape around the urban site. The aim of this research is to highlight the impact of the imperial policies and economies on the natural and social environment over the course of time. This communication will present the most recent preliminary results of our work, as well as information found in some of the cuneiform texts discovered at the site, which document, for the first time, the historical situation of the city and of the region right before their integration into the Middle Assyrian “empire.”

Lisa Cooper (University of British Columbia), “Archaeological Reflections of Identity in the Late Assyrian Period Remains at Bestansur, Kurdistan”

Detailed here are the investigations of the Assyrian period remains at the site of Bestansur in the Shahrizor Plain of the Sulaymaniyah Province of Kurdistan. Renewed excavations in 2017 have taken place in Trench 14, about 30 m to the southeast of the central mound, where a large, multi-roomed rectilinear building was first explored in 2013. Along with additional small soundings on the central mound, it is hoped that the archaeological remains will shed additional light on the identity of the occupants of Bestansur and their relationship to Assyria during the final years of its imperial power. It is hoped that aspects of the inhabitants’ identities will be illuminated through the analyses of pottery production technologies and vessel functions, foodways, and considerations of built architectural spaces, informed by access analysis, visibility analysis, and the presence of the fixed, semi-fixed and portable objects within the various spaces.

Jason Herrmann (University of Tübingen) and Paola Sconzo (University of Tübingen), “Environmental Influences on Survey Results and Settlement Patterns, Eastern Habur Region, Iraqi Kurdistan”

In this paper we present analyses of select results from the first four years of the Eastern Habur Archaeological Survey (EHAS). Like parallel surveys in Iraqi Kurdistan, the EHAS project area covers a range of distinct ecological zones, from the plains that flank the Tigris River to Zagros Mountain ranges. We begin with an evaluation of the successes and failures different survey strategies presented in each zone. We then summarize the range of settlement patterns exhibited in the survey results from the Early Bronze Age through the end of the Iron Age. Geospatial and statistical analyses are used to assess how our results fit into existing models of aggregation and dispersion, continuity and change in the study region as a whole and in distinct environments. We close with a discussion of how our understanding of transformations in settlement strategies from the third to the first millennium B.C. are enhanced by careful consideration of the role these environments played in ancient settlement strategies and how they influence the results of field survey.

3B. Archaeology and Biblical Studies I

CHAIR: Jonathan Rosenbaum (Gratz College)

Aaron Demsky (Bar-Ilan University), “Rabbi Estori Haparhi, the Father of Biblical Historical Geography”

Seven hundred years ago, Rabbi Estori Haparhi wrote his magnum opus, *Kaphtor va-Ferah*, and gained the recognition of being the father of biblical historical geography. His methodology for identifying biblical sites, innovative for his time, was based on the assumption that the contemporary Arabic place names preserved the ancient Hebrew and Canaanite toponyms. Between the years 1315–1322, he traveled throughout the Holy Land and knew the topography first hand. Following this principle of the preservation of place names, he identified over 150 sites, many of which have been accepted by modern scholarship. Furthermore, having full command of the written Hebrew sources, namely the Bible and rabbinic literature, he was able to strengthen his identifications and put them into historical context. On occasion, he also noted physical artifacts, particularly ruined synagogues and ancient structures.

In a sense, Estori predated the modern study of biblical historical

geography based on preservation of the ancient name, familiarity with the terrain, command of the written sources, and finally archeological corroboration. Not since Eusebius's *Onomastikon* written a thousand years earlier for Christian pilgrims was there an attempt to identify biblical sites. Unfortunately, Estori's contribution was forgotten until the 19th century and the scholarly rediscovery of the Holy Land. In this paper, I will review Estori's approach in light of modern research of Talmudic traditions, synagogue inscriptions, and historical geography, noting its limitations, including those that led Estori to the frustrating identification of Ekron in the Shephelah with Caesarea on the seacoast.

Dale Manor (Harding University), "Toys 'R' Us at Tel Beth-Shemesh"

In the 2009 excavation season at Tel Beth-Shemesh, several small, crudely formed animal figurines came to light in the ruins of the 14th century B.C.E. palatial building. These figurines were found in clear non-cultic contexts, but in contexts that reflected celebratory and feasting activities. After careful evaluation, we have concluded that these were toys that probably had been made to placate children who were part of the social setting.

As one surveys the excavation reports from ancient Near Eastern sites, it becomes readily apparent that information on how children in antiquity amused themselves is conspicuously absent. While our refined efforts in archaeology reconstruct ancient cultures and social interactions, the presence and roles of children remain relatively obscure.

The aim of this paper will be four-fold: 1) to evaluate the artifacts that we have retrieved from ancient Beth-Shemesh (with collaboration from Zvi Lederman); 2) to offer a theoretical framework in which to refine our studies of toys in the ancient Near East; 3) to offer insights of why the presence of children in the archaeological record may remain elusive, and 4) in so doing to alert us to questions to ask that might sensitize us more carefully to the presence of children's activities.

Peter Feinman (Institute of History, Archaeology, and Education), "Rethinking Israel: The 400-Year Stories of the Hyksos and Israel"

There are two noteworthy four hundred year stories from the ancient Near East. In one, Ramses II honors the legacy of the Hyksos in Egypt. In the other, Yahweh informs Abram that his descendants will experience oppression in Egypt. The idea of a connection between the two is not new, but determining the exact connection has been problematic. Manetho and Josephus in ancient times and some Egyptologists have suggested a Hyksos-Exodus link of some kind. I propose that there is a connection between the 400-year stories and it originated in the aftermath of the Battle of Kadesh during the reign of Ramses II.

As Donald Redford notes, Ramses's failure at Kadesh was a signal to people throughout the land of Canaan and the Delta that Seti I had not chosen a qualified person for the job. He attributes the subsequent revolts in Canaan to this awareness of Ramses's shortcomings. But what about the Canaanites in the land of Egypt? What about the Canaanite warriors who had rescued Ramses at Kadesh? What about the Hyksos? If Canaanites could rebel in the land of Canaan, Canaanites in the Delta could do the same. It is time to rethink the relationship of these two 400-year stories and the role of the Hyksos in the origin of Israel.

Richard Hess (Denver Seminary), "Cultural Contexts Compared: The Onomastic Profiles of the Books of Joshua and Judges"

The personal names found in various books of the Hebrew Bible, like those occurring in particular archives from specific times and places in the ancient Near East, provide a window into the cultural worlds of those sources. Study has been made of the personal names in the book of Joshua with special attention to the names of non-Israelite persons. Correspondence has been argued between these names and those attested in the Canaanite Amarna letters as well as in other cuneiform documents from southern Canaan in the Late Bronze Age.

While some personal names in the book of Judges resemble those found in Joshua, other names differ in their overall ethnic and cultural backgrounds.

The purpose of this study will be to compare and to contrast the linguistic and etymological origins of the personal names attested in the books of Joshua and Judges. By examining these onomastic profiles as a whole, it will be possible to point to the locus of the traditions behind the two groups of names and therefore to their cultural and chronological origins.

Amit Dagan (Bar-Ilan University) and Aren Maeir (Bar-Ilan University), "And the Gods of the Philistines' (Judges 10:6): Understanding Philistine Cultic Practices in Light of Archaeological and Textual Evidence"

This paper will present the characteristics of Philistine religion as reflected in the archaeological record, as well as in biblical and extra-biblical texts. The core of the presentation will summarize four ritual structures dated to Iron Age IIA, which were uncovered in the excavations at Tell es-Safi/Gath. The structures represent the ritual characteristic of the settlement in the upper (Area A) and the lower tell (Area D). Examination of the similarities and differences of these ritual structures will shed more light on Philistine ritual characteristics.

The second part of the paper will compare the finds from Tell es-Safi/Gath with previous known Philistine ritual structures (e.g., Tell Qasile, Tel Ashkelon, Tel Ekron, Nahal Patish, etc.) and the nearby region, such as Motza. Finally, the archaeological finds will be compared with textual evidence in order to further our understanding of Philistine religion.

Robert Miller (The Catholic University of America), "The Archaeology of Midianite Religion and Yahweh's Southern Origins"

Israelite religion's roots in the Northwest Semitic world are well understood. Yet a significant alternate notion perdures in the Bible connecting Yahweh with the South—a persistent association with Midian, Seir, Teman, and Kenites. Extrabiblical material, too, attests to "Yahweh of Teman," and Egyptian sources connect the name Yahweh with the South. Such issues were much discussed in the 19th century, but little since.

Thomas Römer explored them in his 2014 *L'invention de dieu* (The Invention of God), attempting to use Edomite religion of a supposed pre-Qausitic phase. This study agrees with Römer that the key to southern elements of Yahwism lies in the religion of Israel's southern neighbors, but rather than focus on an undocumented aspect of Edomite religion, it focuses on Midian and uses the critical tools of archaeology of religion. The archaeology of religion is the subject of much scholarly discussion and its anthropologically-driven methods are only just being introduced in the Near East. Archaeological information from northwestern Saudi Arabia is viewed through these methods to understand Midianite religion and what it can tell us about Yahwism and its origins.

3C. Archaeology of Israel II

CHAIRS: J. P. Dessel (University of Tennessee, Knoxville) and Rachel Hallote (Purchase College SUNY)

Haggai Cohen Klonimus (The Hebrew University of Jerusalem), "The Renewed Excavation in Teluliyot Batashi—A View from the Southernmost Wadi Rabah Sites"

The Wadi Rabah culture (ca. 5800–5200 cal B.C.E.) is seen as the dominant Late Pottery Neolithic or Early Chalcolithic culture of the Southern Levant. The term was introduced in the late 50s by Jacob Kaplan, following his excavation at the Bashan Street in Tel Aviv, and at the sites of Teluliyot Batashi and Wadi Rabah in the Shephelah. Famed for its elaborate surface treatment of pottery—which includes burnishing over thick dark red-black slip as well as common incisions, combing, plastic decoration, and other 'surface manipulations'—the Wadi Rabah culture was left as a neglected phase in archaeological research for many years after. Even now, with growing interest in the proto-historical periods of the southern Levant, Wadi Rabah excavations are focused almost entirely in the north of Israel. This leaves Teluliyot Batashi as the only Wadi Rabah site to be excavated in the southernmost region of this culture. The renewed excavation in Teluliyot Batashi revealed five successive

architectural strata of the Wadi Rabah cultural phase. This marks Teluliyot Batashi as the most multilayered Wadi Rabah site known so far. Functional, technological, and typological approaches in the study of the pottery, the flint implements, and the groundstone tools are being used in order to maximize our understanding of the material culture and its development throughout this period.

Marcin Czarnowicz (Jagiellonian University in Kraków), Krzysztof Ciałowicz (Jagiellonian University in Kraków), Agnieszka Ochał-Czarnowicz (Jagiellonian University in Kraków), Yuval Yekutieli (Ben-Gurion University of the Negev), Eli Cohen-Sasson (Ben-Gurion University of the Negev), Eliot Braun (Jagiellonian University in Kraków), Dmitry Yegorov (Israel Antiquities Authority), and Ianir Milevski (Israel Antiquities Authority), “Tel Erani: The Jagellonian and Ben-Gurion Universities and Israel Antiquities Authority Excavations (2013-2017)”

Tel Erani is a large mound located at the northern border of the Negev. In the past the site, erroneously identified with Philistine Gath, was extensively excavated, revealing important strata of the Early Bronze Age as well as evidence of settlement in the Iron Age and Persian periods.

From 2013 Jagiellonian University and Ben-Gurion University began a joint project focusing primarily on Early Bronze Age deposits. Today, that project has discovered evidence of several Early Bronze Age phases of occupation including a developed EB I horizon known as “Erani C” and later phases of the period dating to the end of the fourth millennium B.C.E. In addition to domestic structures in Area D, more of the massive fortification system, already partially exposed in earlier excavations, was revealed on a sloping terrace in Area N. In 2015–2016, the Israel Antiquities Authority conducted a salvage excavation which revealed additional evidence of this fortification system on the southern fringes of a low terrace of the tell in two new Areas, P and Q, as well as some earlier occupation of the Erani C horizon. Planned for the spring of 2017 is an expanded excavation additionally supported by a team of the University of Buenos Aires and ASOR. Renewed excavations are primarily aiming to reveal additional evidence of the site’s fortification, with the hope of verifying its proposed late EB I date. This presentation will present summaries of the excavation results since 2000.

Geoffrey Ludvik (University of Wisconsin–Madison), “Hard Stone Beads and Socio-Economic Interaction in the Intermediate Bronze Period: Tracing Foreign Connections with Israel in the Third Millennium B.C.E.”

This paper presents a new study of long distance exchange of hard stone beads during the Intermediate Bronze Age (IB; EB IV/MB I) in Israel. Given that crafts like beadmaking are prone to idiosyncratic differences in manufacturing technology, style, and raw material exploitation, it is proposed that bead styles, production methods, and mineralogical sources varied from region to region, workshop to workshop, and from culture to culture during the Intermediate Bronze Age. This presentation focuses on the identification of discrete groups of beads in the IB corpus and on linking these to their regions of manufacture. To that end, detailed stylistic and technical analyses were performed on over 400 IB beads found in Israel. Statistical studies of measurements alongside Elliptical Fourier Function Analysis (EFFA) were employed to mathematically identify groups of beads most likely made in different workshops. Scanning electron microscopy (SEM) was used to identify different drill types. Laser ablation inductively coupled mass spectrometry (LAICPMS) geochemically sourced raw materials. Using this evidence derived from high resolution bead analysis, a more complex model for interregional trade in the Intermediate Bronze Age Levant is produced in which beads indicative of Indus Civilization (2600–1900 B.C.E.) manufacture as well as those made in Egypt, Arabia, and Mesopotamia all made their way into Israel by the mid-third millennium B.C.E., alongside Levantine products. Results offer a new framework for understanding beads as complex and important trade goods in IB Israel and suggest significant changes in interregional economic interactions from the late EB III through the IB periods.

Jacob Damm (Cotsen Institute of Archaeology, University of California, Los Angeles), “Pots and People: Imperial Collapse and Identity Negotiation at New Kingdom Jaffa”

While the spirit of internationalism in the Levantine Late Bronze Age (ca. 16th–13th centuries B.C.E.) has a long history of study, contributions of post-colonial theory compel us to contemplate alternative factors in the construction of cultural identity. Given the presence of the New Kingdom empire in the region, it is necessary to reconsider the cultural interaction zone as a dynamic stage wherein actors used a constellation of practices and material objects to negotiate and signal affiliation according to exigent needs. As such, any destabilizing influence on Egypto-Canaanite relations, be it outbursts of violence or shifts in the balance of power, would in turn result in renegotiation to adjust to the new status quo. Recent excavations at the site of Tel Yafo (modern Jaffa, Israel) by the Jaffa Cultural Heritage Project (JCHP) have provided insight into one such interaction zone, where the closing decades of New Kingdom imperial control were marked by multiple destructions of the city’s monumental gate. By focusing specifically on the culinary sphere as an index of identity maintenance, this paper tracks consumption patterns at the site to reconstruct how inhabitants responded to these traumatic episodes during the collapse of the imperial system. With the assistance of high-resolution 14C dates, residue analysis, and an intensive ceramic quantification program, it is possible to track at sub-generational scale the gradual de-emphasis of Egyptian culinary practices at the site, culminating in their final disappearance and the reassertion of a local identity upon the final destruction of the garrison.

Jeffrey Blakely (University of Wisconsin–Madison), “The So-Called ‘Governor’s Residencies’ at Tell el-Hesi”

The pioneering excavations of W.M.F. Petrie and F.J. Bliss on behalf of the Palestine Exploration Fund between 1890 and 1892 recovered two structures that have been identified as “Governor’s Residencies.” Eliezer Oren identified the structure of Bliss’s City IV as such a residency, and about 20 years ago I identified Petrie’s Pilaster Building as another after the Joint Expedition isolated an additional, outer wall, clarifying the shape of the structure.

Further research has allowed these structures to be seriated and dated, Bliss’s City IV to the 13th century and Petrie’s Pilaster Building to the first half of the 12th century. They were sequential, the latter likely reusing architectural elements of the former. If these structures are in fact evidence of an Egyptian presence at the site, then one can follow other recent scholarship and suggest a continuing Egyptian presence at the site starting at least in the Amarna period.

If this is so, then the question of actual function becomes relevant. Modern Hesi excavators have argued that the greater Hesi region was a grassland or pasture, and not farmland, for much of the site’s history. This attribution is most secure during the arid climate of the 13th and 12th centuries. Both “Governor’s Residencies” and manors/estates seem unlikely functions since little built environment is needed to support a pasture, beyond protection of course. More likely the site functioned as an observation point, a guard post for the pasture, and a way, or mail, station.

Zvi Lederman (Tel Aviv University), “Water for the Royal Horses: Rethinking Iron Age II Water Systems”

Recent finds from Iron Age II Tel Beth-Shemesh challenge the widely accepted notion that underground rock-cut water systems, found at major sites like Hazor, Megiddo, and Beer-sheba, were designed to support the city inhabitants in times of siege. An excellent example of such a water system was discovered by the Tel Aviv University expedition to Tel Beth-Shemesh in 1992–1993. It is estimated that this system could store up to 800 cu. m of water, a quantity that far exceeded the needs of Beth-Shemesh’s Iron Age II population, even in times of a long siege. Interestingly, a recently discovered large tripartite stone building, found next to the reservoir’s opening, may well help solve the function of the Beth-Shemesh example and hold important insights into Iron Age II water systems in general.

3D. Ancient Inscriptions III

CHAIRS: Heather Dana Davis Parker (Johns Hopkins University) and Michael Langlois (University of Strasbourg)

Janling Fu (Harvard University), “A Thick Description of the Tabnit Sarcophagus”

The Tabnit sarcophagus was discovered in 1887 in a shaft tomb in Sidon. Although originally made for an Egyptian general Pen-Ptah, as indicated with a hieroglyphic inscription, it was later repurposed for Tabnit of Sidon in the fifth century B.C.E. The short Phoenician text of eight lines bears renewed consideration, given the relatively understudied nature of this text in comparison with that of Eshmunazor. In this paper, I propose to revisit the sarcophagus to offer what may be termed a “thick description” of some of its more salient epigraphic and orthographic features. I will then set an interpretation of the inscription within the light of the ancient Near East.

Andrew Burlingame (University of Chicago), “Eshmunazor’s Last Full ‘Measure’ of Devotion? An Old Reading and a New Interpretation of KAI 14:19”

Lines 18-20 of the pectoral inscription appearing on the sarcophagus of Eshmunazor II of Sidon describe the annexation of Dor and Joppa to Sidonian territorial holdings and constitute an important source for reconstructing Persian-Sidonian relations during the Persian Period. As traditionally read and interpreted, the text asserts that these lands were given to Sidon “according to the measure” of the mighty deeds performed by Eshmunazor (*lmdt ʿsmt ʿs pʿlt*). Yet the reading of the phrase {lmdt} is open to question. Based on a new epigraphic study of the text, I argue that the reading {lmr(t)}, once entertained as epigraphically likely but passed over in favor of the more easily interpreted {lmdt} since the 1880s, must be recognized as the epigraphically superior reading. Furthermore, I demonstrate that this reading can be interpreted philologically in a contextually plausible manner by appeal to the root \sqrt{mwr} , well attested in Northwest Semitic languages. According to this interpretation, the phrase in question casts Sidon’s territorial gains as one side of a fair exchange, i.e., as recompense (*mr* or *mrt*)—a hypothesis that has important historical and rhetorical implications for our understanding and interpretation of Eshmunazor’s inscription as a datum relating to Sidonian politics during the sixth and fifth centuries B.C.E.

Dov Gera (Ben-Gurion University of the Negev), “The Greek Inscriptions from Maresha”

Maresha, located about 40 km to the southwest of Jerusalem, is where four tombs, two of which were painted, were explored by J. P. Peters and H. Thiersch in 1902. A publication of their findings followed in 1905, and it included descriptions of the painted murals with their accompanying inscriptions as well as 58 other inscriptions. These comprise more than a quarter of the Greek inscriptions from the site. In recent years, D. M. Jacobson has made it clear that the plates accompanying Peters and Thiersch’s book blended elements from two sources: 1) photographs taken in 1902 by Chalil Raad and 2) aquarelles of the tombs sketched at the time by L. H. Vincent and A. R. Savignac. Naturally, the watercolours offered a subjective view of the findings in the tombs. Jacobson has published Raad’s original plates, and these afford us control of the published material, allowing us inter alia to check the accuracy of the readings of Peters and Thiersch. The Raad plates are essential for deciphering the painted inscriptions, since the coloured elements in the Maresha tombs faded long ago. In my paper, I offer some new readings for the Greek inscriptions published by Peters and Thiersch and show how these readings re-shape our understanding of the history of Maresha. I re-date two inscriptions, present a revised description of two central scenes, and establish the presence of a Tyrian huntsman in Maresha.

Gil Gambash (University of Haifa) and Assaf Yasur-Landau (University of Haifa), “Governor of Judea, Patron of Dor: A New Inscription of Gargilius Antiquus”

During a recent underwater survey conducted by the Laboratory for

Coastal Archaeology and Underwater Survey at the University of Haifa’s Department of Maritime Civilizations, a limestone block presenting a Greek inscription was discovered. It was found in Dor’s northern bay at a shallow depth. The block was removed from its place of discovery, and underwent a thorough process of cleaning and preservation before the inscription was read by the authors of this paper.

Two sockets in the shape of feet, apparent on the upper part of the block, suggest that it served as a statue base. The inscription is dedicatory in nature, and it contains seven lines, partly preserved, which may be divided into three parts. The first part contains the full polyonymous formula of the dedicatee’s name, Gargilius Antiquus. The middle part refers to the *cursus honorum* of Gargilius Antiquus. And the last part indicates the likely occasion of the dedication—the designation of Gargilius Antiquus as the *patromus* of the dedicating city, probably Dor.

Part of Gargilius Antiquus’s career was already known from other inscriptions. The new inscription positively confirms that he was the governor of Judea during the 120s C.E., and it also mentions Syria, previously unknown in his *cursus*. In this paper we aim to shed light on the nature of Gargilius Antiquus’s appointment in Syria, as well as on the historical circumstances of the dedication indicated in the new inscription, and the designation of our man as patron of Dor.

Gaby Abou Samra (Lebanese University), “The Arabic Inscriptions in Deir Es-Salib Church in the Qadisha Valley (Lebanon)”

This paper is a presentation of the Arabic inscriptions in Deir Es-Salib Church in the Qadisha Valley, Lebanon. I will give a description of each inscription with transliteration, translation, and commentary. From these inscriptions, I will try to present a linguistic and historical reading and a good understanding of this site, its habitants, and its pilgrims in different periods.

3E. Southern Phoenicia Initiative I (Workshop)

CHAIR: Becky Martin (Boston University)

Ilan Sharon (The Hebrew University of Jerusalem), “The Southern Phoenicia Initiative: Defining Space and Chronology”

The very definition of “Phoenicia” and “Phoenician” is—as some of the other contributors to this workshop claim—elusive, fluid, and perspective-dependent, and mutates over time. I would argue that liminality is the defining quality of Phoenicianism: certainly from the perspective of modern scholarship and perhaps in the point of view of some of its contemporaries, too. In defining “Southern Phoenicia” as the liminal zone between Phoenicia proper and entities to the south and southeast, our object of inquiry is a limbo of the second order. Drawing precise edges (spatial or temporal) to “Southern Phoenicia” becomes a truly subliminal endeavor. Yet a workgroup, even one convened for the study of liminality, must define the borders of its subject matter: which sites, periods, and discussions are within its domain? Who is under the umbrella and who is out? I will put on the table my proposals for the spatial and temporal purview of the initiative, as a basis for discussion by the forum.

Ayelet Gilboa (University of Haifa), “Early Iron Age Phoenicia as a Construct and Tool”

That the term “Phoenicia” for the early Iron Age Levant is anachronistic and methodologically wrong became a scholarly cliché many years ago. Yet we all keep using it. Is “Phoenicia” useful only for attracting volunteers to our excavations and selling our books? Or is it useful because we feel that there is some unity to this region (leaving aside for the moment what exactly “this region” might be)? And how about “Southern Phoenicia”? “Southern Phoenicia” was coined by Josette Élayi to define the coastal areas south of the Ladder of Tyre in the Persian period: mainly those territories that politically were part of Phoenicia in as much as they were governed by Sidon and Tyre, newly acquired by them around the turn of the sixth century. But is this of any relevance for the Iron Age? I suggest that even if “Southern Phoenicia” is an anachronistic

expression, we must ask ourselves two questions: 1) Is the use of “Southern Phoenicia” at least heuristically helpful for the early Iron Age and what might we or should we mean by it; and 2) (an interrelated question) can any early Iron Age phenomena be identified as the buds of later Phoenician ones? These are some of the questions I think should be posed in the framework of the proposed project, and I will dwell on possible ways to pursue answers.

Becky Martin (Boston University), “Phoenicianism’ in the Persian Period: Definitions and Problems”

This presentation concerns the status of our understanding of the relationship between Phoenician identity (“Phoenicianism”) and Phoenician archaeology in the Persian period. This presentation will argue for the centrality of the Persian period to Phoenician studies, not only as a transitional period but also in its own right. Indeed, the Persian period offers one of the richest—and arguably the most important—records of indisputably “Phoenician” art of any period. Using this evidence, I raise the possibility that the Persian period is in fact the first time that evidence of Phoenicianism in the material record is indisputable, an outgrowth of a new collectivity shaped by events in the early Achaemenid empire. The second part of the presentation applies these ideas to the region of Southern Phoenicia, which is for the most part lacking in the kind of artistic evidence offered by “mainland” excavations, and to the goals of the Southern Phoenicia Initiative.

Jessica Nitschke (Stellenbosch University; University of Cape Town), “Southern Phoenicia in the Hellenistic and Roman Eras”

Traditionally, scholarly narratives about “Phoenicia” end with the arrival of Alexander and the Macedonian colonial administration, with most specialists showing little interest in the post-Achaemenid era. This epochal break has also affected approaches to archaeological fieldwork. In many site reports, “Phoenician” settlements suddenly become “Greek” and, later, “Roman” towns, without evidence that Greeks or Romans arrived there in any sort of numbers. Such narratives rely on vague assertions about unilateral cultural diffusion, a methodological framework long discredited in anthropology. An important exception to this has been the work of Andrea Berlin and Sharon Herbert, especially at Qadesh and Tel Anafa; they have long argued for the existence of Phoenician identity into the Roman period. There has also been a recent uptick in scholarly interest in the history and culture of post-Alexander Phoenicia more widely. Under the Southern Phoenicia Initiative, there is an opportunity to continue this momentum at the fieldwork level in a more concerted way. This presentation seeks to initiate a critical dialogue on how we analyze and narrativize the material record from the periods of Macedonian and Roman hegemony, along two lines. The first is to interrogate the culture concept and the conceptual frameworks we employ to interpret material evidence of contact (e.g., “glocalization,” “koine”). The second is to reframe our questions in ways that see the Phoenicians as active agents in their own cultural production as they respond to shifting political realities and new cultural trends, rather than as passive recipients of vaguely defined cultural movements.

Assaf Yasur-Landau (University of Haifa), “The Contribution of Underwater Archaeology to the Study of Southern Phoenicia”

Maritime interaction is considered crucial to our understanding of the Phoenician economy, culture, and religion in the Iron Age and Persian/Classical periods. Forty years of underwater archaeology in southern Phoenicia have exposed the enormous potential of this area of study for the understanding of harbor installations, cargoes, and even shipwrecks. Underwater excavations at the port sites of Dor and Atlit have brought to light maritime installations and coastal constructions. Ceramic cargoes of ships found at Atlit, Dor, Achziv, and elsewhere not only provide evidence of the source of maritime containers traveling by sea, but also in some cases preserve traces of organic matter absent from land excavations. The massive underwater deposit of figurines from Shavei Zion opens a window to cultic practices related to the sea. Finally, the Maagan Michael shipwreck from the late Persian period, while not Phoenician, opens the real possibility that Phoenician boats can be found even in the shallow coastal waters. This presentation will give a status

report on ongoing underwater field projects, at Dor and Achziv, as well as on additional publication projects of material excavated or retrieved in surveys of the 1960s–1980s.

Meir Edrey (Tel Aviv University), “Burial Diversity in Phoenicia and Its Social Implications”

Funerary practices are considered a conservative element of ancient societies, which represent religious ideas concerning death and the afterlife. They can serve as a marker distinguishing one ethnic group from another. Funerary architecture is therefore somewhat limited to a few types of tombs that represent the deceased’s social status in life, e.g., monumental tombs for monarchs, elaborate tombs for the wealthy, and simple burials for commoners. In Phoenicia, however, archaeological evidence suggests that Iron Age funerary practices demonstrate a much greater diversity, not only in various grave and tomb types ranging from simple pit burials to elaborate rock-cut shaft tombs, but also in the post-mortem treatment of the body, as both inhumation and cremation were practiced, occasionally appearing in the same tomb. This paper suggests that the unique conditions that formed Phoenician culture led to the development of an urban-centered society whose main economic engine was trade and the production of luxury items, rather than agriculture. The ability for social mobility in such a society was far greater than in other ancient Near Eastern cultures. This complex social stratification is evident in the diversity of burial traditions among the Phoenicians during the Iron Age.

Paula Waiman-Barak (University of Haifa), “Phoenician Maritime Transport Containers of the Early Iron Age, a Provenance Analysis”

This research investigated commercial and economic networks of Early Iron Age Phoenicia through a large-scale provenance analysis of ceramic transport containers. Several categories of vessels were selected: carinated jars, small lentoid flasks, and decorated ware (Phoenician Monochrome and Bichrome). Over 450 vessels were collected for analysis from both Phoenician (Tel Achziv, Tell Keisan, Tel Dor) and non-Phoenician sites (Tel Dan, Tel Rehov, Tel Megiddo, ‘En-Haggit, Tell Qasile, Nahal Patish). Three main petro-fabric groups were identified representing ceramic production centers along the Phoenician coast: 1) the southern Lebanese coast between Tyre and Sidon; 2) the coast between Achziv and Haifa; and 3) the Carmel Coast. Most of the analyzed vessels were locally produced; however, some were imported and clearly used for transport. Movement of Phoenician vessels of various types, mainly carinated jars and decorated wares, was identified up and down the coast. In addition to maritime trade, overland connections between the Phoenician coastal centers and sites within their hinterland were identified. Vessels made in Phoenicia, especially small lentoid flasks and Phoenician decorated wares, were found deep inland and southward in the land of Philistia. The Phoenician Carmel Coast shows strong connections with the Jezreel Valley and the southern Lebanese coast shows ties to Rehov and Dan. In exchange, transport vessels produced inland travel to the Phoenician coast. The reference data and methods developed in this research are applicable to various research avenues in the Southern Levant for the archaeological periods in question.

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

CHAIR: Eric Lee Welch (University of Kansas)

Itzhaq Shai (Ariel University), Debi Cassuto (Bar-Ilan University), and Chris McKinny (Texas A&M University Corpus Christi), “Tel Burna Archaeological Project: The Results of the 2016–2017 Seasons”

The past two seasons of excavations at Tel Burna have provided us with new data on the site during the LB II and the Iron Age II. These discoveries have contributed to broaden our knowledge of the Judean Shephelah, particularly in the region of Wadi Guvrin. The continued exposure of the Late Bronze Age public structure and its associated finds strengthen this structure’s connection with cultic activities, and a greater understanding of additional features that date to this period. Meanwhile, Iron Age II remains uncovered on the summit include an impressive fortification system and a large eighth century B.C.E.

administrative building. In addition, work commenced on the excavations of some of the agricultural installations in the vicinity of the tell, which can now be well dated to the Bronze and Iron Ages. In this paper, we will present our most recent results from the excavations of both the Late Bronze Age and the Iron II Age remains.

Hoo-Goo Kang (Seoul Jangsin University), “The City Gate of Tel Lachish Level V: Where Is It?”

In the fourth expedition to Tel Lachish under the direction of Prof. Y. Garfinkel (Hebrew University of Jerusalem), Prof. M. Hasel, and Prof. Klingbeil (Southern Adventist University), one of the main targets is to explore the nature of Tel Lachish Level V, with attention focused on questions such as: whether it was a fortified city or just an unfortified town without public buildings, the size of Level V, when it was built, and so on.

After a weeklong sondage in 2013, excavations started in 2014 and are scheduled to close in 2017. During the excavations in 2015, a previously unknown 3 m wide city wall was uncovered in the middle of the northern edge of Tel Lachish. In spite of massive erosion, more than 70 m of the city wall has been revealed to date. Based on stratigraphy and pottery typology, it is attributed to Level V.

With the identification of the fortification system of Level V, several possible questions can be raised: Did Level V had other public buildings such as a water system like Tel Megiddo and Tel Hazor? Where is the city gate? etc. This paper is aimed at answering the second question and tries to suggest its possible location.

Gerald Mattingly (Johnson University) and Mark Green (Indiana State University), “Where the Lines of Evidence Converge: Dating the Origin of Khirbat al-Mudaybi’, on Central Jordan’s Karak Plateau”

Between 1995 and 2014, Karak Resources Project (KRP) completed seven seasons of multidisciplinary fieldwork in central Jordan. This research team collected data concerning the acquisition and use of natural resources by working on three fronts: 1) excavation at the Iron Age II fort of Khirbat al-Mudaybi’ (KaM); 2) regional archaeological survey; and 3) regional scientific studies. KRP has excavated for six seasons at KaM, which is located ca. 21 km southeast of Karak. Mudaybi’ was one of the 443 sites documented by the Miller-Pinkerton Survey (1978–1983). Because of its strategic location and impressive architectural features, KaM (which measures 83.5 m N-S x 88.75 m E-W) has attracted the attention of many scholars who have traveled through this area (Musil, Glueck, etc.). Study of this compact site holds great potential for understanding the Karak plateau’s history, but this requires a solid chronology.

The purpose of this paper is to examine various lines of evidence that enable us to assign the initial occupation of the Mudaybi’ fort to Iron Age IIB. This converging evidence includes ceramic typology, radiocarbon and optically stimulated luminescence dating, and the dating of artifacts and architecture. Architectural features that reflect an Iron II date for the fort include its overall layout, the four-chamber gate, and proto-aeolic or volute capitals. Of course, all of these categories present their own problems.

Yifat Thareani (Hebrew Union College-Jewish Institute of Religion, Jerusalem), “Movers and Shakers of the Ancient Near East: Assyria’s Deportation Policy in Light of the Archaeological Evidence from Tel Dan”

Assyria’s expansion westward involved exporting psychological terror and depression to newly conquered territories. Creation of a hegemonic imperial space was achieved through devastating military campaigns that left unmistakable imprints on the Syro-Levantine kingdoms. Nevertheless, the Assyrian kings were not satisfied with the mere conquest of the “Westland” and initiated large-scale deportations from and to the conquered regions.

While both the Assyrian inscriptions and the Hebrew Bible refer to two-way deportations from Palestine to other regions and vice versa, the information that can be retrieved from these sources is limited. Recent studies have emphasized the role of archaeology in illustrating the diverse imperial strategies practiced by the Assyrian Empire on its frontiers. Of special

importance are the material manifestations of Assyria’s deportation policy; these manifestations, discerned through the renewed study of the Iron Age II remains at Tel Dan, will be the focus of this paper.

By following the archaeological footprints of the mass movement of people and products through imperial space, I will emphasize the agency of deportees in the imperial act and its far-reaching implications on the economy and social composition of local communities.

Assaf Kleiman (Tel Aviv University), “The Invisible Kingdom? Settlement Oscillations in the Northern Jordan Valley and State Formation in Southwestern Syria”

By the mid-ninth century B.C.E., Aram-Damascus achieved a prominent position among the other kingdoms that had emerged in the Levant, and it constituted the spearhead of the local resistance to the expansionist ambitions of the Assyrians. Nonetheless, the formation of the kingdom as a political entity has always been considered an elusive chapter in the history of the ancient Near East, and only a few bits of information illuminate its early phases. Scholars have regularly emphasized the limited archaeological research in southwestern Syria and the fact that all the relevant texts encompass depictions of later historical realities, with little or no contribution to the study of the kingdom’s “dark ages.” Accordingly, many have preferred not to refer directly to the formation process of the kingdom, or alternatively have chosen to concentrate on the biblical references to the early kingship of Aram-Damascus.

In this lecture I wish to bring archaeology to the forefront of the discussion, by expanding the search for the formation of Aram-Damascus to the northern Jordan Valley: a Syrian-oriented region throughout the second millennium and the southwestern borderland of the kingdom in the second half of the ninth century B.C.E. An examination of settlement oscillations in the region, in between the LB III and early Iron IIA, indicates a significant regional event at the end of the Iron I. This process may reflect a violent territorial expansion from the northeast, and thus suggests initial manifestations of statehood in southwestern Syria of the early first millennium B.C.E.

David Kertai (The Hebrew University of Jerusalem), “The Architecture of the Gaze: Palace J/K at Zincirli”

The citadel of Zincirli contains the most impressive ensemble of Syro-Anatolian palatial architecture known today. Analyses have, however, tended to be subsumed within discussions on the enigmatic Assyrian *bīt ḥilāni*. The discussion has tended to focus on finding a definition that can describe all elite residences found in the Syro-Anatolian states (as well as in the regions surrounding it). The result is a focus on the lowest common denominator at the expense of the rich variation present in the corpus. The notion that the entire corpus can be subsumed under one heading, whose characteristics were correctly defined by the Assyrians, has hindered a proper analysis of the nature of Syro-Anatolian palatial architecture. This article will use Palace J/K, occupying the northwestern corner of Zincirli’s citadel, to highlight the peculiarities and creativity inherent in Syro-Anatolian architecture.

On first sight, rather than representing a conscious design, Palace J/K and the complex surrounding it appear to form a haphazardly accumulated architectural ensemble. This apparent randomness, however, hides an elaborate design. This paper will argue that the aim of this design was to organize the gaze, creating an architecture that centered on mediating between looking and being seen. It brings the question of intended audience and the power relations between them to the fore and allows the subtle interplay between Palace J/K’s architecture and its surroundings to be highlighted.

3G. Connectivities in The Near East: Social Impact of Shifting Networks I

CHAIR: Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences)

Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences) and Arkadiusz Marciniak (Poznan University), “Connecting and Constructing: Pathways to the Late Neolithic of Central and Western Anatolia”

The second half of the seventh millennium cal B.C. brought about significant changes in many domains of existence of the Neolithic groups in the Near East. These changes involve a transformation of major constituent elements of the Neolithic, making it possible to manifest and realize the full potential of the Neolithic revolution. The developments in Late Neolithic comprised dispersal of the farming groups, emergence of individualized and autonomous social units, development of the integrated character of arable-husbandry economy, occupation of different ecological zones, as well as creation of sacral landscape. However, pathways to Late Neolithic in different parts of the Near East were heterogeneous and differentiated. This paper aims to present major dimensions of constructing the Late Neolithic communities in central and western Anatolia. It will examine different trajectories of developments in both regions by looking at the foundational role of major Neolithic centers in their origins. The case studies in focus are classic Çatalhöyük and Upper Mesopotamia and/or southern Levant, respectively, as well as relations with local foragers and Çukuriçi Höyük in its local and regional context. The paper will then scrutinize major facets of social organization, subsistence practices, and the character of material culture in both regions and provide a comparative analysis of potential corresponding developments. The paper aims to examine the character of the connectivity between the Late Neolithic communities of central and western Anatolia. These relations will be scrutinized as an element of a broader process of creating regional identities in this part of Anatolia.

Christoph Schwall (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), Barbara Horejs (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), Moritz Numrich (Curt-Engelhorn-Centre Archaeometry), and Ernst Pernicka (Curt-Engelhorn-Centre Archaeometry; Institute of Geosciences, Heidelberg University), “The Early Bronze Age Gold Treasures of Troy and Related Finds: Indicators for the Connectivity of Rising Elites?”

The famous gold treasures of the Early Bronze Age settlements of Troy in western Anatolia have been well known ever since they were discovered during Schliemann’s investigations in the 19th century. Chronologically, the treasures can be associated with the phases of Troy I (late) and II-III (EBA II-III), dating mainly to the second half of the third millennium B.C. Remarkable is the enormous number of high quality gold objects, in particular vessels and jewelry. The high amount of jewelry with partial fine filigree gold applications is striking and leads to the question of the people who produced and wore these precious objects. Interestingly, the practice of hoarding prestige objects is not known in previous time periods in the Aegean and in western Anatolia. This phenomenon seems to be accompanying the formation of hierarchical structures and the first ‘proto-urban’ centers in the developed EBA II. The influence of these centers is shown by a gold treasure from the settlement Poliochni on Lemnos, an island just off the western Anatolian coastline and close to Troy. Moreover, distinct gold elements indicate far-reaching communication and trade networks from the Aegean to the Indus region. A new research project is analyzing these gold finds as social indicators for the formation of hierarchical structures and allows us to reveal interactions between emerging elites in the Early Bronze Age.

Felix Höflmayer (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences) and Katharina Streit (The Hebrew University of Jerusalem), “Tracing Transformations in the Southern Levant at the Transition from the Middle to the Late Bronze Age”

The transition from the Middle to the Late Bronze Age was a crucial

period for the southern Levant. This period saw the demise of the Middle Bronze Age city-states, the end of the Hyksos Empire in Egypt, and the rising interest and involvement of the Pharaohs in the Levant, culminating in the military campaigns of the Thutmoseid period and leading eventually to the ‘International Age’ of the Late Bronze Age Amarna period. This transformative period is still poorly understood due to an insecure chronological framework with many open questions regarding the chronological synchronization of Egypt and the Levant. So far, assessments of this period have also been dominated by a text-based approach relying heavily on Egyptian sources, while archaeological data from the southern Levant has not always been fully appreciated. The new project “Tracing Transformations,” hosted by OREA, aims to address these issues by employing different approaches, including a reassessment of absolute chronological evidence and material culture and a critical review of Egyptian historical sources. This paper presents first results and potential historical implications.

Katharina Streit (The Hebrew University of Jerusalem), “Fluctuating Connectivity of the Levant and Mesopotamia—A *Longue Durée* View of Long Distance Ties from the Pottery Neolithic to the Early Bronze Age”

While the import of raw materials such as shell and obsidian over large distances dates well back into Epipaleolithic and pre-Pottery Neolithic times, the following Pottery Neolithic and Chalcolithic periods witnessed a marked intensification and diversification of such transregional interactions. Besides imported raw materials, for the first time finished products, technologies, and artistic styles and concepts were also transported across larger distances, creating a multifaceted web of interactions. However, rather than following a linear increase in the intensity, such interactions were subject to major fluctuations throughout the periods. A particularly intense interaction has been observed for example in the mid-sixth millennium cal B.C. between the Wadi Rabah culture of the southern Levant and the Amuq C and Halaf phases of the northern Levant and Mesopotamia. In the following late sixth and early fifth millennia, this interaction appears to decline, and nearly ceases in the more regionally restricted Late Chalcolithic communities. The Early Bronze Age witnesses a revival of at least some aspects of these ties. This paper therefore aims to trace this development over three millennia, suggesting possible mechanisms underlying these fluctuating developments and their long-term impacts. Understanding these developments in the Protohistoric period provides the basis for the study of connectivity of the eastern Mediterranean in the Middle and Late Bronze Age.

Bettina Bader (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Technological and Morphological Differences in Pottery Production in Egypt in the Second Intermediate Period (1700–1550 B.C.): Signs of Changing Regional Connectivity?”

This paper discusses a process and its possible meaning, increasingly observable in the pottery production of Second Intermediate Period (SIP) Egypt. In different regions such as the northeastern Nile Delta, the Memphis-Fayoum region, Middle Egypt, the Theban region, and further south, pottery production developed in various ways. This observation includes the composition of raw materials, morphological details of the same vessel types, such as hemispherical cups and storage vessels, as well as technological features, such as the finishing of bases and rims or surface treatment, although a common root is usually recognizable. Moreover, in the various regions certain vessel types are favored over others although some types are found in most places.

This development contrasts with the perceived uniformity of the earlier Middle Kingdom makes relative synchronization of sites in Egypt in the SIP complicated, requiring the hitherto neglected contextual approach to archaeology, which includes other object types such as stone vessels, scarabs, tools, and even mollusks. The most abundant contexts are represented by tomb groups although a few relevant settlements also exist.

Pottery was chosen for illustrating this process of changing connectivity within Egypt because it is the most abundant artifact type in archaeology and shows subtle changes in relatively short time periods. The most common

interpretation of these processes has sought political explanations but these changes allow considerations about regionality, its reasons, development, and appearance. Finally, it will be possible to illustrate networks of technology and whether they are congruent across various artifact types.

3H. Madaba Plains Project at 50: Tall Jalul

CHAIR: Randall Younker (Andrews University)

David Merling (Andrews University) and Randall Younker (Andrews University), “In the Trenches at Jalul: Struggles, Strategies, Discoveries”

Excavations at Tall Jalul, south of Amman and 5 km east of Madaba, began in 1992 as part of the Madaba Plains Project (MPP). This illustrated presentation will introduce the Jalul project, discussing early explorers’ observations of the site, why MPP wanted to dig here, struggles in setting up the project, the evolution of our dig strategies, and our basic discoveries.

Constance Gane (Andrews University), “Jalul and the Empires of the North”

Archaeological finds from Late Iron Age levels at Tall Jalul provide evidence of a vigorous settlement that reflects the sociopolitical complexity seen in Levantine secondary states under Assyrian, Babylonian, and finally Persian domination. This paper will highlight material remains such as fragments of incense altars, anthropomorphic and zoomorphic figurines, seals, and ostraca that provide tantalizing evidence of a robust community with international interactions, particularly between Transjordan and the dominating powers of the north.

During this period, the walled city was entered through a chambered gate and included large residential and administrative complexes as well as a sophisticated water system, the largest of its kind from the Iron Age II period.

The significant and abundant finds from the late Iron Age IIC/Persian period (539–332 B.C.) at Jalul help to clarify the emerging picture of occupation during the Persian period in Transjordan.

Paul Gregor (Andrews University), “Tall Jalul: What Happened to Amorite Heshbon?”

Was Tall Jalul Biblical (Amorite) Heshbon? This paper will address the geographical position of Tall Jalul in the light of biblical and extra-biblical material reflecting on its possible identification with Amorite Heshbon. Among the lines of research that will be critically examined in support of this hypothesis are previous scholarly opinions and pronouncements supporting this identification. The results of recent archaeological discoveries together with explorations and surveys of the surrounding area will be closely examined to see if the identification is possible.

Paul Ray (Andrews University), “Jalul and the Mesha Inscription: Was Tall Jalul Biblical Bezer?”

In terms of historical geography, the archaeological site of Tall Jalul has sometimes been viewed as a possible candidate for Heshbon at the time of Israel’s emergence. While not a new proposal, an in-depth case has recently been made instead for the equation of Tall Jalul with biblical Bezer. This paper will critically examine that hypothesis by evaluating the relevant biblical and extra-biblical textual sources, especially the Mesha Inscription, as well as the opinions of previous scholars in light of the results of recent archaeological excavation and exploration in and around the site of Tall Jalul. The paper will conclude by suggesting possible future directions of research whereby this hypothesis may be tested more rigorously.

Randall Younker (Andrews University), “Jalul and the Modified High Chronology for the Iron Age IIA–B”

Ceramics from stratified contexts of the Jalul excavations, when linked with the published stratified finds of Hisban and Tall al-‘Umayri, (as well as pre-published materials from neighboring sites such as Madaba and Atarut), are now providing a more complete record for reconstructing the ceramic chronology for the Iron Age IIA–B in the Madaba Plains region. While the pottery assemblage for the tenth and ninth centuries (Iron II A–B) is essentially

the same in Cis-Jordan (contributing to the chronological debate between a “Low” and “High Modified” chronology), the upper part of the tenth–ninth century assemblage in Transjordan—specifically in the central and southern part of the Madaba Plains region—exhibits unique ceramic elements and characteristics at sites identified as Moabite by historical sources (e.g., the Mesha Inscription). These unique characteristics are thus best identified as Moabite and reflect the physical presence of the Moabite incursion and conquests in this region during the latter part of the ninth century as recorded in the Mesha Inscription. The ability to divide the tenth–ninth century ceramic assemblage in Transjordan and assign the latter to the events described in the Mesha Inscription makes the Madaba Plains material important for resolving the debate about the dating of the Iron II A–B assemblage in Cis-Jordan and whether the Low or the High Modified chronology is to be preferred.

3I. The Synagogue at Horvat Kur

CHAIR: Byron R. McCane (Florida Atlantic University)

Stefan Münger (Institute of Jewish Studies, University of Bern), “Introduction to the Kinneret Regional Project”

The paper is an introduction to the archaeological fieldwork of Kinneret Regional Project (KRP), currently under the auspices of the University of Bern (Switzerland), the University of Helsinki (Finland), Leiden University (the Netherlands) and Florida Atlantic University (USA). It will highlight past excavations, current projects, and future plans focusing on the cultural-historical exploration of the region on the southwestern shore of the Sea of Galilee (Israel). In addition, methodological and technological aspects will be treated.

Tine Rassalle (University of North Carolina at Chapel Hill), Rick Bonnie (University of Helsinki), and Annalize Reeder (University of Augsburg), “Architecture and Stratigraphy of the Horvat Kur Synagogue Area”

Between 2010 and 2016, Kinneret Regional Project exposed the remains of a Byzantine synagogue at the site of Horvat Kur in the Galilee. Although the architectural outline of the building is relatively clear, the structure shows many signs of construction phases and repairs, producing a complicated stratigraphy. Based on our current research, we believe that at least two different buildings can be discerned. The first synagogue building seems to have been erected sometime post-337 C.E., possibly partly built over the remains of earlier Roman houses. The floor of this rather small building was decorated with a mosaic floor. Sometime in the first half of the fifth century, the building underwent radical changes and it was considerably expanded, especially on the eastern side. The mosaic floor was replaced with a simple plaster floor. This second building, a broad house synagogue, received at least one more major renovation around 600 C.E., possibly necessitated by earthquakes. During this and other minor renovation phases, the benches, the bema, and the floors were altered until the building finally went out of use sometime in the seventh century. In this paper, we aim to show the complex history of this communal building.

Philip Bes (Leiden University) and Dennis Braekmans (Leiden University), “Fifty Shades of Clay: Roman and Byzantine Pottery from the Horvat Kur Synagogue (Galilee, Israel)”

In this paper, and in line with KRP’s research questions, we wish to highlight our archaeological and archaeometrical data, and share our observations with regard to chronology and economic exchange. The large quantity and variety of architectural and small finds have been the focus of scientific study in tandem with the excavations. Pottery finds are particularly plentiful, and their study within the stratigraphic framework contributes significantly to the reconstruction of the synagogue’s building history, even if questions remain. In order to determine the provenance and technological background of the various ware groups, both mineralogical (optical microscopy) and chemical analyses (WD-XRF) were carried out. Results of these analyses provide clear fingerprints for comparisons with potential production areas. Preliminary

results suggest that the majority of the pottery was regionally manufactured, whereas a small yet significant portion comes from as far away as Tunisia and the Black Sea. Also interesting is that a small percentage of roof tile fragments came from Cilicia. Given the detailed and comprehensive study, the pottery (as a proxy) offers insights into regionally-embedded as well as pan-Mediterranean exchange constellations. These preliminary patterns nonetheless prompt us to ask new questions with regard to socio-cultural and socio-economic connectivity and standing of Byzantine villages in this part of the Galilee.

Patrick Wyssmann (University of Bern), “The Numismatic Evidence from Horvat Kur”

During fieldwork at Horvat Kur, a large quantity of numismatic material came to light. All in all 1248 coins were found and most of them were digitally mapped. This makes it possible to reconstruct and visualize the different contexts precisely. As each and every coin was cleaned and registered, the complete record of the numismatic evidence is available now.

Most of the numismatic finds are bronze coins minted at the end of the fourth century C.E. They were part of a large coin assemblage placed beneath the floor in the portico of the synagogue. Such so-called foundation deposits are a well-known, though poorly understood, phenomenon attested in numerous synagogues all over the Galilee and in the Golan. Additionally, eight gold coins minted in the second half of the sixth century C.E. are of particular interest. It is most probable that they originally formed a small gold hoard, which was hidden in the synagogue, like similar sixth century gold hoards in the region. The purpose of the paper is to give a detailed overview of the numismatic evidence and its composition. It presents the most important finds in their context and offers a possible interpretation. In addition, the significance of the coin finds for the dating of the different phases of the synagogue will be shown.

Jürgen Zangenberg (Leiden University), “The ‘Mysterious’ Stone Table and Its Functional Context in the Synagogue at Horvat Kur (Galilee)”

At the end of the 2012 season, Kinneret Regional Project (KRP) found a large, rectangular table hewn from a single piece of local basalt. The object has been published recently (Zangenberg 2016). In the same volume, Mordechai Aviam proposed that the object was “another reading table base,” and founded his hypothesis on a popular interpretation of the so-called “Magdala stone” (Aviam 2016). Did these two objects indeed have the same function, and to what extent was that function “liturgical”? In order to find a convincing answer to these questions, however, it is not only necessary to look at the form and decoration of the table; a close examination of its archaeological context is equally important. On the basis of KRP’s ongoing analysis of the synagogue’s stratigraphy, the paper will take a close look at the architectural and chronological context in which the table was found. It will become apparent that the last use of the table cannot necessarily help us identify the purpose for which the table was made in the first place. Original function and secondary use of this “mysterious object” need to be carefully distinguished.

Byron R. McCane (Florida Atlantic University), “The Mosaic Floor in the Horvat Kur Synagogue: Context and Interpretation”

This paper will describe and interpret the partially-preserved mosaic floor from the ancient synagogue at Horvat Kur. Two prominent features have aroused scholarly interest: 1) the Aramaic inscription with the name of the benefactor who endowed the floor, El’azar bar Yudan bar Susu; and 2) the depiction of a menorah with lighted lamps characteristic of the Byzantine period. Other topics for description and discussion in this part of the workshop will include: a) a close description of the floor, including measurements, tesserae, bedding, and restoration; b) the precise location of the floor within the synagogue; c) the stratigraphy of the floor, including its terminus post quem and terminus ante quem; d) the epigraphy and interpretation of the inscription, including similarities with an inscription in the synagogue at Bar’am; e) description and interpretation of the menorah, including its relation to other Late Roman and Byzantine representations of menoroth; f) the historical context of the floor, including its similarities with a nearby Byzantine Christian mosaic floor at Tabgha. Photographs, plans, and stone-by-stone drawings will assist

participants in evaluating possible answers to these important archaeological and historical questions.

3J. Houses and Households in the Near East: Archaeology and History II

CHAIR: Laura Battini (Laboratoire PROCLAC–Collège de France, Paris)

Monique Vincent (La Sierra University), “Households, Communities, and Dimensions of Social Identity in the Early Iron Age at Tall al-‘Umayri, Jordan”

This study is based on the remains of a small group of domestic structures from the Late Bronze Age/Early Iron Age transitional stratum at ‘Umayri. Starting with an ecological-functional approach to the archaeological remains, the study then focuses on the households and community and uses an identity-practice approach to examine how a localized social identity is embodied in their everyday practices. Combining archaeological and ethnographic evidence illuminates the nature of social identity in the small rural villages that characterize this transitional period.

The village at ‘Umayri had well-defined architectural boundaries between households, which formed self-sustaining units for production of necessities like food and clothing, as well as seals and other items. At the community level, socioeconomic inequality is evident in the range of sizes and complexity of the domestic structures and the presence of certain artifacts only in the larger houses. Compared to some other settlements in the region, ‘Umayri was more organized and cooperative, as evidenced by the fortification system and the shared walls between houses. The inhabitants would also have needed to cooperate to reduce agricultural and pastoral risks and to participate in ritual, which may have helped build solidarity. Interestingly, ‘Umayri and the other settlements in the region that demonstrated such cooperation simultaneously have evidence of individual households making greater efforts to protect or hide their grain stores from other households. Contextualizing and comparing these household and community practices with contemporary sites allows for a discussion of the active ways in which villagers organized their societies and economies.

Clemens Reichel (University of Toronto / Royal Ontario Museum), “House or Household? Intricate Overlaps between Domestic and Administrative/Economic Space in Late Chalcolithic Hamoukar”

Between 2001 and 2010, three large building complexes were excavated the site of Hamoukar within a walled settlement dating to Late Chalcolithic 3–4. The identification of large storage units in these buildings and the presence of seals and of thousands of clay sealings prompted an initial interpretation of these buildings as “administrative compounds.” A more detailed analysis of their ceramic, faunal, and botanical assemblages, however, has suggested an overall domestic function for these units. Using comparable data from contemporary sites of the Upper Khabur region and other areas of the Near East this paper will discuss the pivotal role of household production in the incipient urban fabric of northern Syria during the fourth millennium B.C.

Janelle Batkin-Hall (University of Michigan), “Live and Let Dye: Fabrication and Dye Characterization of Roman-Period ‘Dolls’ from Karanis, Egypt”

In total, twenty dolls made of woven flax and wool, papyrus, hair, bone, un-woven wool fibers, wood, small rocks, and interlinking sprang were excavated from Karanis, Egypt, through several University of Michigan excavation campaigns between 1924 and 1935. Sixteen of these dolls are part of the Kelsey Museum of Archaeology’s (U-M) permanent collection and have been the focus of ongoing research and scholarship by Kelsey curators and graduate students from the Interdepartmental Program in Classical Art and Archaeology (IPCAA). Such efforts have been concerned with the objects’ original purpose as they pertain to Roman concepts of children and childhood, and material culture.

At Karanis, fragile cloth and papyrus materials are exceptionally well preserved and have provided scholars with a wealth of knowledge on the inhabitants’ personal belongings and inventory of private houses. To better

understand the fabrication materials and dye technologies used, research was undertaken purely from a conservation and preservation point of view. Diagnostic imaging was carried out using multispectral imaging (MSI), and technical analysis was supplemented by polarized light microscopy (PLM), micro computerized tomography, X-radiography, FTIR-ATR, and SEM-EDS. As part of ongoing research into their cultural context, these findings will not only aid in the ongoing preservation of the collection, but also help increase the scholarship of other objects in the Kelsey Museum's collection that were excavated from Egypt during the period of Roman occupation.

S. Thomas Parker (North Carolina State University), "Ceramic Imports to Petra: Domestic versus Funerary Contexts"

Recent excavations on the North Ridge at Petra aimed to learn about the non-elite population of Petra through excavation of simple rock-cut shaft tombs (late first century B.C. to early second century A.D.) and "ordinary" domestic structures (first to fourth centuries A.D.). Despite Petra's land-locked location, these excavations recovered some quantity of imported ceramics, especially transport amphorae (including examples from Palestine, the Aegean, Anatolia, and Egypt) and fine tablewares (especially several varieties of Terra Sigillata and Late Roman Red Wares). Comparison of the quantities and kinds of imported ceramics suggests some significant differences between those derived from domestic contexts versus those retrieved from funerary contexts, even in the same chronological period. This paper offers some possible explanations for these differences.

Heather D. Baker (University of Toronto), "Quantifying the Use of Space in the Babylonian House of the First Millennium B.C."

In a previous study I proposed a comprehensive scheme for understanding the social use of space within the Babylonian house of the first millennium B.C., based on the integration of textual and archaeological evidence. This made it possible to match the Babylonian terms for different parts of the house with their architectural correlates. The present paper draws on this work with the aim of quantifying the spaces associated with these different Babylonian terms, thus establishing the proportion of domestic roofed space that was allocated to different functions and/or familial groupings. Previous study of house size showed that the average Neo-Babylonian house was much larger than the average Old Babylonian house, and the range of house sizes was much greater, leading the author to conclude that we are dealing with an unprecedented degree of social inequality at this period. In the light of these previous findings it is argued that, by quantifying domestic space in the manner proposed here, the differences between smaller and larger houses can be brought into sharper focus and the ways in which social inequality is reflected in the domestic architecture can be better understood.

3K. Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration I

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

Denise Schmandt-Besserat (University of Texas at Austin), "Early Administrative Technologies: Tokens And Seals"

In the Near East, the prehistoric administration operated with two technologies: tokens for counting and seals for authentication. In Greater Susiana, as in Mesopotamia, tokens and seals co-existed for 2000 years but never influenced each other. Their evolution from stamp to cylinder seals and from token to writing was entirely disconnected. In this paper I analyze the correlation between tokens and seals in Greater Susiana, where four stages of their simultaneous evolution are well documented by modern excavations. In Stage 1, ca. 7200 B.C., tokens were used in the first levels of occupation of the agricultural sites of Ali Kosh and Chogha Bonut. Two millennia passed until Stage 2, when stamp seals made their appearance. This occurred in the fifth millennium B.C., when Chogha Mish had become a regional center, where a pottery workshop indicates the beginning of mass production. In Stage 4, ca.

3200 B.C., tokens disappeared and were replaced by their own impressions on clay tablets. Seals continued to play their unchanged role on written documents. They were to remain a prominent feature in administration until the Arab conquest of the Near East.

Holly Pittman (University of Pennsylvania), "Appropriated Images: What Do They Tell Us about Cultural Interaction in the Bronze Age of Exchange?"

Seals are among the most mobile of artifacts in ancient Near Eastern cultures because of their small scale, their durable and valued materials, and their central place in administration. This paper considers the impact of this mobility on the transmission of imagery across cultural boundaries during the third millennium B.C.E. Through a small number of case studies, the paper will trace the integration of Mesopotamian imagery within the glyptic repertory of southeastern Iran and western Central Asia. It will consider the extent to which the significance of the imagery remained stable or received new or modified meaning within the new cultural setting. What factors seem to be at play in the choice of appropriated images? To what degree do such acts of appropriation reflect or establish the existence of an "intercultural" visual language of shared conceptions?

Clelia Paladre (Université Paris 1 Panthéon-Sorbonne; French National Center for Scientific Research—CNRS), "The Early Third Millennium B.C.E. Seal Impressions from Susa Housed in the Louvre Museum—A New Contribution"

The sealings from Susa housed in the Louvre Museum have been little studied since Pierre Amiet published *Glyptique Susienne* in 1972. Amiet's work, while fundamental and exemplary, focused on the patterns and motifs of seal iconography, and thus information about the function of these sealings, i.e., the types of objects that were being sealed, is scarce or totally absent.

As part of my dissertation project and with the support of M. François Bridey, the current curator of the Iranian department at the Louvre, I was able to access this material. I focused my study on the functions of the sealings in order to determine which sealing types were present or absent. I then analyzed the links that could be identified between those functions and seal iconography. In the course of my study, each individual sealing was also analyzed typologically, functionally, stylistically, and iconographically in order to glean more information about the administrative system in which they were used.

In this paper, I will present the preliminary results of this project, focusing on sealed documents from the beginning of the third millennium B.C.E. This period, also known as the Proto-Elamite period, constitutes a turning point in the history of early Iran.

Diana Stein (Birkbeck, University of London), "A New Angle on the Contest Scene: Exploring Its Context on Seals and Sealings of the Third Millennium B.C."

Described as one of two defining themes of Early Dynastic glyptic, the contest scene is often contrasted with the so-called banquet scene and linked, if only tentatively, with a different category of people and administration. But the two themes do sometimes occur on the same seal, and, further down the line, derivatives of both these third millennium themes become icons of divine kingship: the one in Babylonia and the other in Assyria. This paper re-examines their relationship on third millennium B.C. seals and sealings and suggests that they refer to different aspects of the same event. While the main protagonist of the contest scene evolves from hybrid figures to nude heroes to the king himself, the underlying theme remains basically unchanged and is generally understood to be a metaphor for the generic struggle between two opposed realms: the domesticated, civilized, and structured world on the one hand, versus the wild, uncivilized, and chaotic forces that threaten it on the other. Looking at older examples of the contest scene on Early Dynastic seals, I suggest that there may originally have been another, more personal angle to this interpretation, one that ideally suited the ideology of an emerging elite, whose authority was based on might and increasingly also on a privileged relationship with the divine.

Ann-Kathrin Jeske (University of Vienna), “A Reassessment of Seals and Scarabs to Reconstruct Egyptian Engagement in the Southern and Central Levant”

The discovery of an Egyptian object in the Levant always raises two main questions: Who brought this item from Egypt to the Levant? What was the intention behind importing it? In five steps, this paper attempts to reassess the significance of Egyptian seals and scarabs in a Levantine context to reconstruct the undertakings of Egyptian soldiers and officials during the Middle Bronze Age. The first step includes the careful documentation of the find contexts as well as a thorough description of the objects themselves. In the next step, these items are examined within the framework of the object-itinerary-concept to identify the group of people who most likely imported a specific object into the Levant. The theory of affordance offers a tool to understand/define the different ways in which objects could be used: personal item, equipment, trade good, gift, etc. The third step represents a sorting-out of that material that was not imported by Egyptian soldiers and officials. The following step includes only the so-called private-name seals. The titles on these seals are correlated with the ones attested in expedition inscriptions, especially in the Sinai inscription. The last step combines the results of step 2 and 4 to evaluate the possible presence of members of Egyptian institutions in the Middle Bronze Age Levant.

The analysis of Egyptian seals and scarabs within the pattern presented leads to the argument that the Egyptian administration was engaged in the Middle Bronze Age central and southern Levant with similar interests as those in other expedition destinations.

Marta Ameri (Colby College), “Imagery and Material Choice in the Glyptic Arts of the Harappan World”

While the cities of the Indus Valley lack the monumental architecture or large-scale sculpture found in contemporary Egypt and Mesopotamia, their artistic production is defined by their extensive corpus of miniature arts—seals, seal impressions, and molded tablets—found at sites throughout the Greater Indus Valley. The iconography found on these tiny, but exceptionally modeled, artifacts consists primarily of standardized representations of a single-horned bovine commonly referred to as the Harappan “unicorn,” similarly standardized images of other animals found in South Asia, and a number of mysterious creatures, scenes, and narratives that have to date defied interpretation. The media for this imagery vary from highly standardized square seals made of glazed steatite to small tablets in various shapes bearing impressed designs. This paper delves deeper into the question of the varying iconography found on these glyptic materials by examining the relationship between imagery, object type, and material choice. Two primary questions will be addressed: Are different material choices made for different types of imagery? And, is the difference between the imagery depicted on seals and the imagery depicted on molded tablets significant in terms of the production, function, and use of these artifacts?

4A. The Archaeology of the Kurdistan Region of Iraq III

CHAIR: Jason Ur (Harvard University)

Rocco Palermo (University of Groningen), “Empires and the Rural Landscape: New Data from the Land of Nineveh Archaeological Project and the Erbil Plain Archaeological Survey for the Seleucid, Parthian, and Sasanian Periods”

In recent years, the territory of the Kurdistan Region of Iraq has received a considerable attention in terms of archaeological research. Within this scientific renaissance, the historical phases that followed the fall of the Assyrian imperial entity have been the object of an unprecedented analysis. From the late fourth century B.C. the rolling plains east of the Tigris came under Seleucid control, and the impact on the rural landscape contributed to the increase in settlement density and the diffusion of cultural hybridization. The Parthian and Sasanian period (second century B.C.–early seventh century A.D.) further transformed the region through substantial imperial investments and the organization of settlements. This paper aims to cover these particular historical

periods in two case study areas: the Land of Nineveh Archaeological Project, directed by Daniele Morandi Bonacossi (University of Udine), and the Erbil Plain Archaeological Survey, directed by Jason Ur (Harvard University). With the support of recent survey data, I will address the impact of the Hellenistic, Parthian, and Sasanian empires in this area as it is reflected in the archaeological record. Models of occupation and land exploitation will be discussed, as well as the continuity and variations in ceramic traditions. By combining different datasets, I specifically aim to demonstrate how the historical relevance of the region did not decrease after the collapse of the Assyrian Empire, but rather it evolved, adapting and transforming itself, during the Seleucid domination, continuing during the Parthian-Roman confrontation and in Sasanian times before the Arab conquest.

Tina Greenfield (University of Saskatchewan), “Frontiers of Empires—A Zooarchaeological Perspective of the Neo-Assyrian and Hellenistic Presence along the Zagros Foothills of Kurdistan”

Empires have multi-dimensional and tiered systems of food production and provisioning, which distribute products through domestic, industrial, and administrative domains. Standardized policies of food production and provisioning are characteristic of imperial centers, cities, villages, and towns whether they are located in the imperial heartland or in the far-reaching frontiers of the empire. Through zooarchaeology (animal remains), it is possible to identify the economic strategies and social relationships inherent in empires. Differences in availability and access to animal resources between functionally or socially distinct areas of sites can be used to infer the nature and reach of the political economy of an imperial settlement with a greater level of detail. Faunal data can be used to further understand the social, economic, and political hierarchy inherent in both urban centers and villages even in the farthest reaches of Empires. Zooarchaeological data from two imperial sites in the Zagros foothills of Kurdistan located on the peripheries of their empire are used to reconstruct the animal food production and provisioning strategies.

Gianfilippo Terribili (Sapienza University of Rome) and Camilla Insom (L’Orientale University of Naples), “In the Shade of a Tree: Religious Patterns in the Kurdistan Region from Late Antiquity to Modern Times”

The paper presents a case study for investigating religious patterns in the Kurdistan region in a broad diachronic perspective. Though archaic beliefs and religious practices associated with the sacredness of trees are almost universally attested, the conservative nature of both culture and society of the Western Zagros allows the detection of consistent motives in historical sources as well as in living tradition. To understand the development of this phenomenon and outline its foremost phenomenological patterns, the study will compare evidence drawn from different periods and traditions. One of the main goals consists in clarifying how culturally dominant religions (Zoroastrianism, Christianity, and Islam) negotiated with local traditions to elaborate narrative motifs attuned to the cultural sensitivity of native recipients. This assimilation/adaptation process left its footprints in the literary output of the culturally dominant religions; meanwhile it contributed in shaping the lore of religious groups later developed in the very same area (e.g. Yezidi, Ahl-e Ḥaqq). Particular attention will be accorded to Late Antique and Middle Age hagiographical motifs, in which emerged the relationship between holy or venerated figures and “sacred” trees. Similarly, oral literature and modern folklore provide a diachronic perspective on cultural reinterpretations of the “sacred”-tree/authoritative-figure motif in contemporary context. Furthermore, this case study will engage with recent scholarly trends in the field of Iranian Studies.

Kyra Kaercher (University of Cambridge), “Excavations at Gird-i Dasht, 2013–2016”

Recent excavations at Gird-i Dasht, in northeastern Iraqi Kurdistan, by the Rowanduz Archaeological Project, have uncovered the last three periods of the site’s occupation. The latest period dates to the Iran-Iraq War of the 1980s when Iraqi forces substantially modified the mound’s surface, including the building of a road and access ramp, digging of trenches, and placement of anti-aircraft batteries on the mound’s summit. Artifacts include

plastic bags, shrapnel, tin cans, ceramics, and other modern debris. The Late Islamic/Ottoman occupation (ca. 1500–1900 C.E.) consists of a fortification wall along the high mound's periphery, buildings, and courtyards. The later phases of this period belong to the time of the ruler Mohammad Khors and the Sorani Emirate (1800–1835). The earliest levels reached to date fall within the Middle Islamic Period (ca. 1000–1500 C.E.). These phases have also revealed a fortified settlement. The ongoing excavations at Gird-i Dasht are refining our understanding of the ceramic assemblages of these little understood periods and include painted Diyana Ware, monochrome and polychrome glazed wares, stamped and moldered fine wares, imported celadon, stonewares, and a wide variety of unglazed earthenwares and glass. The attested forms and styles of decoration exhibit ties to sites farther afield such as the Seljuk assemblages of Iranian Azerbaijan (1037–1194 C.E.). This paper will present the evidence for the dating of these levels and how Gird-i Dasht fits into the overall narrative of the region.

Luca Colliva (Sapienza University of Rome), “Preliminary Results of the MAIKI—Italian Archaeological Mission in Iraqi Kurdistan—2016 and 2017 Campaigns”

The paper will present the preliminary results of the Italian Archaeological Mission in Iraqi Kurdistan (MAIKI) activities carried out in 2016 and 2017 and focused on the study of the Sasanian monument of Paikuli and the Erbil Citadel. In Erbil, together with the High Commission for Erbil Citadel Revitalization (HCECR), MAIKI is studying the ceramic materials found during HCECR excavations in sector E and G of the Erbil Citadel, preliminarily dated from the Hellenistic to the Ottoman Period. In Paikuli, together with the Sulaymaniyah Antiquities Directorate, MAIKI is studying the Sasanian Monument of Paikuli and its bilingual inscription, while pursuing the creation of an archaeological map of the area near Paikuli, between the Basra and Diyala rivers (almost 835 km²). The archaeological research is accompanied by an ethnographic survey of the area, focused on its religious system. Both projects include archaeometrical analyses of ceramic samples carried out in collaboration with the Department of Science, Geological Sciences Section, of Roma Tre University.

John MacGinnis (British Museum), “The Darband-i Rania Archaeological Project”

The Darband-i Rania is a pass in Sulaymaniyah province of Iraqi Kurdistan where, though now subsumed into Lake Dukan, the Lower Zab flows from the Peshdar into the Rania Plain. It is a strategic location on one of the major routes from Mesopotamia into Iran, and control of both the road and the river must always have been important. The Darband-i Rania Archaeological Project, which is a British Museum project forming part of the Iraq Emergency Heritage Management Training Scheme, commenced fieldwork in September 2016 and is expected to continue through to 2019. The project aims at investigating a cluster of sites which commanded the pass in the first millennium B.C.: Qalatga Darband, a site commanding the western end of the pass dating to the Parthian period; Usu Aska, a fortress in the pass itself which appears to be predominantly Assyrian; and Murad Rasu, a mounded site to the south with occupation from at least the Uruk period through to the first millennium A.D. The overall aim of the project is to reconstruct the history of settlement occupation and imperial defenses of this strategic location through the full span of the first millennium B.C.

4B. Archaeology and Biblical Studies II

CHAIR: Jonathan Rosenbaum (Gratz College)

Rami Arav (University of Nebraska at Omaha), “I was a city wall, and my breasts were like towers; then I was in his eyes as one who brings peace” (Song of Solomon 8:10): Walls and Towers in the Archaeology of the Iron Age Southern Levant”

Arguably, city walls reinforced by towers also reinforced the feeling of security and peace in eyes of ancient people. The word *migdal* (“tower”) appears 44 times in the Hebrew Bible. Isaiah (2:15) proclaims that the Day of

God is “against every high tower and against every fortified city wall.” Psalm (48:13) calls to “[w]alk about Zion, go all around it, count its towers.” El Amarna letter 234 declares that the city of Acco is as fortified as the Egyptian *migdal*, an Egyptian loan word for a military camp with a tower. The Lachish relief, which adorned the palace of Sennacherib in Nineveh, portrays the city fortified by walls and towers. The Judahite defenders of the city are shown on the top of the towers hurling projectiles and torches at the Assyrians. The city of Lachish has been excavated a few times; were there indeed towers as the artists of Sennacherib depicted, or was it “fake news”?

The excavations of the Iron Age Aramean city of Bethsaida revealed walls reinforced by towers. Did their neighboring Israelite towns also have towers in their city walls? And indeed, how many towers were in the city walls of Jerusalem in the Iron Age? This paper examines the archaeology of city walls and towers and suggests that in reality, there were no towers incorporated in Israelite city walls. From where, then, did the biblical authors derive their metaphors? This presentation will attempt to answer that question.

Jean-Philippe Delorme (University of Toronto), “Pekah and Aram-Damascus: An Onomastic Investigation into the Name of Pekah of Israel and its Historical Implications”

The reign of Pekah (ca. 734–731 B.C.E.) marks an important moment in the history of ancient Israel. According to the present scholarly consensus, Pekah usurped the throne of the Northern Kingdom with the support of his powerbase in Gilead (2 Kgs 15:25), which might have been the southernmost territory of the kingdom of Aram-Damascus under its king, Rezin (ca. 750–732 B.C.E.). Although the involvement of Rezin in the politics of Israel is disputed, most would agree that he played some role in these events. In fact, evidence for strong ties may very well be present in the name of Pekah. The name of the Israelite king has usually been considered to be a hypocoristic form of Pekahiah. But recent onomastic evidence from Neo-Assyrian/Babylonian texts shows that it was also borne by Aramaic speakers (e.g. *Pa-qa- a*; unknown eponym of the eighth century B.C.E.). Through a review of the attestations of this name in epigraphic sources, I seek to establish the Aramaean origin of this Israelite ruler. The political affiliation of the region of Gilead, which had belonged mostly to Aram-Damascus since the reign of Hazael (ca. 844–803 B.C.E.), substantiates the presence of Aramaic speakers within its territory. Evidence from other border areas (e.g., Hazor and Dan) also supports this interpretation. In addition, the deliberate refusal of Isaiah to name this king (Isa 7:4–5, 9; 8:6), as well as the nebulous allusions to the sins of Gilead in Hosea (Hos 6:8; 12:2–3), finds an explanation in Pekah's foreign origin.

Mitka R. Golub (The Hebrew University of Jerusalem) and Shira J. Golani (The Hebrew University of Jerusalem), “Judean Personal Names in the Book of Jeremiah in Light of Archaeological Evidence”

The relationship between the book of Jeremiah and the archaeological data can be viewed through the lens of Judean personal names from the end of the First Temple period, i.e., the seventh to the early sixth centuries B.C.E. Previous onomastic studies have searched the epigraphic record for names of individuals mentioned in Jeremiah. This study, however, analyzes and compares characteristics of personal names in both sources, such as the type of name, the existence and type of theophoric elements, the location of the theophoric element in a name (either prefixed or suffixed), the יהוה-יהוה and יהוה-יהוה variants (for Yahwistic names), and popular names. The comparison reveals similarities between Judean personal names in Jeremiah and those found in the archaeological data, indicating that the book of Jeremiah probably reflects authentic pre-Exilic Judean onomastic traditions. Nevertheless, the differences found in the distribution of יהוה and יהוה between names in Jeremiah and the archaeological data may demonstrate that the names in Jeremiah have been altered by the biblical redactors.

Yossi Nagar (Israel Antiquities Authority), Hanania Hizmi (Israel Antiquities Authority), and Yevgeny Aharonovich (Israel Antiquities Authority), “The People of Qumran—New Discoveries and Paleo-demographic Interpretations”

Since the discovery of the Dead Sea Scrolls in the region of Qumran, and the early excavations at the site, the Hellenistic-Roman site of Horbat Qumran and its associated large cemetery have been the subject of endless scientific publications, questioning the association of this site with an enigmatic group of people, the Essenes.

Yet, despite over 60 years of research, archaeology has not supplied us with convincing proof of this association. This failure has paved the way to endless other theories: soldiers, craftsmen, Iron Age people, or even Bedouins, were all claimed to have been buried in Qumran’s cemetery.

However, the excavation of 30 newly discovered graves in 2016 at Qumran’s cemetery might put an end to the debates. The skeletal remains were examined using a variety of well-established age and sex estimation methodologies, and past estimations were re-inspected. The study proved the uniqueness of Qumran’s society, supporting the earliest theories which view Qumran as a community of ideologically celibate men. The new demographic results and interpretations are: infants and women are absent from the skeletal sample; the population is composed of adult males, and only a few children are represented; child proportion and adult age at death distribution match the common desert monastic societies of the subsequent periods. Our conclusions are supported by C14 dating of the bones, and further inspections of morphology and pathology of the skeletal remains.

Oren Gutfeld (The Hebrew University of Jerusalem) and Ahia Ovadia (The Hebrew University of Jerusalem), “Old Cave–New Project: The Renewed Excavations in Qumran Cave 53”

Cave 53 is located on a cliff less than a mile south of the site of Qumran. In January 2017 a renewed excavation was conducted (after test excavation in the early 1990s in the first “Operation Scroll”) on behalf of The Hebrew University of Jerusalem.

The cave is comprised of a main chamber (5 x 3.5 m) with small chambers to the south and north and a 12 m tunnel in the back wall of the cave in the main chamber. Numerous flint tools, pottery sherds, hearths, and other special finds were found in mix layers attributed to the Pre-Pottery Neolithic B, Pottery Neolithic, and to the Early and Late Chalcolithic. Following these layers, in all sections of the cave but mainly in the back tunnel, large amount of pottery vessels, bones, and organic materials were found attributed to the Early Roman period. In the small southern chamber, behind a stone blockage, a small rolled fragment of worked hide was found in a storage jar. In several niches along the walls of the back tunnel, multiple storage jars and lids were found together with several leather strips, pieces of cloth, numerous olive pits, date seeds, and nuts. Hiding in a crack, two rusty pickaxes were found revealing that the cave had been looted several decades ago. These extraordinary finds prove that this cave used to hide scrolls that were looted in the middle of the last century.

Clint Burnett (Boston College), “Gaius (Caligula) and His Almost Sojourn in Yahweh’s Temple”

Gaius’s (or Caligula’s) failed attempt to set up his statue in the Temple of Yahweh in Jerusalem has been variously interpreted by both ancient and modern historians. There is disagreement about what the event entailed, for what purpose Gaius ordered it, and the emperor’s intention with the erection of his image in God’s Temple.

This paper examines heretofore-overlooked evidence from the epigraphic and archaeological records to propose that Gaius neither wished to overtake Yahweh’s Temple nor to be the only object of worship in it. Rather, his desire was to be a temple sharer (σύνναος) of God, which was an honor given to other Julio-Claudians, including Gaius, in temples in Asia Minor, Greece, and Syria. Viewed from this ancient phenomenon, it was not the placement of Gaius’s statue in the temple that was exceptional, but his command that it be done.

4C. Archaeology and History of Feasting and Foodways

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

Melissa Sharp (University of Tübingen), “Under the Influence: Communal Drinking, Ceramic Styles, and Identity in the Third Millennium B.C. Syrian Jezirah”

Beer drinking in the ancient world was not neutral but inebriated with social meanings. This paper explores drinking practices in Syria during the third millennium B.C. through ceramic analysis. A comparison of frequencies, type, and wares of vessels from household assemblages at six sites in the Syrian Jezirah (Tell Mozan, Tell Bderi, Tell Chuera, Tell Beydar, Tell Brak, and Kharab Sayyar) reveals that drinking practices may have been a key marker of regional identity. This is then developed using embodiment theory. Variations in sensory experience with drinking vessels may have been socially meaningful. This paper considers aspects like touch, holding, and movement to explore a wide range of experiential differences between vessels found in different regions. Through undertaking this analysis, it is hoped that the current gap in the literature between feasting and sensory experience can be filled.

Daniel Griswold (University at Buffalo), “Feasting and Elite Emulation in the Fifteenth Century Sharon Plain”

Elite emulation has been used as a model for the interaction between asymmetrical cultural powers in which the local elite population of the lesser power attempts to acquire social capital through the adaptation of customs and material culture of the greater power. Research into elite emulation in Late Bronze Age Israel has largely focused on Canaanite adaptation of Egyptian cultural material and practices in the 14th–13th centuries B.C. New interdisciplinary analyses of the fifteenth century remains from Tel Ifshar however, show evidence of an intra-cultural form of elite emulation. Regardless of the precision regarding models of pre-Amarna political structure in Canaan, Ifshar, a midsize tell on the Sharon Plain, would not qualify as an elite center or major political polity. Rather, Ifshar was likely subservient to a larger, wealthier site. Despite this, evidence of extensive hunting and feasting, including more than 50 complete vessels and large amounts of animal bones, was sealed by a fifteenth century destruction. While hunting and feasting have generally been considered related to upper-level elites, the data from Ifshar show evidence of these practices even in non-elite sites. The asymmetrical relationship between Ifshar and its controlling power generates the potential for cultural and political capital to be generated through elite emulation, and the evidence from Ifshar suggests that one of the ways this emulation was functionally expressed was through feasting and hunting.

Lidar Sapir-Hen (Tel Aviv University), “Livestock Animals as Symbol and Wealth in the Late Bronze Age–Iron Age in the Southern Levant”

Ceremonies that involve intentional burial of animals with humans are acknowledged to bear religious, social, and political connotations, and rituals of the second and first millennia B.C. are usually based on livestock animals. While most studies of rituals emphasize the human-animal interaction with wild game, the livestock component is usually treated as merely food animals. The presented research focuses on the livestock animals, examining both the ritual activity and its social trajectory. It is based on the faunal remains associated with human burials and with daily life, from domestic and industrial contexts from various Late Bronze Age–Iron Age sites (e.g., Megiddo, Jerusalem, Azekah, and Timna). The results are further examined in the context of contemporary rituals of various types, such as cave burials and public feasts. The revealed patterns suggest that the choice of animals consumed and sacrificed is related to their symbolic rather than economic value (although these two are not mutually exclusive). This choice differs between types of rituals, and it is based on the desired social message that the population aims to convey.

Elizabeth Arnold (Grand Valley State University), Deirdre Fulton (Baylor University), and James Fulton (Baylor University), “Feeding the Philistine City: An Isotopic Investigation of Animal Resources at Ashkelon in the Iron Age I”

The Iron Age I (1200-1000 B.C.E.) was a time of great change for Ashkelon, ushering in a new era of Philistine control of the city. Iron Age I animal bone remains from Ashkelon reveal patterns of consumption within the context of domestic dwellings. Recent animal bone studies of Ashkelon outline not only domestic consumption patterns but also ritual patterns of consumption during this period (Hesse and Fulton forthcoming). This study examines the domestic animal remains not only as food resources within domestic areas but also as key items of trade and exchange, as symbols of wealth and/or status, and particularly within ritual contexts. It has been noted in the archaeology of ancient state economies that the provisioning of food to cities was a fundamental component of urban economies in the past. However, there is little agreement about the nature of animal provisioning in the earliest cities. The archaeological models of animal provisioning that have been proposed for early cities range from generalized to specialized provisioning. This question will be addressed through isotope analyses (carbon, oxygen, and strontium) of tooth enamel from key domestic species (cattle, ovicaprines, equids, and pigs) from Iron Age I contexts at Ashkelon to reconstruct not only diet but also mobility, seasonality, and management practices.

Laura Mazow (East Carolina University), “The Host and the Hosted: Commensal Politics, Feasting Traditions, and Cultural (Mis)understandings at Samson’s Wedding”

Recent studies on feasting in the ancient Near East have focused on its role in enhancing intra-group solidarity, promoting shared identity, and even bridging inter-group differences. Feasts, however, can also be sources of conflict when groups approach the event with different cultural codes and behavioral expectations. In this study, I argue that it is cultural differences between Israelite and Philistine protocols—who is the host and who is the hosted—that are the source of the tension in the story of Samson’s wedding (Judges 14), a tension that is exacerbated when Samson uses the feast to challenge social conventions and renegotiate power structures. Viewing the wedding party through the lens of commensal politics offers an opportunity to view intimate differences between Israelite and Philistine cultural behaviors that are not possible to perceive in the archaeological record of feasting and enables us to observe commensal politics at work.

Andrew Danielson (University of California, Los Angeles), “Edom in Judah: A Case Study on ‘Edomite’ Presence, Interaction, and Identity in the Negev”

The enigmatic “Edomite” material culture found within the Judean Negev in the late Iron Age, particularly the conspicuous material culture found at sites such as Horvat Qitmit, have drawn discussion seeking to elucidate “Edomite” religion, as well as the nature of the interaction between Edom and Judah that resulted in this material culture footprint. The purpose of this paper is to address the individuals and communities of “Edomites” within the Negev who may have frequented the shrine at Horvat Qitmit, as well as the complex nature of their social interaction with the other inhabitants of the Negev. As ceramics related to culinary practice are a particularly culturally sensitive aspect of material culture, serving as a proxy for social preference and action, they may serve as a primary indicator of “Edomite” presence and interaction within the Negev. Through an examination of the integration and/or isolation of these ceramics in different contexts at sites such as Horvat ‘Uza, Tel Malhata, and Tel ‘Aroer, and together with spatial and diachronic considerations, we may begin to explore the manners and degrees to which these “Edomite” individuals and communities were integrated into the Judahite communities and social networks within this region. Furthermore, by examining the subtle and the conspicuous social aspects of culinary preparation and consumption in relation to these “Edomite” ceramics, and in recognizing that these actions both reflect and reinforce particular identities, we can also examine this material culture footprint in terms of identity negotiation and maintenance.

4D. The History of the Early Alphabet

CHAIRS: Orly Goldwasser (The Hebrew University of Jerusalem) and Thomas Schneider (University of British Columbia)

Ben Haring (Leiden University), “The Earliest Alphabet as a Case of Bricolage”

The early alphabetic signs known from the Sinai Peninsula (Serabit el-Khadim) and in the south of Egypt (Wadi el-Hol) were derived, according to many, from Egyptian hieroglyphs. However, although there appear to be successful matches between hieroglyphs and some of the Proto-Sinaitic signs, it is difficult to regard the entire signary as hieroglyphically inspired. Alternative suggestions have been made that some of the signs were inspired by cursive Egyptian writing, and even that some had concrete models (i.e. objects actually observed by the inventors) instead of writing. As it happens, Proto-Sinaitic is not the only signary that possibly started off as a mix of graphic modes. Comparable cases and theoretical models shed more light on this phenomenon.

Aaron Koller (Yeshiva University), “Early History of the Alphabet: The First Half-Millennium”

It is often said that the alphabet did not have much of an effect for the first few centuries after its invention. This silence of the written record has even led a prominent scholar to suggest that the alphabet was invented 600 years later than he originally thought. Recent discoveries, however, coupled with a re-evaluation of data that has been long known, leads to a different conclusion: the alphabet did spread across the entire Near East, from Egypt, through Syria, into southern Mesopotamia, within a few centuries of its invention, and by the 15th century at the latest. It never affected the scribal cultures of the major civilizations, but was known by scribes and remained under the surface in various cultures. Evidence for all this will be reviewed in this paper, and a different picture of the early history of the alphabet will be sketched on this basis.

Orly Goldwasser (The Hebrew University of Jerusalem), “The Role of Egypt in the Development of the Alphabet during the Second Millennium B.C.E.”

Any analysis of the development of the alphabet during the Late Bronze Age must also consider the Egyptian enigma. Since the landmark discovery of the alphabetic inscriptions in Wadi el-Hol by John Darnell, it has become evident that the new script descended to Egypt by the 13th Dynasty, at the latest. The people responsible probably belonged to circles of specialized manpower for hire, such as soldiers, miners, and desert-scouts moving regularly between Canaan and Egypt.

Recently, Ben Haring suggested that an ostrakon from the Valley of the Kings, dated to the New Kingdom, carries on one side an acrophonic list that may allude to the *Halaḥam*, the South Arabic alphabetic letter order. Thomas Schneider identified on the other side of the same ostrakon an acrophonic list showing the beginning of the West Semitic alphabetic order, known already from Ugarit. It is the northern order that continued into various Canaanite script dialects and their descendants, such as Greek and Latin. The South Semitic order, the *Halaḥam*, is meanwhile well attested in different acrophonic lists of later periods in Egypt, and might even have originated there, as suggested by Frank Kammerzell. In this lecture, I shall try to trace the Egyptian “fingerprints” present in the early alphabetic material of the Late Bronze Age.

Alice Mandell (University of Wisconsin–Madison), “Script Choice and Iconicity in Canaan: Rethinking the ‘Short’ Alphabetic Texts”

During the second millennium B.C.E., the scribal enterprises in the Levant were cuneiform based. However, a growing corpus of inscriptions from ancient Canaan are written in a linear, ink-based script and point to another script community. This corpus comprises “short” texts written on small, portable objects such as vessels, weapons and tools. Such inscriptions tend to be grouped together as instances of writing on the margins of the state apparatuses of this period. These inscriptions are classified somewhat nebulously as dedications, labels, or ownership marks, and little more is said

about their archaeological context or purpose. Rather than relegate this script use to so-called marginal communities, I examine the iconicity of this script as a marker of status and index of group membership. When an association is created between the graphemes and the visual aesthetic of a writing system (or written language) and a particular socio-cultural or political group, the visible markings in and of themselves become icons of both the writing system and the group. I argue that the use of this script on personal objects in ritual and funerary contexts, often using luxury materials, attests to its socio-cultural salience. Such an understanding elucidates the transmission of this script into the Iron Age and suggests that by the time of its adoption by the Byblian royal family in the Iron Age I, it was already a prestige Canaanite script.

Christopher Rollston (George Washington University), “The Early Alphabet West and East: Ugarit, Megiddo, and Babylonia”

Among the most important innovations in the history of writing is the invention of the alphabet during the early second millennium B.C.E. Within this paper, there will be brief reference to the importance of the Wadi el-Hol and Serabit el-Khadim inscriptions as well as alphabetic cuneiform of Ugarit and its environs, but the focus will be on the linear alphabetic writing on a second millennium Mesopotamian tablet as well as the alphabetic writing on a ring from Megiddo, replete with epigraphically significant images of both.

Thomas Schneider (University of British Columbia), “Egyptian Transcription Systems for Semitic Languages and the Semitic Alphabet Sequences”

In 2015 Ben Haring published a ground-breaking article on an ostrakon found during the excavation of Theban Tomb 99 of Senneferi (“*Halahaham* on an Ostrakon of the Early New Kingdom?”). He suggested that in the list of words found on the obverse of the ostrakon we are dealing with an acrostich of one of the two ancient abecedaries of the Bronze and Iron Age, the *Halahaham* sequence. In a recent reassessment of the obverse and reverse lists of words, suggesting new interpretations for many of the terms (many of them Semitic words in syllabic orthography), I have been able to confirm the presence of the *Halahaham* sequence. More importantly, I attempted to demonstrate that on the reverse list, we encounter also the oldest attestation of the *’Abgad* sequence, predating the ostrakon of Izbet Sartá, so far our oldest witness, by at least 250 years. The present lecture will put this evidence into the broader context of the interplay of the Egyptian transcription systems and Semitic languages from the Middle to the Late Bronze Age.

4E. Southern Phoenicia Initiative II (Workshop)

CHAIR: Ilan Sharon (The Hebrew University of Jerusalem)

Golan Shalvi (University of Haifa), “The Tel Shiqmona Project: Salvaging a Phoenician Centre at the Margins of Phoenicia”

During the Iron Age, the northern coast of Israel passed through several geopolitical upheavals. During the Iron Age II, the Carmel coast is considered by many to have been a border zone between the Phoenician city-states and the Kingdom of Israel. Between 1963–1977, Tel Shiqmona, located on the coast of the Carmel, was extensively excavated and revealed a nearly continuous occupation from the Late Bronze Age to the end of the Iron Age and further into the classical periods. Still, 40 years later, the results and finds of the early periods have not been researched or published. The Tel Shiqmona Project was launched in 2016 in order to save the cultural and intellectual assets hidden in the site’s forgotten finds. At this very preliminary point it has become clear that there are indications of material culture associated with that of Phoenicia and evidence of an extensive commercial relationship with Cyprus throughout the Iron Age. These preliminary results and more will be presented for the first time at the workshop, alongside future avenues of research that will integrate Shiqmona into the Southern Phoenicia Initiative.

Elizabeth Bloch-Smith (Princeton Theological Seminary), Gunnar Lehmann (Ben-Gurion University of the Negev), and David Schloen (University of Chicago), “New Excavations at Tell Keisan, 2016”

Tell Keisan is a 6 ha mound that rises 25 m above the plain, 8 km southeast of Tel Akko, in the territory of the Iron Age kingdom of Tyre. It was occupied from the Early Bronze Age to the Hellenistic period. Its size and location suggest that it was a hub of local, regional, and Mediterranean trade for agricultural products that moved to the port of Akko from the fertile Akko plain, the Lower Galilee hills, and the more distant Jezreel Valley; the site imported coastal products in return. New technologies and scientific methods for materials analysis are yielding data that is being integrated with data obtained from earlier French excavations in the 1970s. The current project began in 2015 with a magnetometry survey. Excavations were conducted in 2016 adjacent to the earlier French trench and in an unexplored region of the southern part of the tell. Results from the first season’s predominantly seventh century and Hellenistic finds will be presented.

Ehud Arkin Shalev (University of Haifa), Ayelet Gilboa (University of Haifa), Ilan Sharon (The Hebrew University of Jerusalem), and Assaf Yasur-Landau (University of Haifa), “Iron Age Coastal Structures at Tel Dor: Results of the 2016 and 2017 Underwater Excavation Seasons”

The 2016 and 2017 underwater excavation seasons, part of the Dor Joint Land and Sea Expedition, have produced new data which challenges our current understanding of the maritime interface of Iron Age Dor. The massive, ashlar-built coastal walls at the southern edge of the tell previously interpreted as quays were found to be land structures. These are perhaps part of the site’s fortifications during the Iron Age IB–II. An earlier wall made of limestone blocks, found underwater beneath these walls, can also be dated to the Iron Age I. Farther south, an extensive feature composed of ashlar stones is possibly a buried maritime structure. These discoveries provide a timeline of the development of coastal structures at Dor, possibly indicate ancient sea levels, and offer insights into the development of maritime activities on the coast of the Carmel.

Sveta Matskevich (The Hebrew University of Jerusalem) and Paula Waiman-Barak (University of Haifa), “Tell Sites Along Nahal Tananim as an Inland Extension of the Maritime Trade Network”

Nahal Tananim, today a small rivulet, was once a river originating in the foothills of the Carmel that emptied into Mediterranean Sea, forming broad salty marshes along the Carmel coastal plain. Nahal Tananim is located at the crossroads of both continental and maritime trading routes. Three tell sites along its waterway, Tel Tananim on its estuary, Tel Mevorakh within the salty marshes, and Tel Burga further inland, were investigated in the past and revealed significant remains dating to the Middle Bronze Age and onward. Previous geological and archaeological work suggested that there was an entryway from the sea which could have been used by Middle Kingdom Egyptian campaigns, overseas merchants, and local fishmongers alike. Tel Mevorakh revealed a Middle Bronze Age garrison with an abundance of ceramic imports, Nilotic shells, and evidence of the use of Murex in the purple dye industry. We will present preliminary results of a three-stage project: a re-examination of the results of the previous excavations of all three sites, including a petrographic analysis of the Middle Bronze Age ceramic assemblages; test excavations at Tel Mevorakh, including collection of samples for soil analysis, fish remains, etc.; and an underwater survey in the waters off Tel Tananim in search of the ancient anchorages. This project will be a valuable contribution to our understanding of the Middle Bronze Age land-sea interactions, geomorphology, and natural environment of this part of Southern Phoenicia.

Bronwen Manning-Rozenblum (The Hebrew University of Jerusalem), “Shifting Sands: Transitions within Late Iron Age Ceramic Assemblages along the Carmel Coast of Southern Phoenicia”

An in-depth typological study of ceramic assemblages from Tel Dor and Shiqmona from the Late Iron Age is now bearing results that augment our current understanding of Southern Phoenicia’s chronological horizons,

cultural diversity, and trade networks. Analysis of key ceramic assemblages reveal a deeper picture of the regional characteristics of the Carmel coastline than previously known, and identifies some diagnostic forms that allow for a closer dating of material within the region. The vessel types in these exchanges, namely, mass-produced trade ware (transport jars) and luxury ware (primarily bowls), hint at the social shifts within communities. Evidence shows possible rerouting of trade routes/shifts in manufacturing locations of particular ceramic forms in both maritime and overland trade networks in this period. In short, we learn more about Southern Phoenicia on the local level and its broader ties to the surrounding region in the pre-Assyrian, Assyrian, and Babylonian periods.

Barak Monnickendam-Givon (The Hebrew University of Jerusalem), “Engagement and Non-Engagement: The Study of Behavioral Changes in Southern Phoenicia”

Southern Phoenician sites, which are inhabited by populations with comparable access to similar natural resources, provide a model for the study of behavioral changes as reflected by shifting trends in material culture. Pottery assemblages at sites around the Mediterranean changed considerably in the Classical periods. The use and local manufacture of pottery vessels that first appeared in the Greek repertoire became popular. This so-called Panhellenic pottery is not homogenous, however, as it has many local versions. The examination of ceramic assemblages in Southern Phoenicia using traditional morphological-functional analysis alongside macroscopic ware analysis and thin section petrographic analysis is valuable in assessing the engagement of Southern Phoenician sites in the aggregation of the Panhellenic repertoire. Defining the differences in the exposure to and selection of Panhellenic vessels, along with the observation of local ceramic traditions, is important for understanding the tension between the engagement and non-engagement of Southern Phoenicians in the eastern Mediterranean world. This is the first step in outlining the mechanism of transformations in behavioral practices during the classical periods. Several topics need to be addressed: What are the characteristics of the pottery repertoire? Do all sites maintain the same commercial and trade patterns? Can a “core process” of behavioral changes be tracked? Is this process unique to Southern Phoenicia? What are the challenges of this research?

4F. Archaeology of the Near East: Classical Periods I

CHAIR: Michael S. Zimmerman (Bridgewater State University)

Orit Peleg-Barkat (The Hebrew University of Jerusalem), “Continuity and Change in Rural Judaea in the Hellenistic and Roman Periods: The Case of Horvat Midras”

In the absence of a historical source giving a detailed description of the rural areas of Judaea, and due to the shortage of data resulting from systematic archaeological excavations, the reconstruction of the distribution of the rural sites of late Hellenistic and Roman Judaea and their character is challenging. Previous studies have relied mostly on data gathered from surveys and from a small number of digs, mostly salvage excavations that focused on small and medium-sized sites, leaving our knowledge of large villages in Judaea extremely meager.

Horvat Midras, situated ca. 6 km northeast of Beit Guvrin, within Adullam Grove Nature Reserve in the Judean Foothills, is a key site for the reconstruction of the history of rural settlement in Judaea during the late Hellenistic and Roman periods. Past surveys and small-scale digs along its boundaries show that the site was significantly larger and richer than any other rural site in the Judean foothills.

Since November 2015, an extensive survey and two archaeological excavation seasons have been conducted at the site by the author on behalf of the Hebrew University. The excavations exposed several dwellings, public structures, and funerary monuments. The results of the excavations shed light on the nature of the Idumaean rural settlement prior to the Hasmonaean conquest of the region and thereafter, as well as on continuity and change

before and after the two Jewish Revolts. They also give insight into questions concerning the origin of the region's inhabitants in the Late Roman period and their material culture.

Brian Coussens (University of North Carolina at Chapel Hill), “Bring Out Your Dead (to the Desert): The Herodium Mausoleum and the Funerary Landscape of the Judean Wilderness”

Comparanda form the basis of archaeology, but sometimes the wrong examples become entrenched in the field. A decade after the discovery of the Mausoleum at Herodium, this issue continues to plague the monument. Prior to 2007, scholars had advanced a very short list of parallels: Augustus's tomb, Alexander's tomb, and those of the kings of Commagene. The discovery defied every expectation of Herodium's imagined archaeological landscape, yet the analogs have largely remained the same. Even the excavators continue to see the site as emulative of other Hellenistic kings' praxis, despite the distinctive setting and characteristics of the site. However, at least two other sites correspond to Herodium in their type and their location—the Hyrcanium and Alexandrium fortresses, where his sons were buried. Although the Herodian family tombs have yet to be located at these sites, the confirmation of Josephus's claims about Herodium hints at his authenticity elsewhere. Together, these sites suggest that Herod maintained a fairly consistent burial praxis, and in light of this fact, the conception of the Herodium mausoleum as a “family tomb” must be renegotiated. Instead of functioning as a single tomb, it forms part of a massive funerary landscape, a system of tombs erected across the Judean Wilderness in the shadow of its hilltop fortresses. This arrangement of the Herodian dead indicates both a divergent and more complex conception of funerary architecture than current comparanda permit.

Anat Cohen-Weinberger (Israel Antiquities Authority) and Achim Lichtenberger (Ruhr Universität), “Late Roman Workshops of Beit Nattif Figurines: Petrography, Typology, and Style”

In 1936, Dimitri Baramki published an assemblage of oil lamps and figurines that he had excavated in two cisterns at Beit Nattif in southern Judaea. This rich assemblage, which was waste material from a workshop, was the starting point used to characterize a Beit Nattif style. This presentation discusses Late Roman figurines from Beit Nattif and figurines from other places in the Beit Nattif style, which were petrographically analyzed for the first time. In total, 35 samples were taken, and the clay used to make the products found in the cisterns was identified. Additionally, Beit Nattif-style figurines from other excavations were analyzed. While some of these were locally made of clay from the Taqiye Formation, others originated from different sources. Since a number of the Beit Nattif-style figurines are also stylistically slightly different from the material from the cisterns in Beit Nattif, it is clear that there were several workshops in southern Judaea producing figurines in the Beit Nattif style. It is also argued, however, that Beit Nattif was a center for production, as figurines from there made their way to the north, even as far as Megiddo.

Shulamit Miller (The Hebrew University of Jerusalem), “Living Large: The Houses and Daily Life of Late Antique Palestine's Upper Ten”

Social, political, and economic reforms at turn of the fourth century generated a consolidation of financial power in the hands a new, very wealthy upper class. The houses of the Upper Ten are easily identifiable, exhibiting architectural and decorative trends found throughout the Mediterranean. The houses are excessively large and luxurious, incorporating spacious courtyards and lavish dining/reception halls, alongside private bathhouses, industrial facilities, and storage units. Their interior décor includes intricate mosaic and marble floors, colorful wall paintings and mosaics, and ornamental fountains. These components were used by the affluent homeowners as a means to display their wealth and social status, in effect creating a common visual language distinguishing the elites from the rest of society.

This paper focuses on the elite mansions of Late Antique Palestine, which bear the characteristics mentioned above. The remains from two cities, Caesarea Maritima and Tiberias, are presented and analyzed as a means by

which to explore elite domestic and social practices, both regionally as well as within the wider context of the Eastern Mediterranean and beyond.

Mitchell Allen (Scholarly Roadside Service; Archaeological Research Facility, University of California, Berkeley) and William B. Trousdale (National Museum of Natural History, Smithsonian Institution), “Cultural Complexity in Parthian Sistan, Afghanistan”

The first several centuries of the common era represented a period of dense population and cultural complexity in the Sistan region of southwestern Afghanistan. Multiple large sites, extensive agricultural settlements, and a complex canal system covering hundreds of kilometers were uncovered by the Helmand Sistan Project’s intensive survey of the lower Helmand Valley and adjacent Sar-o Tar basin, conducted in the 1970s but as yet unpublished. This economic productivity was matched with cultural intermixing from various sources, including Zoroastrian fire temples and Hellenic shrines. This paper will describe the basics of the settlement and economic system of the Parthian era in Afghan Sistan and connect it to the better known pattern in eastern Iran.

4G. Connectivities in The Near East: Social Impact of Shifting Networks II

CHAIR: Felix Höflmayer (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences)

Christian Knoblauch (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Connectivity in the Egyptian Nile Valley—A Technological (and Social) Approach to Understanding Supra-regional and Regional Processes (2200–1750 B.C.E.)”

The spatial distribution of morpho-stylistic features in material culture as well as technological traditions has long been cited as an indicator of interconnectivity within the Egyptian Nile Valley: uniformity in material culture is understood to be both symptom and result of heightened political connectivity (centralization), whereas heterogeneity is thought to be related to political dis-connectivity (regionalism). While such a model might seem reasonable, it conceives of the relationship between political processes and craft production in a reflexive, abstract, and ultimately untenable way. The premise of this paper is that the development of material culture and technological traditions in the Nile Valley should not be thought about as an inevitable consequence of political events, but historically contingent (and unusual) processes that in each case require explanation. As a case study, the paper analyses the development of the pottery-making traditions of a single site—Abydos—over a period of 700 years (ca. 2200–1500 B.C.E.), through two periods of political regionalism and a single period of highly centralized government. Focusing on the adoption and rejection of new technologies and the context of production at a local level, a new model for the establishment of the high Middle Kingdom pottery tradition throughout Egypt, and its demise and replacement by local traditions during the Second Intermediate Period will be proposed. Connectivity in the Nile Valley, in this respect, will be recast as the interaction of actors at different levels under specific historical circumstances rather than as the result of vaguely defined political and cultural processes.

Reinhard Jung (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “Exchange of Goods—Exchange of Commodities? Greece and the Levant in the Second Millennium B.C.E.”

After a prolonged post-processual focus on social and ideological aspects of product exchange between the societies in Greece and the Levant, it is time to re-assess the issue of the economics underlying the social phenomenology. This paper poses the question of whether exchanged goods took the character of commodities. A commodity is a product that is explicitly produced for exchange, while the exchange mechanism itself is determined and shaped by the exchange value of the commodities. According to the law of value, the latter equals the average amount of labor necessary for the production of the commodity in the producing society. The more repetitive the product exchange between two societies becomes, the more one commodity expresses its value

in quantities of other commodities. The paper examines the archaeological correlates for these specific commodity properties and seeks to clarify to what degree the product exchange between the Aegean and Levantine societies was an exchange of commodities or commodity trade, and if a “general form of value” was operative in those exchange relationships. The approach builds on the achievements of the Liverani school while scrutinizing recent proposals, which use concepts of contemporary economies such as market, profit, and capital. Beginning with issues related to production, the paper will argue that Mycenaean large-scale pottery production for Levantine consumers fulfills several criteria of commodity production, while there are no clear indications for market mechanisms in trans-Mediterranean exchange.

Teresa Bürge (Institute for Oriental and European Archaeology [OREA], Austrian Academy of Sciences), “The Late Bronze to Early Iron Age Transition in Transjordan: Eastern Mediterranean Material Influences”

The aim of this study is the examination of the material remains from the transition from the Late Bronze to the early Iron Age. Whereas this period is well known and much debated as regards Cisjordan, the Transjordanian evidence needs further research.

From the Late Bronze Age, a large number of Cypriot and Mycenaean pottery and other imports are known from Transjordan. In addition, recently published ivory objects from Tell Irbid demonstrate that this region was part of the international trade networks of the Late Bronze Age. The Late Bronze Age breakdown around 1200 B.C.E., as well as the political and social transformations in the southern Levant—and the eastern Mediterranean in general—certainly also affected Transjordan and caused a shift of trade networks.

However, an eastern Mediterranean influence is still perceptible in the early Iron Age: This can, inter alia, be demonstrated at Tell Abu al-Kharaz in the Jordan Valley, where an exceptionally well preserved compound dating from the Iron Age IB yielded tableware related to eastern Mediterranean counterparts, and closed-shaped cooking vessels, which resemble Philistine-type cooking jugs. Other finds are cylindrical loom weights, which were common in the Late Bronze and early Iron Age eastern Mediterranean. These finds confirm the cultural continuity between the eastern Mediterranean and Transjordan in this period of political upheavals but suggest also the limited presence of groups or individuals from the eastern Mediterranean at Tell Abu al-Kharaz.

Joseph Lehner (University of Central Florida) “Finance, Production, and Connectivity in Hittite Central Anatolia: New Metallurgical Data from Hattusa”

The emergence of the Hittite state in central Anatolia during the late 17th century B.C. is marked empirically by a novel political economy reflecting a range of new economic and political institutions. Pottery consumption, settlement patterns, administrative technologies, landscape monuments, and distinct urban architecture all show important overlapping imperial strategies involved in the transformation of Hittite Anatolia into a territorial state. Elites centered at Boğazköy-Hattuşa integrated much of central Anatolia into this new state, which also extended networks of imperial power into populous neighboring regions to extract tribute and facilitate trade. While certain elements of tribute and levies were adopted during the preceding period, the geographic scope and centralization of the tribute and levy system increases in scale and operation during Hittite rule. Metals, in particular silver, gold, and copper alloys, and their producers functioned together intimately within this system, and they provide an appropriate proxy and an independent line of evidence for the functioning of the imperial finance and trade system. In this paper, I briefly examine both textual resources (tribute/tax/inventory and legal texts) and new data from a large study of metallurgy of Bronze Age central Anatolia to scrutinize this problem in further detail. Results demonstrate the significance of local production practices and sponsored labor organization. I also introduce here the importance of a poorly understood alloy of copper and nickel, evidence for which suggests it was an intentionally produced silver-colored metal often mistaken for silver itself.

4H. Border Dynamics in the Tenth Century B.C.E. Levant: A Junior Scholars' Panel

CHAIRS: Geoffrey Ludvik (University of Wisconsin) and Lydia Buckner (Mississippi State University)

Zachary Thomas (Macquarie University) and Kyle Keimer (Macquarie University), "The Expansion of the United Monarchy and Its Strategies of Power and Control"

The biblical description of David and Solomon's kingdom has often been labelled an 'empire' and therefore assumed to be describing permanent, direct control over those areas that David 'conquers' and in which Solomon 'rules.' The historicity of the biblical description has thus been judged on the basis of whether or not such an 'empire' can be demonstrated within the archaeological record. However, the expansion of kingdoms in the ancient eastern Mediterranean world was a much more complex undertaking than this lets on. The strategies that historical texts and archaeology record are quite varied, and much informed not only by practicalities of resources and geography, but just as much by the nature of the socio-political structure of these kingdoms and the way in which that structure accommodated expansion over new territory and populations. By examining the material and ideological strategies employed by the well-attested 'empires' of New Kingdom Egypt, Neo-Assyria, and Persia, it is possible to realistically contextualize both the archaeological record of the southern Levant in the tenth century B.C. and the biblical description of David and Solomon's kingdom. As a result, it is clear that expansion of control into new areas outside Israel's primary highland base, including the Transjordan, the northern valleys, and areas farther to the north, as well as the expression and maintenance of power in those places, was not simply the process of creating an 'empire' expanding like an ink-blot on a map, but more of a network of relationships of power and social incorporation.

Abelardo Rivas (Andrews University), "Jalul as a Border City in Iron Age Transjordan?"

As part of the Madaba Plains Project, excavations at Tall Jalul have been conducted since 1992 in the modern Hashemite Kingdom of Jordan. The site displays an impressive and rich history of occupation from the Early Bronze Age all the way to the Islamic periods, and reaching its peak during the Iron Age. Jalul is the highest point in the area and its identification has been a subject of debate. Among the possibilities suggested by different scholars are Heshbon, Bezer, and Jahaz. However, the theory of Bezer has gained scholarly popularity in recent years, replacing its favored predecessor Heshbon because of the dating of some of its structures, mainly the channel. This identification, if confirmed by further excavations, enhances the role of Tall Jalul in the debate about the role and dynamics of border cities during the Iron Age in Ancient Transjordan. This paper aims to look at the textual evidence as presented in Hebrew and other textual sources, the geographical location of Tall Jalul and its relationship to other major cities in its vicinity, and the material cultural data from Field G to answer the questions related to the possible role Tall Jalul might have played as a border city.

Chris McKinny (Texas A&M University Corpus Christi), "Pressing On: Identifying the 'Other' Gath and Its Implications for Understanding the Border between the Kingdoms of Israel and Judah"

In light of the accepted identification of Philistine Gath with Tell eṣ-ḥafi, which has been clearly confirmed by A. Maeir's excavations over the last two decades, this paper will re-examine the identifications of the southern biblical towns of Gath-rimmon, Gittaim, and non-Philistine Gath. For each of these sites, I will consider the available archaeological, toponymic, geographic, and textual evidence. Through this analysis a new identification for the "other" Gath will be suggested. Besides offering possible site identifications, the purpose of this paper is to better understand the dynamic border between Israel and Judah in the northern Shephelah/Aijalon Valley as reflected in the northernmost Shephelah district of Judah (Josh 15:33–36), the Rehoboam fortification list (2 Chr 11:6–10), and other texts. As I shall demonstrate, the

western portion of the border between the kingdoms of Israel and Judah is not well-defined in the biblical text, nor has it received much scholarly attention or archaeological investigation. Accordingly, this paper will seek to provide a historical-geographical foundation for further study in the region of the eastern Aijalon Valley.

4I. New Light on Persian Period Judah

CHAIR: Oded Lipschits (Tel Aviv University)

Oded Lipschits (Tel Aviv University), "Introduction to the Third Session and Summarizing the Three Years of Discussion the Persian Period"

The 205 years between 539/538 and 333 B.C.E., the so called "Persian period," are a well-defined period from the historical point of view. This period has both a clear starting point, when Cyrus the Great conquered Babylon, and endpoint, when the Persian Empire fell into the hands of Alexander the Great's army. For Judah, these dates mark the period of the "Return to Zion," and the beginning of the Persian/Achaemenid period is also the time when, according to the biblical descriptions, (some of) the Judeans deported to Babylon fifty years before were allowed to return and to build the Second Temple in Jerusalem. This is the beginning of the Second Temple Period in the history of Judah. Scholars dealing with this period have emphasized the place of it as the single most important period for the development of Jewish thought and practice from antiquity to the present.

Bearing in mind the importance of this period, its uniqueness, the many different processes that took place during these 200 years, and the many biblical texts that were written and edited in Judah, this session will explore some basic archaeological questions regarding the understanding of the material culture of this period.

Lester Grabbe (University of Hull), "The Governor of Yehud—Inside Out"

The provincial governor seems to have been important in the Persian Empire, but much of our information on the office comes from Yehud and Samaria. This paper will draw on all the information available, biblical and extra-biblical, including the relationship of the provincial governor to the satrap who was above him (about whom we have more information on the whole). A major conclusion is that the data we have include not only the "outside" (the governor doing his job in the Persian administration) but also the "inside" (taking care of purely inner-provincial needs or concerns or even personal obsessions—bees in his bonnet, some might say). In some cases, the governor seems to have been interfering in matters that were actually none of his concern. The activities of the governors of Yehud, at least as described in our sources, seem to have been mostly concerned with "inside" matters and, in some cases, were no doubt resented by local officials of the province. These observations will be abundantly illustrated with examples.

Aharon Tavger (Ariel University), "The Northern Boundary of the Province of Yehud: An Updated Archaeological View from the North"

The northern boundary of the province of Yehud in the Persian period has been a matter of debate in the last decades. Most of the arguments are based on the interpretation of biblical sources, mainly Ezra and Nehemiah, and on the distribution of the *YHWD* stamped jar handles. Some draw the northern boundary at the Jericho–Bethel–Hadid line (e.g., Kallai, Galil, Rainey, Stern), according to some of the lists from Nehemiah; some mark Tell en-Nasbeh as the northern site of Yehud, according to other lists and to the new typology of the *YHWD* stamped handles (e.g., Levin, Schwartz, Carter, Lipschits); and recently Israel Finkelstein has argued for a smaller Yehud by suggesting that the northern boundary did not extend much north of Jerusalem, and that all the lists of Nehemiah reflect the Hasmonean period.

In this paper, I will examine the northern boundary by integrating updated archaeological data from northern Judah/Yehud in a long-term perspective. The settlement patterns in the southern parts of the northern kingdom and the northern parts of the Judahite kingdom, from the end of the Iron Age through the Persian period, indicate an expansion of Yehud to the

north in the last stages of the Persian period while leaving a vacuum area south of the province of Shamrayn (Samaria).

Pirchia Eyal (Israel Antiquities Authority), “New Insights on the Southern Shephelah in the Persian Period”

The Persian period is defined by many scholars as a transitional period, between empires, periods, and cultures. Until recently the attitude of most scholars to this period was similar, and the amount of excavations, finds, research, and publications were scanty in relation to the previous and later periods. This disproportion was common in all the land of Israel in general, and in the region of Judea in particular. In the coastal area large sites, with clear stratification and pottery assemblages, were excavated, and much research was conducted. On the other hand, in the region of Judea, the assemblages originated from only a few tells and strata with poor archaeological remains, and therefore the research on this period was very scanty.

In recent years the research of the Persian period has been reconsidered, especially in Judea. Significant sites have been excavated and much work has been done. These studies are not only general and regional, but often deal with subregions in Judea, such as the Judean Desert, the Judean Highlands, and the Shephelah.

Despite the increase of studies for Judea, the southern Shephelah has not yet been studied thoroughly. This region serves as a transitional area between the Judean Highlands, the southern coastal plain, and the Negev. In this paper I would like to focus on this area. I will refer to the new excavations, surveys, and studies published in recent years, analyze them, and try to give a new perspective on the region.

Lucas Schulte (University of Nebraska–Lincoln), “Judean Adaptations of Persian Propaganda: A Comparison of Isaiah 44–45 and Nehemiah 2 to Achaemenid-Period Inscriptions of Babylon and Egypt”

This examination of royal inscriptions from Achaemenid-controlled Babylon and Egypt reveals a propaganda model in which Persian kings are portrayed as authorized and supported by local deities to reign as heirs to local dynasties. This propaganda begins in Babylon with Cyrus’s reign as depicted in the Cyrus Cylinder, and in Egypt during the Persian conquest of Egypt under Cambyses’s reign as depicted in both an epitaph of the Apis buried in Cambyses’s sixth year and the Statue of Udjahorresnet. Continuing in inscriptions of Babylon and Egypt through at least the reign of Artaxerxes I (Longimanus), this propaganda spans the time and locations associated with the sixth century B.C.E. redaction of the book of Isaiah (the so-called “Deutero-Isaiah”) and the mid-fifth century B.C.E. Nehemiah Memoir of the book of Nehemiah. Together, these various texts suggest a shared Persian milieu expressing the ethos and ideology of the Zoroastrian *Avesta* adapted for local religions. After a brief survey of the epigraphical evidence from Persian-controlled Babylon and Egypt, this paper will then discuss two different Judean adaptations of the Persian Royal Propaganda Model: that of Isaiah 44:24–45:13 at the beginning of the Persian Period, and that of Nehemiah 2 at approximately the halfway point of the Persian Period. This paper will present the results of the comparison between these two Judean texts and the epigraphical evidence from Babylon and Egypt to demonstrate specific Judean adaptations of the Persian Royal Propaganda Model for their sixth and mid-fifth century Judean contexts respectively.

4J. New Discoveries at Beth She’arim

CHAIR: Adi Erlich (University of Haifa)

Rona-Shani Evyasaf (Technion–Israel Institute of Technology) and Adi Erlich (University of Haifa), “The Haifa University Excavations at Beth She’arim: An Overview of the Results of the 2014–2017 Seasons on the Sheikh Abreik Hill”

Beth She’arim was first excavated eighty years ago, when the main focus was the necropolis at the foot of the Sheikh Abreik hill, while the town itself received limited attention both in excavation and in publication. In 2014

excavations at Beth She’arim were renewed, directed by Dr. Adi Erlich of the Zinman Institute of Archaeology at the University of Haifa. The main goal of the current excavations is to explore the ancient town. Seven areas have been excavated on the hill’s summit and on its northern saddle. This paper presents the main results from five of these areas (the other two will be presented separately). Evidence found at the site has shown occupation from the Iron Age through the Hellenistic, Roman, and Byzantine periods as well as a presence in the Mamluk, Ottoman, and Modern periods. The architectural remains at the site mainly date to the Roman and Byzantine periods, especially the second–fifth centuries C.E., the heyday of the Jewish town of Beth She’arim. The new excavations have revealed domestic and public buildings, streets and alleys, water installations (cisterns, small pools, channels, and shafts), subterranean rooms, and many diverse small finds. The remains of the Roman period seem to be aligned on a grid plan, along with buildings previously excavated, most notably the basilica and synagogue. The first excavation seasons have revealed an intricate town, while clarifying different chronological phases of construction and abandonment in the city, and have shed new light on the history of this important site.

Ran Kafory (University of Haifa), “An Early Roman Period Structure and a Middle Roman Period Building on the Hilltop of Beth She’arim”

The summit of the Sheikh Abreik hill is the highest point on the ancient settlement of Beth She’arim. For the first time, a large area was recently excavated near the summit (area B), northeast of the Alexander Zaid statue. No remains were visible on the surface prior to our excavation, which revealed evidence mainly from the Ottoman, Mamluk, Byzantine, Roman, and Hellenistic periods. Remains from the later time periods were found mainly in refuse pits that penetrated deeply into earlier strata. Sections of a large building from the Roman period (second–fourth centuries C.E.), consisting of some large rooms paved with flagstones, were revealed. This building differs in its architectural style from domestic structures at the site. Parts of the building were disturbed by the later refuse pits. This Middle/Late Roman building was constructed on top of an Early Roman structure dated to the early first century C.E., a time when, according to historical literature, Beth She’arim was a private estate of Queen Berenice. This Early Roman structure covers and blocks bell-shaped pits quarried into the local chalk, some of which were plastered and reused as cisterns in the Late Roman phase. This is the first time at the site that there is clear architectural evidence for these early periods (i.e. Early Roman and Hellenistic) at Beth She’arim.

Fanny Vitto (Israel Antiquities Authority), “A Gateway and an Industrial Area on the Eastern Edge of Beth She’arim (Area X)”

A first season of excavation conducted in 2016 in Area X, on the eastern edge of Beth She’arim, revealed remains belonging to two phases. Phase 1 included an impressive structure built of large ashlars and stones with drafted margins and bosses, comprising a wide gateway and a flagstone pavement. Phase 2 included evidence of pottery and glass production consisting of a large pottery kiln with an accumulation of broken vessels and debris from glassblowing activities. This paper will present the results of the 2016 and 2017 seasons, suggest an interpretation of the structure with the gateway and discuss the glass and pottery production.

Michael Osband (University of Haifa; Ohalo College), “The Settlement of Beth She’arim in Light of the Pottery: A Revised Chronological Perspective”

The new excavations at the settlement of Beth She’arim have revealed levels and contexts that shed new light on the settlement history of the site. The dating of these contexts is based upon the pottery along with the coins and architectural style. These include levels and contexts from the Hellenistic, Early Roman, and Middle Roman periods. In addition, contexts dating to the Late Roman and Byzantine periods have also been uncovered as well as pottery from the Mamluk and Ottoman periods, increasing our understanding on the changing nature of the site over time.

A particularly interesting question concerns the Byzantine period, especially the mid-fifth through mid-sixth centuries. While Mazar and Avigad

suggested that Beth She'arim was only sparsely settled after the fourth century, evidence from a sixth century building and activity in the necropolis suggest that the site was still inhabited at this time. Pottery from this period, most importantly forms of Late Roman Red Ware dating to the mid-fifth through the mid-sixth centuries, has been uncovered mainly near the surface. However, there are only a few coins from this time at the site. We will discuss this problem and the nature of the site during the Byzantine period.

Tsvika Tsuk (Israel Nature and Parks Authority), Iosi Bordowicz (Israel Nature and Parks Authority), and Achia Kohn-Tavor (Independent Archaeologist), "Impressive Reservoir and Aqueduct in Beth She'arim National Park, Israel"

The archaeological excavations in Beth She'arim during the 1930s and 1950s, which focused on the catacombs, bypassed a huge subterranean reservoir. This reservoir, known as the "Slik Cave," was converted during the British Mandate period to a clandestine storage place of ammunition and operated as a secret firing range. This conversion destroyed the ancient entrance and part of the channel. An archaeological excavation in 2014, as part of the conversion of the place to a visitors center of the seven branched menorah, exposed the entire reservoir.

It was a large reservoir, 26 m long, 18.6 m wide, 6 m deep with a volume of about 1260 m³. An impressive staircase with a balustrade was encountered at the entrance. West of the entrance was an installation used as a settling basin for the large aqueduct that flowed in from the north. The aqueduct, exposed for about 20 m, consisted of a hewn tunnel roofed with stone slabs. The aqueduct collected and supplied discharged rainwater from the valley into the reservoir. The plaster on the reservoir walls was typical in fabric and color of the first-second centuries C.E. Radiocarbon analysis provided a date of ca. 120 C.E., which is consistent with the plaster typology chronology. Pottery sherds, some glass finds, and a few coins encountered on the floor date the end of its use to the fourth century C.E. These findings revealed an ancient and previously unknown chapter in the history of Beth She'arim, dating back to the beginning of the second century C.E.

Zeev Weiss (The Hebrew University of Jerusalem), "Beth She'arim and Beyond: Urban Necropoleis in Roman and Late Antique Galilee"

The Beth She'arim necropolis is central to the study of Jewish society in late antiquity. Over thirty catacombs have been excavated to date, and presumably there are more that have not yet been uncovered. The uniqueness of this necropolis lies in its number of graves, their variety, and the quality of the finds, which include many burial inscriptions in Greek and Aramaic as well as artistic portrayals incised in stone and in relief.

This paper will focus on the necropolis at Beth She'arim but will also examine—owing to its status as a patriarchal burial site—whether its finds are more varied or of a higher quality than those from other sites in Roman and late antique Galilee, or whether the archaeological finds from these other Galilean sites are modest and therefore present an asymmetric picture of the burial and burial practices in the region.

In light of the evidence, it will be argued that the wealth of architectural, artistic, and epigraphic discoveries from the Beth She'arim necropolis should not be compared to those from rural settlements, but to the material found in the *necropoleis* of Tiberias and Sepphoris, the two main urban centers reflecting wealth and culture in Roman Galilee. Such a comparison changes the parameters of the equation and provides important observations regarding the nature, size, and magnitude of the urban Galilean *necropoleis* beyond Beth She'arim.

4K. Object, Text, and Image: Interdisciplinary Approaches to Seals, Sealing Practices, and Administration II

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

Melinda Nelson-Hurst (Tulane University), "Spheres of Economic and Administrative Control: Textual, Visual, and Archaeological Evidence for Female and Male Sealers"

Officials with titles related to sealing goods featured in the administration of private estates in ancient Egypt from at least as early as the Old Kingdom. By the time of the Middle Kingdom, positions such as treasurer (overseer of sealed items) would make their way into the central administration, with the treasurer possibly rivaling the vizier in his level of authority during this period. At the same time, these positions continued to be an integral part of the administration of private estates as well. While texts, private tomb decoration, and archaeological evidence in the form of seals and seal impressions from the Middle Kingdom attest to the presence of these officials, including some women with sealing duties, we know little of the specific responsibilities and sphere of influence of sealers and their supervisors. This paper utilizes a combination of text labels and depictions of officials with sealing duties from private tombs and the seals and seal impressions that these officials left in the archaeological record in order to examine the extent of their economic and administrative roles. Further, since a title need not represent a fixed set of duties from one individual to another, the paper also looks at whether roles appear the same or different between men and women. By extension, this case study may also shed light on the spheres of influence of other female administrators during the Middle Kingdom.

Oya Topcuoglu (Northwestern University), "The Seals of Šamši-Adad: Ideology, Iconography, Identity"

This paper examines the seals belonging to Šamši-Adad within their archaeological, historical, and iconographical context, aiming to understand how seal imagery functioned as part of a visual system of administrative, social, and cultural communication and identity formation during Šamši-Adad's reign.

Despite being perceived as a usurper and illegitimate ruler due to his Amorite origin, Šamši-Adad successfully created a politically unified entity across Upper Mesopotamia during the 18th century B.C. A close reading of textual and visual evidence suggests that the Kingdom of Upper Mesopotamia owed its success to a unifying ideology expressed through text and image, which combined the preexisting political and ideological infrastructures of the region with the cultural memory and traditions of the Akkadian, Ur III, Old Assyrian, and Old Babylonian worlds. In the visual realm, this strategically crafted program of representation is expressed through the iconography of royal and official seals. The audience scene and the figure-with-mace motif on the seals of royals and high-ranking officials not only communicated the legitimacy and high status of the seals owners, but also conveyed a political message regarding the power and authority of Šamši-Adad's state.

Impressions of seals bearing Šamši-Adad's name show great variety in terms of their imagery and inscriptions, although they draw heavily from earlier traditions of seal iconography, carving style, and royal epithets. By focusing on these seals, this paper explores the role of cultural memory and visual representation as tools of political change and legitimization, royal ideology, and identity in the early second millennium B.C.

Christina Chandler (Bryn Mawr College), Annalisa Azzoni (Vanderbilt University), Mark Garrison (Trinity University), and Erin Daly (University of Chicago), "The Chamberlain and the Queen: An Inscribed Seal and Administrative Networks at Persepolis"

Inscribed seals, i.e., those carrying an engraved inscription accompanying the figural imagery, mark a particularly distinct and direct manner in which text and imagery interact on ancient seals. Inscriptions on seals follow various formulas that often are specific to time and place; in all periods and places, however, inscribed seals are rare.

Corpora of closely dated and contextualized seals provide rich avenues for exploring the relationships existing between seal imagery and text, and the manners in which inscriptions may have functioned in a particular visual landscape. Some 3400 distinct seals preserved as impressions in 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.), present one of the richest corpora of closely dated and contextualized seals. Approximately 170 of these seals carry inscriptions written in Elamite, Aramaic, Egyptian, Greek, Babylonian, or Old Persian.

This paper will explore the lines of inquiry opened by the visual imagery and inscription on one particular inscribed seal from the PFA, PFS 535*. The seal carries an especially interesting banquet scene and an Aramaic inscription: ‘Šalamana the Vastrabara’ (‘chamberlain’). Analysis of the seal imagery and inscription, the individual, his title, and his administrative duties reveals a complex network of social and administrative interactions involving various members of the Achaemenid court, including the royal women Irtašduna, a daughter of Cyrus the Great and wife of Darius, and Irdabama, one of the most influential members of the court in the reign of Darius.

Anne Goddeeris (Ghent University) and Katrien De Graef (Ghent University), “Dangerous Liaisons? Temple Personnel with Royal Seals in the Old Babylonian Period”

The enigmatic title “lú ka-NE lugal” appears only on Old Babylonian cylinder seals, and is never written on tablets. Moreover, all these seals belong to priests attached to the main city temples. The title is attested from the reign of Samsuiluna onwards in Nippur, Dūr-Abi-ešūḫ, and Sippar. Tablets from Dūr-Abi-ešūḫ often bear impressions of several seals belonging to different “lú ka-NE lugal,” which shows that the title could be borne by several priests at the same time.

De Boer (2010) has translated the title as “membre/homme de la troupe/cohorte du roi.” As the title is borne by a variety of high profile priests, we believe de Boer’s translation implying a military connotation is unsatisfactory. Given the fact that the men bearing this title are linked both to the temple and the king, we propose to interpret the title as “liaison officer of the king in the temple.”

We have been able to identify more than 100 impressions of these seals, from three different sites, belonging to 15 different individuals, which offer us a sound basis to investigate the range of activities of the bearers of the title “lú ka-NE lugal,” to consider their position between temple and king, and to identify the responsibilities and benefits attached to the ownership of a “lú ka-NE lugal” seal.

Katherine Burge (University of Pennsylvania), “The Internal Administration of the Eastern Lower Town Palace at Tell Leilan” (20 min.)

Excavations undertaken at Tell Leilan in 1985 and 1987 uncovered about 10% of the Eastern Lower Town Palace, revealing a throneroom/reception area, as well as kitchens and storerooms. Most of the material found within the palace comes from the final building level occupied by a local dynasty following the collapse of Šamši-Adad’s regional empire. This paper focuses on archives of texts and sealings that were in use during the last years of occupation under the local king Jakūn-Ašar, including a wine archive and a sealing assemblage belonging to the royal baker.

A sealing controls access to a commodity through the message of authority carried by the seal impression (image and legend). Through these we are able to identify individuals who were empowered to restrict access to goods within an institution. In the palace economy of the early second millennium, the king owned all the movable property that was produced and stored within the palace. Under him were a variety of palace bureaucrats, whose activities were documented in economic texts that were also sometimes sealed. The presence of Jakūn-Ašar’s royal seal all over the wine archive not only attests to the high institutional value of wine, but also implies the king’s direct role in its control and administration. Looking at patterns of seal use in these archives offers a granular perspective of intra-palace administration, specifically the disbursement of wine, and makes it possible to identify other areas in the

palace in which property relations required physical evidence of individual responsibility.

FRIDAY, NOVEMBER 17

5A. Landscapes of Settlement in the Ancient Near East

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

Emily Boak (Oriental Institute, University of Chicago), and Kathryn Franklin (Oriental Institute, University of Chicago), “Graveyard of Empires, Cradle of Commerce: Remotely-sensed Research of Early Modern Travel Infrastructure in Afghanistan”

This paper presents data on early modern (16th–17th century) travel infrastructure in Afghanistan, discovered and mapped using satellite imagery and historical maps by the Afghan Heritage Mapping Partnership (AHMP) at the University of Chicago. In this paper, we will reconstruct routes, ways of traveling them, and the limits of government control along them using travel accounts, previous archaeological research, and new data from “remote surveys.” By recording networks of standardized roadside architecture from the Safavid-Mughal period, we generate new information on previously understudied routes of the 17th century “Silk Road.” Across late medieval and early modern Eurasia, caravanserai garrisoned soldiers and welcomed travelers, levied taxes, and provided rest and security on difficult and dangerous roads. These buildings thus represent both a mode of delimiting the boundaries of effective sovereignty and an effective mechanism for propagating state projects in architectural space. Our diachronic assessment of the early modern caravanserai system contributes to a more nuanced understanding of the political history of landscapes in Afghanistan as well as to the management and protection of heritage sites.

Anthony Lauricella (University of Chicago), and Emily Hammer (University of Pennsylvania), “Mound Volume as a Proxy for Settlement Intensity in Southern Bactria”

The Balkhab river valley extends north from the ancient city of Balkh and is one of the most dense archaeological landscapes in Central Asia. Classical authors, most notably Strabo, called it ‘the land of the thousand cities.’ Travelers’ accounts and early archaeological surveys (e.g. Kruglikova and Sarianidi 1976; Ball and Gardin 1982) partially documented the vast expanse of mounded sites following the dendritic system of canals that stretches into the arid fringe of the oasis. Recent research at the Center for Ancient Middle Eastern Landscapes (CAMEL) has used satellite imagery to systematically map the extent of archaeological mounds in the Balkh oasis. This paper uses high-resolution elevation models generated from LiDAR (US government BuckEye Program) to calculate the volume of mounds identified from survey, and studies the spatial distribution of mound volume across the landscape. Using mound volume as a proxy for duration and intensity of settlement, our research analyzes the *longue durée* relationship between irrigation, occupation, and imperial control across this part of Bactria.

Mehrnoosh Soroush (Harvard University), “Water History and Urbanism on the Susiana Plain in the Age of Transition”

This paper discusses the trajectory of the hydraulic infrastructures of the Late Antique and Medieval cities of Susiana. Although much emphasis has been placed on the short-term nature of the imperial hydraulic investment of the Sasanian Empire on the Susiana and on the dramatic impact of the Islamic conquest, the picture is more complex. Several important urban and agricultural centers of antiquity declined after the fall of the empire but other centers survived the sociopolitical transitions, sometimes into modern times. This paper discusses the diverse trajectories of these urban centers in the long term, particularly looking at the sustainability or vulnerability of their hydraulic infrastructure. In addition to the sociopolitical factors, the role of environmental processes and technological change in shaping the region’s

water management strategies during the transition from Antiquity to the Middle Ages is highlighted.

Georgia Andreou (Cornell University), “The River Valley as a Study Unit and Conceptual Boundary in Settlement Studies: The Case of South-Central Cyprus”

The river valley is an important physical and conceptual unit in archaeological surveys as well as broader scale interpretations (settlement patterns) in Mediterranean and Near Eastern archaeology. River valleys are widely recognized as critical sources of water and as places of geological and geomorphological variability that facilitates mixed agropastoral economies. As such, a long scholarly tradition on archaeological survey and landscape archaeology stems from ‘valley projects’ and ‘valley surveys,’ which have shaped our understanding of the ‘region’ and inter-regional interaction. Similar to other parts of the Mediterranean, much of our knowledge of the archaeology of Cyprus derives from surveys that have shed light on the diachronic human habitation in various environmental zones. Yet, despite recent theoretical and methodological developments in archaeological survey on the island, the history of south-central Cyprus is primarily reconstructed based on a series of north-south ‘valley surveys’ that are often closely located. While these surveys have revealed unprecedented human activity across these river valleys, the areas between them remain poorly understood. In this paper I discuss how the valley as a study unit has developed into a conceptual boundary in the reconstruction of diachronic settlement patterns in Cyprus, through an examination of the Vasilikos, Maroni, and Kouris river valleys. I then demonstrate how GIS methodologies have helped combine the valley data and have highlighted alternative spatial study units for settlement studies.

Evie Gassner (The Hebrew University of Jerusalem), “Water, Water, Everywhere”—Water as a Landscape Element in Herod’s Building Projects”

Water, by virtue of its vitality to existence, has naturally been a key feature of humanity’s daily life since its very dawn. However, as with many other natural elements, water can also be used in other functions—to serve an agenda, for example. King Herod, who ruled Judaea between 37 B.C.E. and 4 B.C.E., erected many spectacular buildings and monuments, seeking both to elevate his own name and to serve the people. Herod—a foreign king in a strange land and a vassal ruler to the greatest Empire in the world—was forever seeking to prove his worth. In this paper, I will present the ways in which Herod recruited water as a landscape element—in the form of pools, nymphaea, and fountains—to build up his political standing by physically exhibiting his power and wealth. The innovative use of landscape archaeology as a tool to help us better understand Herod, his projects, and the motivation behind his building system is essential and can further the research of Herodian archaeology. The study of the surroundings in which the buildings stood and their relations can teach us a lot about the buildings themselves.

Norma Franklin (University of Haifa; W. F. Albright Institute of Archaeological Research), “Revealing Greater Jezreel”

Airborne LiDAR was used for the first time in Israel in February 2012 over a ca 7 sq. km area, an area that we have defined as Greater Jezreel. The area comprises an upper site, Tel Jezreel, a lower site, Ein Jezreel, and includes the ancient paths that connect both sites with a perennial spring. The area comprises numerous agricultural installations, rock-cut tombs, and bell-shaped cavities, all of which help define the history of settlement. The first part of this paper will illustrate how combining LiDAR, aerial photography, and traditional surveying has helped us understand greater Jezreel in the *longue durée*. The second part will focus on the ca. 100 bell-shaped rock-cut cavities that dot the upper site. These have invariably been misidentified as Ottoman-period cisterns, not just at Jezreel but at many other rocky hilltop sites in the Levant. I suggest that they serve a number of functions and are an important clue to understanding agricultural abundance at Jezreel and elsewhere.

5B. Senses and Sensibility in the Near East I

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

Saana Svärd (University of Helsinki) and Aleksii Sahala (University of Helsinki), “Am I Seeing Things? Language Technology Approach to ‘Seeing’ in Akkadian”

This paper presents some first results of the project “Semantic Domains in Akkadian Texts,” which uses and develops state-of-the-art language technology methods to handle large amounts of Akkadian language data in order to gain new semantic insights. The project focuses on creating open science tools for generating contextual semantic domains for Akkadian lexemes. A quantitative perspective broadens the possibilities of semantic research on these texts, as semantic research in Assyriology is still very much qualitative. In addition to Krister Lindén (PI) and the presenter, the research team members are Heidi Jauhainen, Tommi Jauhainen, and Tero Alstola. The presentation is based on the joint efforts of the whole team.

The project involves three fields of study for new methodological insights: Assyriology, language technology, and cognitive linguistics. The linguistic data (Akkadian texts) are analysed with language technology from a theoretical cognitive linguistics perspective (building contextual semantic domains). For Assyriology, the project enables cultural understanding of concepts in a new way. For language technology, the project provides an opportunity to develop methods that are useful for the analysis of other extinct languages as well as small/fragmented corpora. The main source of textual data at this stage of the project is the Open Richly Annotated Cuneiform Corpus (Oracc). This paper outlines the theoretical departure points of the research and presents the results of the first cluster analyses of the lexemes related to “seeing” in Akkadian, such as *amāru*, *naṣālu*, and *dagālu*.

Dora Goldsmith (Egyptology Seminar, Freie Universität Berlin), “The Archaeology of Smell in Ancient Egypt—A Cultural Anthropological Study Based on Written Sources: An Olfactory Hierarchy Manifested in the Realm of Gods, Temples, Kings, Royals, and Ordinary People”

An examination of the written evidence on the sense of smell in the realm of gods, temples, kings, royals, and ordinary people yields new aspects of the Egyptian culture that were always there, but to which Egyptologists have not previously paid attention. The significance of written sources is that they provide us with refined details about olfactory sensation that archaeological sources are unable to give. The documents reveal two types of limitations of scents, which served to emphasize social differentiation: linguistic restriction and restriction of real smells. The words with relevance to the abovementioned spheres were chosen with care and reflect how the Egyptians made sense of each other and the world. Gods were on the top of the olfactory hierarchy. The sense of smell was intentionally used to set the king apart from the rest of the society and to emphasize his special standing, which was between the world of the gods and the rest of Egypt. Within the royal family, olfactory codes were employed to enhance the status of the queen. Commoners were at the lowest level of olfactory hierarchy. The texts referring to the distinguished smell of gods and royals were not merely a fabricated sensory perception to enact hierarchy, but seem to have reflected the reality to a certain extent. Documents show that the Egyptian society did not have access to the same range of scents: the royal court and the temple deliberately limited access to sweet scents from ordinary people to create social differentiation.

Paul Flesher (University of Wyoming), “Acoustic Typology of Ancient Synagogues in Greater Galilee”

The acoustic character of ancient Galilean synagogues has been largely ignored in archaeological research. Interpretations of architectural remains emphasize the visual over the aural. This talk will identify three main synagogue types according to their acoustic character, examining in particular the way each one enhances speakers’ voices and/or takes steps to augment the ability of listeners to hear. First, at Gamla and other first century synagogues, speakers were placed in an open, central area equally accessible to those sitting in tiers of benches around it. Second, at Khirbet Shema and other broadhouse

synagogues, speakers stood on a raised platform. Third, at Beth Alpha and similar synagogues, an apse was built into the synagogue to direct the sound of speakers' voices towards the congregation. Each of these three designs intentionally used acoustic techniques known at the time to boost the sound that travelled from speakers to the congregation seated in the hall. During the talk, I will address acoustic phenomena in general and present calculations measuring the effectiveness of each architectural arrangement in enabling sound to fill the hall's interior space.

Allison Thomason (Southern Illinois University Edwardsville), “Getting Inside Teumann’s Head: Material Evidence for Sensing, Emotion, and Cognition in the Neo-Assyrian Period”

When the word “cognitive” is paired with ancient Mesopotamia, the tendency is to discuss the “intellectual adventure of ancient man,” as Henri Frankfort called it, which can be traced in the textual record, especially through mythological, scholarly, and other texts. This understanding of “intellectual” context assumes that cognitive experiences are intentional and rational, mediated largely by the frontal cortex of the human brain and connected to language. However, the brain first and foremost reacts through sensory stimuli and processes of cognition and emotion, which trigger memories and networks in the brain—and bodily responses—that often bypass or work differently from language-related areas. In this paper, I will explore how analysis of portable objects and monumental art from Assyria, which triggered sensory and memory processes in their producers and consumers, allow archaeologists and art historians to access the bodily and cognitively-mediated acts of sensing and emotion. I will analyze Assyrian concepts and illustrations of pain and pleasure, or joy and fear, as just a few examples, to explore an evidence-informed understanding of at least a fragment of the cognitive world of these ancient humans.

Irene J. Winter (Harvard University), “Mesopotamian Ritual as *Gesamtkunstwerk*”

Virtually every religion includes some sensory stimulus in devotional practice. Ancient Mesopotamia was no exception. Evidence for Mesopotamian ritual practice occurs across the archaeological, artifactual, and textual record, suggesting a rich tradition of visual, auditory, and olfactory experience. Privileged were the senses of sight and sound, with smell also attested. Touch and taste may further be adduced by inference. The open sensorium is actively ascribed to the resident deity or deities in a given temple, as well as to devotees and the resident priesthood. The temple experience can be said to be analogous to that attributed to the experience of opera and even architecture in Western tradition, both of which address more than one sense as part of the work's impact. The term that was coined for this multisensory experience in the 19th century C.E.—*Gesamtkunstwerk*—has been variously applied to both sacred and secular contexts. Although the term has often been used in the broadest possible sense, I shall use it here to refer to a work (counting a choreographed ritual performance as such) that makes use of all or many known art forms in order to stimulate multiple senses as a component of experience. I shall further argue that there is a direct link to Western “aesthetic theory,” originally explored in the 18th century to mean the study and experience of the senses. A scholarly exploration of the senses, therefore, particularly in a ritual context, affords a direct pathway to understanding Mesopotamian aesthetic experience.

5C. Cultural Heritage Management: Methods, Practices, and Case Studies I

CHAIR: Glenn J. Corbett (American Center of Oriental Research)

Joseph Greene (Harvard University), “Cultural Resource Management in Jordan, 30 Years On”

This is a retrospective on cultural resource management in Jordan over the past three decades, 1987–2017. The Jordan Cultural Resource Management (CRM) Project began in 1987, jointly supported by the American Center of Oriental Research (ACOR), the U.S. Agency for International Development (USAID), and the Department of Antiquities of Jordan (DAJ). The idea for the

CRM Project grew out of a desire to help ACOR cope with the increasingly urgent calls from the DAJ for assistance with archaeological rescue. In the mid-1980s, a building boom in Amman and the expansion of roadways and other infrastructure throughout the Kingdom had overwhelmed the DAJ's slender resources. In its original conception, however, the CRM Project was not aimed primarily at meeting the need for more emergency excavations (although the CRM Project did conduct a rescue project on the Amman Citadel), but rather at promoting coordination between the DAJ and the various ministries and departments concerned with economic development, infrastructure expansion, and local, regional, and national planning. In the following decades, the CRM Project evolved under successive directors, sponsors, and funders into other aspects of CRM: computerized site inventories (JADIS; MEGA-Jordan), cultural heritage management capacity building, tourism-based site reconstructions, and local income-generating enterprises. Simultaneously, Jordanian universities created programs to train students in CRM and to conduct archaeological rescue, site rehabilitation, and monument reconstruction. As a result, after three decades the expression “cultural resource management” is no longer the foreign phrase it was in Jordan in 1987.

Mohammed El-Khalili (Hashemite University and University of Petra), Nizar Al Adarbeh (University of Jordan/Hamdi Mango Center for Scientific Research), and Abeer Al Bawab (University of Jordan/Hamdi Mango Center for Scientific Research), “Restoration and Rehabilitation of the Roman Nymphaeum in Amman: ‘Nymphaeum Archaeological Park’”

This paper demonstrates a practical example of urban cultural heritage restoration and rehabilitation centered on the Roman Nymphaeum in downtown Amman, considered to be the largest monument of its kind in the region. The Nymphaeum suffers from different deterioration factors that affect its state of conservation, accessibility, and aesthetic appeal. However, a joint project of the Hamdi Mango Center for Scientific Research at the University of Jordan, the Department of Antiquities of Jordan, and the Greater Amman Municipality, with generous support from the U.S. Ambassadors Fund for Cultural Preservation (AFCP), is now working to preserve large portions of the site. The project is also focusing on creating a new model for reviving the urban architectural heritage of downtown Amman by creating a cultural forum and open public space that, it is hoped, will foster socio-economic benefits for local residents and businesses. Ultimately, by establishing a comprehensive methodology for cultural heritage preservation that is based on best practices in documentation, site management, capacity building, conservation, and interpretation, this project will ensure the long-term sustainability of a unique site imbedded in the urban fabric of Jordan's capital.

Suzanne Richard (Gannon University), Marta D'Andrea (Sapienza University of Rome), Douglas R. Clark (La Sierra University), and Andrea Polcaro (University of Perugia), “Community Engagement to Protect Cultural Heritage in Jordan: The Madaba Regional Archaeological Museum Project (MRAMP)”

The MRAMP represents an international initiative of a combined American-Italian-Jordanian collaboration dedicated to establishing a new regional archaeological museum in the city of Madaba, Jordan, which is intended to showcase over a dozen archaeological projects. Within the centrally located Madaba Archaeological Park West, this ambitious and exciting project envisions the restoration of the Ottoman buildings that, along with the adjacent “Roman Road” and the “Burnt Palace,” will eventually constitute the first floor of a newly designed museum that will encompass and preserve these important antiquities. The 2016–2017 field seasons lay the groundwork for the ensuing restoration, construction, and setting up of the entire museum operation. The significance of MRAMP is that it will provide a complete and comprehensive narrative of the Madaba region's illustrious past and its legacy to the dynamic present, as well as numerous positive impacts on the community and its economy. Importantly, through the preservation and presentation of its treasured antiquities, we will not only preserve Jordan's heritage, but will also train and educate the local community in a wide range of employable areas/disciplines, such as consolidation, preservation,

construction, architectural skills, and a plethora of archaeological, museum, and management skills, to ensure the development, continued growth, and sustainability of this museum. The uniqueness of this project is its emphasis on regional development and the impact envisioned for the small towns and villages in the defined geographical area.

Jenna Morton (PAX Foundation), “Measuring Cultural Heritage Preservation through Community Engagement Related to the Umm al-Jimal Interpretive and Hospitality Center in Umm al-Jimal, Jordan”

Cultural heritage preservation of the ancient site of Umm al-Jimal is one of the primary objectives of the new Umm al-Jimal Interpretive and Hospitality Center development. The project is a collaboration between the Umm al-Jimal Project and various partners, including the USAID Sustainable Cultural Heritage Through Engagement of Local Communities Project (SCHEP) and the American Center of Oriental Research (ACOR), in addition to the Jordanian Ministry of Tourism and Antiquities, and the Department of Antiquities. Each of the partner constituencies and their capital patrons has its own definition of success, from publication to jobs, to tourist visitation, and ultimately to preservation. Walls and fences have been the traditional methods of protection for antiquities sites. In Umm al-Jimal fences have inspired holes and invited looting. The Umm al-Jimal Interpretive and Hospitality Center builds upon the Umm al-Jimal Project’s practice of community engagement in archaeological activity on the site by shifting direct responsibility for the site to the local population. Does the movement from exclusion to inclusion of the local population in antiquities awareness, expertise, and management ensure its preservation? What effect do education and economic benefit have on heritage preservation in Umm al-Jimal? In addition to data on tourism visitation and job creation, surveys of various populations including children, men, and women, locally, regionally, and internationally, will measure change over time in the relationship of those populations.

Erin Linn-Tynen (Integrated Heritage Project), “Putting the ‘Sustainable’ in Sustainable Heritage Management: Case Studies from Jordan and Cambodia”

The challenges associated with managing cultural heritage sites are as countless as they are complex. These challenges vary from site to site, region to region, and country to country. Despite the myriad differences, there is a shared common goal, at least among those that value the cultural heritage: to ensure their long-term protection, preservation, and relevancy for generations to come—to ensure their sustainability. But what makes a heritage site sustainable?

The fundamental component necessary for a heritage site to be sustainable is engagement with, and education of, the local communities. This is true especially in developing economies. For generations, foreign professionals and organizations have often overseen the management and stewardship of heritage sites in low-to-middle-income countries. This neo-colonial style of management contributes little to the local economy beyond the immediate vicinity of the heritage site and even less towards building local capacity to manage sites; a top-down approach to heritage management is not sustainable. To ensure the long-term sustainability of cultural heritage in any country, the communities, local and national, must be active stakeholders in the management of those sites. By providing access to education, training, and resources, communities become empowered as decision makers and site stewards. This paper will survey current examples of heritage management initiatives in Jordan and Cambodia, two vastly different countries with vastly different heritages, to highlight the strategic importance of an integrated approach to achieve sustainable heritage management practices.

5E. Archaeology of Cyprus I

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

Lindy Crewe (Cyprus American Archaeological Research Institute), “Excavating Souskiou-Laona Chalcolithic Cemetery”

The partial or wholesale destruction of archaeological sites is an increasing problem in the Near East and eastern Mediterranean. Opportunistic and systematic looting of cemeteries to acquire objects for sale on the antiquities market has been ongoing for centuries, a problem that shows little signs of abating despite international efforts. This paper presents the results of fieldwork undertaken from 2001–2006 at the Middle Chalcolithic (ca. 3000 B.C.) cemetery of Souskiou-Laona on Cyprus, part of a unique complex of sites comprising a settlement and surrounding extramural cemeteries. The cemeteries were previously thought to have been thoroughly looted for the anthropomorphic figurines and pendants that characterize the period. The aim of this paper is to present the methodologies developed and results obtained to highlight the archaeological possibilities of this type of project in the face of increasing destructions worldwide.

Peter Fischer (University of Gothenburg) and Teresa Bürge (OREA, Austrian Academy of Sciences), “Tombs and Offering Pits at the Late Bronze Age Metropolis of Hala Sultan Tekke, Cyprus: Results from the Excavations in 2016”

Hala Sultan Tekke is a large Bronze Age city close to the famous homonymous mosque near the international airport of Larnaca on the southern coast of Cyprus. Previous research demonstrated that the city flourished mainly in the later part of the Late Bronze Age, viz. during the 13th and 12th centuries B.C.E. Nevertheless, the results from recent fieldwork prove that the city was continuously occupied from the transition Middle/Late Cypriot to roughly the mid-12th century B.C.E. In the course of the current long-term project, which started in 2010, three new city quarters (CQ1–3) were exposed in the northern part of the city close to the ancient harbor, which corresponds to the western shore of today’s Larnaca Salt Lake. Geophysical surveys by georadar and magnetometer, which were carried out in Area A—a plateau approximately 600 m east of CQ1 and opposite the mosque—indicated more than 80 roughly circular anomalies. Amongst these were tombs and offering pits intermingled with wells. The find material from Area A, which to a large extent antedates the city quarters excavated so far, reflects the intercultural nature of the societies of the city. The majority of the objects from the tombs and the offering pits are of high artistic value from a vast area of the eastern Mediterranean including the Aegean, the Levant, Egypt, and possibly Anatolia and the Italian peninsula.

Paula Waiman-Barak (University of Haifa), Anna Georgiadou (University of Cyprus), and Ayelet Gilboa (University of Haifa), “Early Iron Age Cypro-Phoenician Interactions: Cypro-Geometric Ceramics from Tel Dor and Cyprus, a Study of Ceramic Petrography”

During the Iron Age, Tel Dor was a principal port-town on the eastern Mediterranean Carmel Coast. At the site, hundreds of Cypro-Geometric ceramic imports have been discovered. The main types are: White Painted, Cypriot Bichrome, Black Slip, and Black on Red ware. These vessels were recently analyzed according to their stylistic morphological and technological characteristics to identify provenance within Cyprus. This is not an easy task since in the island’s center lies the Troodos Ophiolite Complex, whose magmatic formations are present in Cypriot ceramics. Sediments from the numerous rivers that traverse the Troodos were widely exploited for the production of pottery. Therefore, eroded fragments from the Troodos—in various quantities, sizes, and compositions—are present in the clay beds in this large ‘region,’ where most of Cyprus’s Iron Age polities were located and which until now were uncharted. Still, five key sites were identified as main production centers for the pottery that arrived at Dor: Salamis, Idalion, Kition, Amathus, and Palaepaphos. To evaluate these observations, as well as to define their petrofabrics, 150 vessels from Dor and 75 vessels from Cyprus were

analyzed using ceramic petrography. This is the first time a systematic approach has been used for the characterization of petrofabrics and local geological features at production centers within Iron Age Cyprus. This newly acquired information will be applicable to provenancing Cypriot imports found at other sites. Importantly, this research opens opportunities to understanding the complicated webs of commerce between Cyprus and its neighbors during the Iron Age and in other periods.

Giorgos Bourogiannis (Museum of Mediterranean and Near Eastern Antiquities [Medelhavsmuseet], Stockholm), “The Ayia Irini Project at the Medelhavsmuseet, Stockholm: New Research on an Old Excavation”

The sanctuary at Ayia Irini in Cyprus was the most celebrated discovery of the Swedish Cyprus Expedition. Excavated in 1929 and published in 1935, the sanctuary of Ayia Irini remains one of the most interesting cultic sites on the island, known primarily for its magnificent corpus of terracotta statues and statuettes that dominated the area around the altar. Other aspects of the site’s history, however, have not received the attention they deserve. The need to elaborate on the history of Ayia Irini, and to produce a comprehensive understanding of the sanctuary’s features, are the main goals of the ongoing research project at the Medelhavsmuseet (Museum of Mediterranean and Near Eastern Antiquities) in Stockholm. The museum hosts a large number of objects produced during the Ayia Irini excavation, including tens of thousands of unpublished pottery sherds that were not properly considered in the publication of Ayia Irini. The paper will offer an insight into the study of Ayia Irini, with a special focus on the unpublished pottery material, in an attempt to produce a new, contextualized understanding of the sanctuary’s ceramics. This discussion will involve questions about the sanctuary’s idealized stratigraphy, its chronological sequence and its relation to neighboring sites in Cyprus.

Andrew McCarthy (University of Edinburgh), Kathryn Grossman (North Carolina State University), Tate Paulette (Brown University), Lisa Graham (University of Edinburgh), and Christine Markussen (University of Vienna), “A Transriverine Hellenistic Settlement at Prastio-Mesorotsos, Cyprus”

Excavation and surface collection at the site of Prastio-Mesorotsos on the western bank of the Dhiarizos River in western Cyprus have revealed evidence of occupation dating from the Neolithic to modern times. The archaeological traces from the Hellenistic and Roman periods, however, are some of the sparsest represented in the stratigraphic sequence, likely due to ploughing activities and medieval and later construction. At the same time, our understanding of the size and type of community in the Hellenistic period is well defined through surface finds and spatial data. Recent geophysical prospection and surface collection from fields on the opposite bank of the perennial Dhiarizos River has uncovered an assemblage of Hellenistic finds comparable to those found on the main site on the west bank. These fields (called ‘Prastio Village’) face the main portion of the ancient site, separated by a few hundred meters and a major river. These unexpected results show that this rural site was much larger than previously reported for the Hellenistic period and that this location was quite possibly a river-crossing point on one of the main routes from the resource-rich Troodos Mountains to the coastal city of Paphos at this time.

5F. Archaeology of the Near East: Classical Periods II

CHAIR: Michael S. Zimmerman (Bridgewater State University)

Sharon Herbert (University of Michigan), “Phoenician Funerary Mask Impressions from the Kedesh Archive”

In 1999–2000, a University of Michigan/University of Minnesota team recovered 2000+ Hellenistic seal impressions at Kedesh in the upper Galilee of modern Israel. In the Hellenistic era, Kedesh lay in the territory of Tyre and was inhabited by a mixed Greco-Phoenician population. The impressions were found in a large administrative building built in the Persian period, but successively repurposed under the Ptolemies and Seleucids.

The archive dates to the Seleucid control of the site, from ca. 200 to 140

B.C.E. The impressions present a spectrum of artistic choices available at this time and place. They reflect in some cases local preferences, and in others the official symbolism of the Seleucids. This said, the vast majority of impressions represent Greek gods. On closer inspection, not all of the “Greek” images are straightforward. One particularly interesting group are the representations of Phoenician funerary masks, a small subset of the masks in the Kedesh collection, most of which are Greek theater masks.

The manufacture of life-size terracotta masks found in Phoenician contexts began in the Iron Age. They were first found in large numbers in the Punic West, leading to the assumption that they were a Punic invention. Later excavations have found them widely distributed in the Levant and in contexts earlier than Punic, placing them firmly in the Phoenician orbit. The funerary mask impressions from Kedesh are unparalleled in ancient glyptic. They show yet one more way in which Greek and Phoenician traditions are interwoven in the Hellenistic Levant.

John Harmon (Southwest Baptist Theological Seminary), “The Sanctuary of Mizpe Yammim: A Proposed Explanation for Its Unusual Location”

This paper examines the Persian period sanctuary of Mizpe Yammim, which is located on an isolated mountaintop on the peripheries of Phoenician territory in the upper Galilee. The paper argues that the site was a Phoenician sanctuary, as did A. Berlin and R. Frankel (the site’s excavators). The idea that the Mizpe Yammim sanctuary primarily served socially elite devotees will be explored, based on the unusually fine quality of votive figurines and vessels discovered there, as well as the complete lack of ceramic statuettes, which are normally ubiquitous during this period. The probable function of the site as a border shrine, and the possibility that the site was associated with the city of Acco, will also be considered.

Marcela Zapata Meza (Universidad Anáhuac México Sur, Magdala Center Archaeological Project) and Jordan Ryan (Wheaton College, Magdala Center Archaeological Project), “Rethinking the Layout of the Magdala Synagogue”

The discovery of the synagogue at Magdala in 2009 has provided archaeologists and scholars of early Judaism with crucial data for understanding early Roman period synagogue art and architecture. One of the mysteries of the Magdala synagogue is the location of its main entrance, whose architectural elements were not discovered in context. However, the Israel Antiquities Authority has suggested that the primary entrance was located on the west side of the building, and has reconstructed it there. The work of restoration involves interpretation, and may not always accurately represent the past exactly “as it was.”

An analysis of the synagogue’s architecture, the archaeological drawings of it, and the early photos taken when the structure was first excavated in 2009 leads us to conclude that the primary entrance was located on the south side, bordering the southern east-west street. So far as we know, the whole town of Magdala is located to the southeast, and there is no clear evidence of settlement to the west. A secondary access by the west is not impossible, but the current evidence is not sufficient to support its existence.

The location of the entrance impacts our understanding of the functions of the rooms on the west and south sides of the building, as well as our understanding of the architecture of the Magdala synagogue as a whole. This, in turn, should influence our broader understanding of the architecture and functions of early synagogues in general.

Barak Monnickendam-Givon (The Hebrew University of Jerusalem), “Tel ‘Akko’s Periphery during the Classical Periods”

Archaeological excavation conducted by the Salvage Excavations Program of the Hebrew University of Jerusalem at the ‘Akko train station, just 300 m north of Tel Akko and 1 km east of the old city of Acre, yielded remains dating to the Middle Ages and the Classical periods. The main feature exposed during the excavation was the continuation of the so-called ‘amphora lines,’ first recorded by the Israeli Antiquities Authority at a nearby excavation in 2008.

The ‘amphora lines’ include an assemblage of standing amphorae aligned in a row with no clear connection to any architecture. The ‘amphorae lines’ were composed of Phoenician carinated-shoulder jars, Levantine basket handle jars, and Aegean amphorae, all dating to the fourth and third centuries B.C.E. (the late Persian and early Hellenistic periods). The ‘amphora lines’ were accompanied by a few finds, mainly Attic drinking vessels.

In this paper, I will present the ‘amphora lines’ as they were preserved in the different areas of the excavation and discuss different interpretations for their possible function, in light of other similar phenomena from the Mediterranean world. Lastly, I will explore the identity of the population who built and used the ‘amphorae lines.’ This will be done by analyzing the nature of the pottery assemblage and the commercial and cultural contacts of the population as reflected from the findings.

Alexandra Ratzlaff (Boston University), “Tel Achziv in the Hellenistic and Roman Periods”

The aim of the Tel Achziv Publication Project is to publish the extensive findings from the 1963–1964 excavations of the Israel Department of Antiquities under the direction of Moshe Prausnitz and in conjunction with the University of Rome. Five squares were opened in Area Z, where excavation uncovered architectural remains of domestic structures with material dating to the Hellenistic and early Roman periods. Relatively little is known about Tel Achziv during the time when the site is firmly established in Hellenistic traditions as a city within the territory of ‘Akko. While Pliny refers to the site as *oppidum Ecdippa* (*Natural History* V.XII.75) in the first century C.E., there is a great deal to learn about the period leading up to Achziv as a thriving Roman town. Through an analysis of the ceramic assemblage in Area Z and a review of the original excavation documents, new information has been gained about this gap in our knowledge of Achziv. This paper summarizes results from the publication project, as well as results from the more recent 2012 excavation at the site and a survey in the adjacent bay. Analysis of material from these sources seeks to address how the occupants of Hellenistic and Roman Achziv were connected to the broader Mediterranean world and the multi-ethnic region between ‘Akko and Tyre.

5H. Death and Dying in the Ancient Near East

CHAIRS: Stephanie Selover (University of Washington) and Pinar Durgun (Brown University)

Maria Forza (Freie Universität Berlin), “Cremations Burials at Tell Halaf: a Theory of Reconstruction of a Post-Mortem Ritual”

The two cremation burials found at Iron Age Tell Halaf are unique in funerary archaeology of the ancient Near East. The burnt bone remains were collected in an urn protected within a masonry pit, each with a female statue placed over it. The statues are carved in a typically Syrian posture, as was very common in Syro-Hittite funerary steles in the Iron Age. The figure is portrayed seated and holding a cup. The two chapels that shelter the statues have no known comparisons. The monumental structure of the tombs and their proximity to the city gate suggest that the community had particular respect for these individuals. This study proposes some considerations on the rituals celebrated in these chapels, in which the statues were probably intended as representations of the deceased. The cup, as well as other archaeological evidence related to liquid consumption, suggests that food offerings and consumption of meals could have taken place nearby. But who were the deceased? The comparison with the funerary stele of KTMW from Zincirli provides valuable support for this question. In this stele we find a figure whose iconography is comparable to that of the statues from Tell Halaf. Its inscription refers to cremation and also provides new elements for the interpretation of food offerings, which were probably presented periodically to the deceased, outlining the gestures of a ritual, maybe not unlike those of the shrines from Tell Halaf.

David Ilan (Hebrew Union College-Jewish Institute of Religion, Jerusalem) and Yorke Rowan (University of Chicago) “Reconstructing the Stages of Dying, Death, and Rebirth in the Chalcolithic of the Southern Levant”

Most of the existing literature on Chalcolithic mortuary practices focuses on the more visible aspect: secondary burial in ossuaries. But the archaeological evidence suggests that the process of dying, interment, and the integrative transformation of the “person” was drawn out over an extended period of time and involved a string of ritual acts at several junctures. It was also a process that took place over an extended geographical area, not being confined to the locale of the final burial. In this paper, we trace this extended process, with the help of archaeological data. Finally we will attempt an explicit, definitive statement about what the evidence tells us about Chalcolithic people’s beliefs about death.

Lanah Haddad (University of Frankfurt), “Burying Family Members of the Settlement Founder Generation during the Early Bronze Age in Northern Mesopotamia”

This paper focuses on the intramural funeral practices in Northern Mesopotamia during the early Bronze Age. This period is remarkable for the growth of settlements in number and size. This development goes along with a demographic increase and requires extramural cemeteries to inter the majority of the population. In the past decades over a dozen cemeteries have been discovered in Northern Mesopotamia. Although most archaeological projects have been more focused on tell sites, a small number of intramural burials have also been recorded. The infrequent location of burials within a household complex implies a special interment of a few inhabitants. In my case study of Tell Chuera, only seven burials were recovered from within a household quarter (Area K), dating to an occupation phase between 3100 and 2200 B.C.E. Area K was intensively excavated and provides an undisturbed occupation throughout the third millennium B.C.E. The location and the chronological time period of the tombs can give us information about the social context in an urbanized society. The funeral performance inside the living area must have received different attention and memorialization through its visibility in the household quarter than in an extramural cemetery. In this paper, I argue that the tradition of domestic funeral practice in Tell Chuera is connected to the very early phases of the settlement foundation and that the individuals must have been part of the settler generation.

Tara Ingman (Koç University), “Changing Mortuary Practices at Tell Atchana, Ancient Alalakh, and the Use of GIS Modeling”

The burial record of Tell Atchana, ancient Alalakh, is one of the largest in southeastern Anatolia, with over 300 individuals excavated to date. Previous research on these burials focused on straightforward descriptions of osteological analyses of portions of both the corpus and individual graves. Until recently, there was little analysis of the burial record as a whole. A comprehensive analysis of the graves provides insight into the funerary practices at Alalakh and reveals mortuary trends and preferences in the Middle and Late Bronze Ages. These can then be linked to ritual practices and attitudes, as well as cultural affiliations and influences. A three-dimensional GIS model of the cemetery area of Tell Atchana was created to facilitate the analysis of the graves. GIS is an important tool for the analysis and visualization of cemeteries, in collaboration with the observed burial practices. Insights and preliminary interpretations of these trends are discussed, particularly the dramatic changes in burial practices that occur halfway through the Late Bronze Age, a period at the site that is also associated with the transition from Mitannian to Hittite hegemony. Possible links between the changing mortuary practices and political circumstances are also explored.

Petra Creamer (University of Pennsylvania), “Invoking Memory within the Neo-Assyrian Royal and Domestic Mortuary Cults: Combining Material, Spatial, and Textual Evidence”

Death, funeral, and post-mortem activity are not within the realm of individual action, but rather community action. Mortuary ritual provides an opportunity to create and reinforce the identity and memories of the living community. Understanding death and the culture surrounding it can provide

a new perspective for interpreting collective memory, religious tensions, and the relationship between elite and non-elite practices. This paper uses Assur as a case study to investigate the mortuary cult of the Neo-Assyrian period via archaeological and textual evidence. Emphasis is placed on the relationship between the domestic mortuary cult, practiced by the citizens of Assur, and the royal ancestor cult. By analyzing textual sources referring the Mesopotamian *kispu* ritual of periodic post-mortem care, this study then compares the data to architectural and material features of private rooms, under which burials and tombs were located. Neo-Assyrian domestic burials and their associated cults are then compared to the royal tombs and elite rituals surrounding the death of rulers and their family. Finally, concepts of memory and ritual from the theoretical works of P. Nora and M. Eliade are applied to Mesopotamian ideas of death and the afterlife to further understand the placement of Assyrian burials in relation to the living. This promotes a working theory of conceptualizing location and memory in relation to sacred and profane space, ultimately concluding that burials under house floors established a link to the underworld within each home, benefitting both the deceased and the living inhabitants.

Sophie Moore (Brown University), “Memory and Burial at Historic Çatalhöyük”

The prehistoric mounds at Çatalhöyük were reused as cemeteries between the first and 17th centuries C.E. This paper will question narratives of religious transition and collective identity in the Anatolian heartland in an analysis influenced by the current work of the relational school of archaeology. Drawing on Latourian Actor-Network Theory and the works of Deleuze and Guatari, relational theories ask us to consider how experiences emerge from the relations between ‘things,’ including the material world, ideas, and beliefs. Our knowledge of the past is largely contingent upon the ways in which we experience the present, leading inexorably from exploring what people in the past knew about their past to asking how we build archaeological consensus in the present day. Applying relational theory to the analysis of the historic cemetery at Çatalhöyük enables us to focus on how different religious communities justify the location of their cemeteries. The form and placement of graves, material culture, and stratigraphy are interrogated to cast light on how Islamic communities at Çatalhöyük recognized and engaged with Christian burial practices present on site, and how later communities engaged with the presence of the Neolithic dead.

5I. Meeting the Expenses: Ancient Near Eastern Economies I

CHAIR: Raz Kletter (University of Helsinki)

Ianir Milevski (Israel Antiquities Authority), “Before Weighting: Prehistoric Economies of the Southern Levant”

This paper will present a panorama of economic developments in the societies of the southern Levant from the Neolithic until the Early Bronze Age. From the point of view of the changes that occurred in the Near East, we will review the evolution of the communities from the Neolithic Revolution, beginning in the tenth millennium B.C., until the urban revolution at the end of the fourth millennium B.C. Between these revolutions other important events occurred such as the full domestication of plants and animals, the creation of pottery, the secondary products revolution, and the invention of metallurgy. The primary goal of this review is to understand the modes of production during these periods through the analyses of the archaeological material culture record and suggest an interpretation of the theory of value for such societies.

Lorenz Rahmstorf (University of Göttingen), “Hoards With Weights in the Third Millennium B.C.E. between the Aegean and the Indus”

‘Hoards’ (sometimes distinguished from ‘votive deposits’) containing substantial amounts of metal or other artifacts are an uncommon phenomenon in the ancient Near

East during the Bronze Age. Scholars have posited a fundamental dichotomy between an ‘archival’ economy in regions such as Mesopotamia or

Egypt and a ‘sacrificial’ economy of postulated metal hoarding zones in specific rather marginal regions of the ancient Near East and, notably, in Bronze Age Europe. This dichotomy, however, fails to account for the hoards, although not widely attested, with bronze/copper objects, quite often alongside artifacts (or raw material) of gold, silver, ornamental stones, etc., which appear in core regions of the ancient Near East: not only Mesopotamia but also in the Indus and the Aegean. It is remarkable that there are also hoards, albeit not numerous, which also contain balance weights or parts of scales. It should be noted that some of these have only been identified by the present author as such. These clearly demonstrate the potential relation between the deposited objects and their material value, one which could be expressed by units of weights. The use of cross-cultural and contextual perspectives and the parallel investigation of potential patterns in the assemblages enables our analysis of the hoards with weights to provide insights into the primary motivation and the agents responsible for these deposits. These hoards can therefore be understood as material remnants and necessary tools of traders in the third millennium B.C., when this profession clearly surfaces for the first time.

William Hafford (University of Pennsylvania), “Early Bronze Age Silver Hoards in the Diyala”

This paper begins with a close analysis of silver hoard Kh-9-87, found in a jar under the floor of an Early Dynastic house at Khafajeh (Iraq) in the 1930s. Dating to around 2500 B.C.E., it is one of the earliest known silver hoards. The jar contained 102 pieces comprised of spiral rings, cut and bent finger ingots, roughly cut plate, and finished silver beads. The jar and half its contents (50 pieces) went to Baghdad and the other half (52 pieces) to Philadelphia. These latter are being weighed, examined under microscope, and tested with portable X-ray fluorescence. They show between 95 and 98 percent silver, and the spiral rings approximate 1/2 and 1 shekel weights on the southern Mesopotamian system.

The paper concludes with comparison to two other early silver hoards from the Diyala, from Tell Asmar and Tell Agrab. The weights of these hoards are not published and both are unavailable for further analysis, but their overall form and find-spots are known. The exact usage of any of these hoards is not clear, but there is little doubt that they were hidden away as valuable groups of consistent silver content. Silver was the typical measure of value in the period and the pieces would all sit well in known Near Eastern scale pans. Indeed, they were likely weighed out in payment or for manufacturing to set weight standards.

Judy Bjorkman (Independent Scholar), “Interpreting Ancient Hoards and Ritual Deposits”

In my analysis of over 200 Mesopotamian hoards and ritual deposits, from the fourth and third millennia B.C., there were a variety of historical, cultural, and economic meanings suggested for several groups of artifacts. Examples of attempts to use artifacts and their archaeological contexts to draw out such meanings will be presented, as well as reasons why most of them are not satisfactory. Some explanatory proposals are that hoards could give us details about traders or itinerant metalsmiths, that artifacts found in buried temples had been scattered about by looting soldiers, or that items had been buried because they were out-of-date inventory. Evidence of fire and/or scattered artifacts has been connected to the violent overthrow of a temple and/or kingdom, and several attempts have been made to connect this violence with what history is known from cuneiform texts. More recently, some groups of artifacts are suggested to be simple garbage or as just having been put into large pits. Several examples of these interpretive analyses will be discussed, along with the proposal that most ritual deposits were, in fact, made for religious, not historical or economic, reasons. Evidence from cuneiform texts, as well as more recent analyses of the archaeological settings themselves, will be presented.

Maribel Dorka Moreno (Heidelberg University), “Late Bronze Age Metal Hoards from Greece: Approaches to Identification and Interpretation”

The practice of hoarding metal objects is a common phenomenon throughout the European Bronze Age. Central European research in particular

has focused on this phenomenon, the implications associated with the deposition of wealth deposits and the ostensive contradiction between profane (economic) and sacred (ritual) depositions.

The identification of metal hoards in Late Bronze Age Greece and the difficulties associated with their dating and interpretation are the focal point of this paper. Four hoards found in the Late Bronze Age citadel of Mycenae will serve for discussion of this diverse find group. It is indispensable that every single object in these hoards is analyzed with regard to their material qualities and meaning in the micro-context of each hoard. From this premise, I will show that a generalized interpretation of Late Bronze Age metal hoards from Greece as indicators of social unrest must be repudiated.

While arguing that these hoards should be viewed as single phenomena in very local contexts, there exist similarities in composition and mode of deposition to other Late Bronze Age hoards. I wish to emphasize the importance of some of these hoards for the interpretation of social and economic exchange mechanisms in the Late Bronze Age eastern Mediterranean, in direct analogy with catastrophe deposits such as the Uluburun Shipwreck and metal hoards from Cyprus.

5J. Baths and Bathing in the East

CHAIR: Craig A. Harvey (University of Michigan)

Eyal Regev (Bar-Ilan University), “Jewish Purity and Greco-Roman Pleasure: Hot Baths and the Ritual Baths from the Hasmoneans to Herod”

In the Hasmonean palaces at Jericho (110–31 B.C.E.) we find the earliest Jewish ritual baths (*miqva'ot*) for bodily purification and also the first bathtubs in Jewish/Judean sites. The Hasmoneans did not see a contradiction between the two types of bathing. This attests to their inclination for Hellenistic culture and a luxurious lifestyle while adhering to their commitment to Jewish and priestly purity practices. Several decades later, Herod built Roman bathhouses in his palaces at Jericho, Masada, Herodium, and Cypros and was the first to build them in Judaea. The frigidarium (the cold-water bathing hall) was shaped as a Jewish immersion pool or ritual bath (*miqveh*). Strikingly, Herod, the champion of Romanization in Judaea, was interested in combining Roman and Jewish bathing into a single unit as a continuous act of immersion in water. Herod therefore blended Jewish and Roman cultures into a unified Jewish-Roman identity. In a sense, Herod's Roman bathhouses, which included a Jewish *miqveh*, represent his own identity and cultural program of Judeo-Romanization. Yet, Herod did not initiate the practice, since the Hasmoneans had already used both types of bathing. For both the Hasmoneans and Herod, bathing developed into a way of integrating different cultures into a routine practice, although in different ways. In this paper, I will suggest why they found both the Jewish ritual bath and the Greek or Roman bathhouse appealing, and why they used them in different ways.

M. Barbara Reeves (Queen's University), “Elevated Luxury: The Nabataean Villa Bathhouse at Wadi Ramm”

The Eastern Complex at Wadi Ramm is a luxurious Nabataean villa with its own multi-room hypocausted bathhouse. This complex is located at the eastern end of a small hillock abutting the eastern flank of Jebel Ramm. A Nabataean temple occupies the western end of the same hillock and there are remains of a small settlement on the plain below, as well as other Nabataean remains on the surrounding slopes and throughout the nearby desert. The Eastern Complex was excavated in 1996 and 1997 by the Wadi Ramm Recovery Project, with the present author directing the bathhouse excavation. Since the preliminary reports were published, many more Nabataean bathhouses have been excavated. The purpose is this paper is to consider the physical location and appearance of the Wadi Ramm villa bathhouse in relation to both the Nabataean community at Wadi Ramm and to contemporary elite structures in Nabataea and neighbouring territories. These comparanda support the conclusion that Wadi Ramm's villa and bathhouse were luxurious, highly visible structures intended to advertise the elite status of the Eastern Complex's owners.

Sophie Tews (Independent Scholar) and Craig A. Harvey (University of Michigan), “The Newly Discovered Bath on the Petra North Ridge: An Initial Report”

During the 2016 field season of the Petra North Ridge Project, excavators unexpectedly uncovered the remains of a small bath complex just beyond the city walls in an area that was thought to be dominated by non-elite settlement. The remains of the bath complex consist of rectangular room heated by a hypocaust and an adjacent circular room with a small drain in the centre of its floor. The architectural arrangement and construction of this bath as well as the phasing of its associated ceramics suggest that this complex dates to the first century A.D., making this bath a welcome addition to a small but growing corpus of Nabataean baths in and around Petra. The preservation of various elements of the bath, including its hypocaust, a recessed stone tub, and what seems to be an oculus of a domed ceiling, provide valuable clues that allow for a reconstruction of the structure and better understanding of these early Nabataean baths. This bath complex was part of a larger structure, possibly a residence, in which excavators also found evidence of wall paintings and a deposit of elite goods, including two marble sculptures. The presence of this elite complex in a location formerly interpreted as a habitation site of the non-elite necessitates a re-evaluation of the occupation of the Petra North Ridge.

Robert Darby (University of Tennessee, Knoxville), “Awash in Change: Roman Military Bathhouses in the East from the First to Fourth Centuries”

As a fixture among the architectural repertoire of the Roman army, military baths, it has long been argued, served a transformative function, not only providing soldiers stationed on the frontiers access to a quintessentially “Roman” cultural practice of public bathing, but simultaneously transmitting the benefits of Roman rule to non-Romans. Despite the inherent and obvious colonial overtones in such generalizations, few would argue that the Roman army did not play an important role in the proliferation of bathhouses in the provinces both in the East and West. Beginning in the mid-first century C.E., the archaeological remains of military *balnea* appear in the East and continue to be built through the Late Roman and early Byzantine periods. This paper presents the results of a diachronic study of Roman military bathhouses in the East from the first to fourth centuries illustrating the transformation of an originally Italic architectural form towards regional hybridity.

Thibaud Fournet (French Institute for the Near East), “Zenobia's Baths in Palmyra (Syria): an Assessment”

The Roman baths of Palmyra were excavated by Syrian archaeologists between 1953 and 1975, in the center of the historic city, between the monumental arch and the *tetrapylon*. In 2009, within the frame of the project “Balneorient” (<http://balneorient.hypotheses.org/>), the French Institute for the Near East (Ifpo) and the Syrian Directorate-General of Antiquities and Museums (DGAM) decided to complete the study of this building, visited by thousands of tourists since its discovery but still unpublished.

The beginning of the Syrian civil war in 2011 prevented us from completing this work. After almost seven years of conflict, the situation is more dire than ever, and many major monuments of Palmyra have disappeared. Considering the risk of destruction to Zenobia's Baths, and the necessity to raise awareness of this threatened heritage, we have decided to present the unfinished results of the study. This paper will present the monumental remains of the buildings (hypocausted rooms, ornamented *basilica*, porticoed *palaestra* and *natatio*, Diocletian's *propyleon*) and the results of the early excavations, and will then propose an architectural reconstruction of the building at each period of its long chronology (i.e. from the second to the sixth century A.D.). The links between the complex urban history of Palmyra and the social/political significance of public baths in Late Roman Near East will then be explored. The results of this Palmyrene case study will finally be compared to ongoing works by the author on other remote oriental Roman baths (Karnak and Petra), at the margin of the empire.

6A. Archaeology of Lebanon I

CHAIR: Hanan Charaf (Lebanese University)

Gassia Artin (Maison de l'Orient et de la Méditerranée), "Lebanon During the Chalcolithic Period"

The Chalcolithic of Lebanon, a transitional period between the end of the Neolithic period and the beginning of the Bronze Age, represents an important and complex phase in the evolution of prehistoric societies. During this period, new technical advancements of great importance were developed in the arts of stone tool and metallurgical production. While certain "prehistoric" traditions such as production and use of lithic tools remained, innovations in the development of new types of arrowheads, blades, metal objects, and funerary practices appeared.

Archaeological data are unfortunately rare for this period in Lebanon, as only a small number of sites are known and have been investigated. The Chalcolithic is attested at the sites of Byblos, Sidon-Dakerman, Khalde II, and Minet ed-Dalieh on the coast, and in Mengez and Kfar Garra located inland. The chronology of the Chalcolithic occupation on the Lebanese coast is essentially based on the Byblos excavations. This paper presents certain aspects of the Chalcolithic period on the Lebanese coast, with an emphasis on spatial organization as well as on the social and economic developments of its societies.

Graham Philip (Durham University), Kamal Badreshany (Durham University), Melissa Kennedy (University of Sydney), and Hélène Sader (American University of Beirut), "Excavations at Koumba: Pathways to 'Complexity' in Northern Lebanon. A Regional Perspective"

This paper reports on work undertaken by a joint research project involving the American University of Beirut and Durham University around the village of Koumba in northern Lebanon. Following a summary of the results of fieldwork undertaken since 2015, we seek to examine developments documented during the fourth and third millennia in northern Lebanon within a comparative regional framework that examines the timing of, and pathways to, complexity, discernible elsewhere in the dry-farming zone of the Middle East.

Melissa Kennedy (University of Sydney) and Kamal Badreshany (Durham University), "Koumba, North Lebanon: The Ceramics and Their Regional Context"

In 2015, a joint pilot project between the American University of Beirut and Durham University was initiated in the northern Lebanese village of Koumba, located approximately 5 km to the north of Batroun. This village has revealed a rich archaeological history, spanning from the Pottery Neolithic through the Ottoman era. Over the course of the past two seasons, two sites have been investigated. The first site has revealed occupational evidence dating from the Pottery Neolithic and EB II, whilst the second site has revealed occupation dating to the Neolithic, EB III-IV, and MB I-II. This paper will outline the ceramic evidence from the Neolithic and Early Bronze Age phases placing the site of Tell Koumba in a wider typological and petrographic context.

Claude Doumet-Serhal (Director, Sidon Excavations), "Sidon in the Iron Age I: A Haven of Continuity"

Since the discovery in Sidon in 2005 of three fragments of a faience vase with cartouches bearing a hieroglyphic inscription of Queen Tawosret, a new Iron Age temple was discovered with one room revealing two Iron Age knives of the curved one-edged type, the fossil type of knives during the 12th century B.C. While this Iron Age temple is still under excavation, preliminary observations indicate continuity both in the stratigraphy and in the material culture from the 12th century well into the eighth century B.C.

Sarkis el-Khoury (General Directorate of Antiquities-DGA, Lebanon), "Overview of Recent Archaeological Activities in Lebanon"

This paper presents an overview of the latest archaeological research activities in Lebanon. Regular excavations by national and foreign individuals

as well as salvage excavations undertaken by the General Directorate of Antiquities throughout Lebanon will be presented here.

6B. Senses and Sensibility in the Near East II

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

Kiersten Neumann (Oriental Institute, University of Chicago), "To Touch Upon: A Tactile Exploration of the Apadana Reliefs at Persepolis"

Praise of the masterfully carved scenes of stairway reliefs of Darius I's Apadana at Persepolis resounds in scholarship, from discussions of imperial might and propaganda, to dressed bodies and gestures, cultural groups and identity, skilled craftsmen and artistic forms. Much of this dialogue depends on the visual, on the image that meets the viewer's eye—this very expression betrays the typical first level of interaction with the reliefs. Yet to delve deeper into these details is to access elements of additional revelatory senses, including that of touch. The effort with which the tactile is articulated in the Apadana reliefs demonstrates something beyond pure artistry; it suggests an intentionality to express through this work of art cultural and socio-political concepts and codes of the Achaemenid court—for example, the message of hierarchy embedded in a tribute bearer's grasp of an animal's coat; the statement of pride and honor communicated through the delicate cupping of a vessel. What is more, tool marks and maker's marks reinforce the physical boundary of the relief as material object, and, with respect to the maker's marks, the intentionality of the craftsmen to record the contribution of their own skillful touch. Yet as viewers, people become conscious of their distance from such tactile interactions, igniting in them the desire to touch the relief, to become active participants in this sensory exchange. Through such considerations of tactility, we can access modes of communication and levels of engagement related to these reliefs that are less often explored.

Neville McFerrin (Sweet Briar College), "The Tangible Self: Materiality and Haptic Negotiations of Agency in, on, and at Persepolis"

While touch has previously been explored as a sense that helps to reinforce self, as a way to embody experiences through underscoring physical boundaries, in the complex multi-sensory zone of Persepolis, touch, like sight, is a reciprocal system, experienced both by the individual and those who interact with that individual. This paper argues that personal identity is negotiated both inwardly and outwardly, and that these conceptual negotiations are mediated by touch.

The senses depend upon a series of invisible touches, and agency is exerted through making the intangible not only tangible, but also solid. In seal play as in reliefs, in curtains as in clothing, the materiality of the object, the physical qualities of clay, stone, and cloth, transfigure ephemeral sense interactions into a tangible zone that invites the individual not only to consider his or her relationship to community and space, but also to envision him or herself as an agent capable of altering that space, of inviting action as much as experiencing it. Differing sensations are presented as potential interfaces through which individuals can both impress their selfhood onto an environment open to interaction, and also consider the spatial relationships that underscore bodily boundaries, suggesting that it is through shared experience that inclusivity is perpetuated. Thus, it is by recognizing the reciprocity of such interactions that we recognize that we sense and are sensed simultaneously, and it is through the notion of shared sensation that we begin to constitute ourselves not only as an individual, but as a whole.

Sarah J. Scott (Wagner College), "Skin on Skin: Exploring Surface Relationships between Seals and Impressions"

Mesopotamian objects possess varying amounts of agency based on their medium, context of creation, and use. Understood as a living body, objects may possess souls, house legacy, and interact in animate ways. Akkadian words related to cylinder seals (*kunukku*) can also carry meanings associated with the skeleton. As a living body, then, objects in Mesopotamia have anatomical structure. Similarly, architecture may be understood as

an anthropomorphic being; the manipulation and articulation of surface treatments (carving, textiles, paintings) may serve to animate and dress the structure. Additionally, materials possessed qualities akin to animate beings: specifically, clay, which, according to textual sources may have both literally and metaphorically been understood as flesh. This paper seeks to approach the anatomy of Mesopotamian objects particularly through the exploration of their skins and epidermal sensations such as pressure, temperature, and penetration. Specifically through a case study of cylinder seals, their use, and resulting impressions the metaphor of object surface as anatomical skin will be drawn. Seals and resulting impressions were intentionally created to act and be used as agent; textual and visual sources related to seals and sealing function will be presented as evidence for agentive power in seals and seal impressions through skin to skin surface interactions.

Laurel Hackley (Brown University), “You Go to a Place Difficult of Access: Multi-sensory Engagement with Ancient Amulets”

The efficacy of ancient amulets relied not only on their physical qualities of material, color, and form, but also on complex performative manipulations. These manipulations went far beyond simply wearing the object, and could involve burning incense, handling the amulet, taking it to a specific place, libating it with beer, reciting an incantation over it, throwing it in a river, or even destroying it entirely. Interaction with amulets, therefore, was a multi-sensory experience, and the engagement of the owner’s senses was a necessary part of the amulet’s use. Through this interaction, the amulet served as a material entry-point into a world of symbolic, sympathetic action that was often emotionally charged.

This paper focuses on the multi-sensory engagement with Bronze Age Egyptian and Mesopotamian amulets. Evidence for this engagement can be found in Egyptian and Akkadian texts and in the archaeological record, marked upon the objects themselves through wear, breakage, or combination with other materials. In many cases, ancient amulets show signs of use consistent with prescriptions found in the texts, providing a link between ideal and actual use of the objects. These practices appear to be very similar in Egypt and Mesopotamia, indicating a shared body of knowledge across geographical boundaries. Additionally, particular interactions with amulets appear to be consistent through time, appearing in Demotic Egyptian texts and even in present-day folk practice. This paper explores how multi-sensory engagement with these objects was intrinsic to their use, and how it contributes to the transmission and stability of apotropaic practice.

6C. Cultural Heritage Management: Methods, Practices, and Case Studies II

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

Thomas Roby (The Getty Conservation Institute), Leslie Friedman (The Getty Conservation Institute), Livia Alberti (Independent Conservator), Ermanno Carbonara (Independent Conservator), Moheddine Chaouali (Institut National du Patrimoine, Tunis), and Hamida Rhouma (Institut National du Patrimoine, Tunis), “The Conservation Plan for Mosaics at Bulla Regia: A Component of the MOSAIKON Model Field Project”

This paper presents a long-term conservation plan for the large site of Bulla Regia in Tunisia, which features almost 400 mosaics that are being preserved by four trained conservation technicians and a team of four workers. Given these human resources, a program of prioritized work over 18 years has been planned. After an initial phase of securing the site with the installation of protection measures to prevent mosaics from being walked on, such as fencing, reburial, and emergency treatments, a second multi-year phase of initial stabilization of mosaics, wall plasters, and walls follows. This phase also includes mosaic reburial and work activities requiring skills beyond that of a conservation technician or worker. These activities, termed “specialist projects,” are planned at the same time and consist of the design and construction of shelters, site drainage, and treatment on particular surfaces of decorative stone and wall paintings. The third phase consists of maintenance

activities after all the mosaics have been stabilized. Initially, about half of the mosaics will be reburied following stabilization in order to allow the current available workforce time to stabilize the mosaics that have been selected for presentation, while reducing the amount of time needed for ongoing mosaic maintenance.

Rachel Aronin (Harvard University), “To Make One Know the Place Beforehand’: Integrating Archival Data and 3D Visualization on the Digital Giza Website”

The Giza Project, a collaborative international initiative based at Harvard University, has as its ultimate goals the comprehensive collection, electronic preservation, scholarly study, and public presentation of data on one of the world’s most famous archaeological sites: the Giza Plateau in Egypt. Having reached a stage where exciting new forms of outreach and education are possible, the project has just completed a small-scale prototype of its forthcoming innovative public website, *Digital Giza*, combining immense amounts of Giza-related archival data from over a dozen individual museum collections worldwide with an immersive 3D virtual model interface.

Recent trends in archival and heritage activity have stressed two priorities: digitization of archival collections for long-term preservation, and making those collections more broadly accessible to all audiences, not just the specialized few. Full construction of the new website will provide unprecedented access to Giza in ways unavailable even at the physical site in Egypt today, through a groundbreaking blend of traditional and new approaches to digital archaeology and data management.

Consistent with the Giza Project’s mission and the evolution of digital/virtual visualizations of information, this introduction to the *Digital Giza* prototype demonstrates the wide-ranging functionality of integrating the Project’s 3D graphic models and data holdings for the Khafre Pyramid Complex (including the Pyramid, Pyramid Temple, Valley Temple, Sphinx, and Sphinx Temple). It is the blueprint for a unique next-generation tool for education and research, the finished product of which will be available for classroom use, scholarly inquiry, and edu-tourism, suitable for amateurs and experts alike.

Boaz Gross (Tel Aviv University), “Why 1700 C.E.? The Possible Contribution of Archaeological Research into the Last 300 Years: The Case of Beit Nattif”

The “Law of Antiquities” (1978) in the State of Israel defines “antiquity” as any man-made object, portable or stationary, created before 1700 C.E. Increasingly, however, the ceaseless movement of time, ever-changing geopolitical situations, and the evolution of our understanding of the role of archaeology in society and academia is leading scholars to question the relevance of 1700 C.E. as such a defining moment. This presentation, through the analysis of imperial statutes and parliamentary discussions, will explore the origins of this definition and the reasoning behind it. I will then endeavour to demonstrate the unique contribution that archaeological methods can offer to the study of recent history. As a case study, I will present the current historical and archaeological research being conducted in the remains of Beit Nattif, an Arab village in central Israel. I will highlight how the exploration of these remains can shed further light on the social and cultural history of the region.

Leann Pace (Wake Forest University), “Teaching Cultural Heritage Management at a Divinity School: A Case Study in Answering the Call for Education outside of the Discipline”

In her plenary address at the ASOR Annual Meeting in Atlanta two years ago, Susan Alcock called the ASOR community to focus on education, inviting people outside of our community to join in the task of documenting ancient monuments and artifacts, of engaging with the region in all its complexities, and in using data from the ancient world to help us address modern problems. I accepted Susan’s challenge and designed and am currently teaching a course at Wake Forest University School of Divinity titled, “Preserving Religious and Cultural Heritage as Part of Pastoral Calling.” As a capstone project for the course, each student is writing a statement that outlines what responsibility his/her/their own religious tradition has for participating in the work of cultural

heritage preservation and management (if any) and providing an academic defense of their assertion. In preparation for this statement of responsibility, the students are studying UNESCO documents, reading archaeological method and theory, critically examining what we mean by the term “sacred,” and looking at numerous case studies from across the world. My presentation will serve as a progress report from our little corner of North Carolina on the charge given to us by Susan Alcock. It will also provide an opportunity for me to share some of the critical work produced by the students on this topic. Perhaps sharing my failures, successes, and questions about this project will be helpful to other ASOR members looking to bring the work of ASOR to new audiences.

Paul Christians (Stanford University), “Cultural Heritage, Distributive Politics, and Public-Private Cultural Development in Qatar”

Much of the existing scholarship on heritage in Arab nations of the Middle East continues to focus on museums as centers of praxis, tourism, transnational organizations such as UNESCO, or relatively limited political notions of nationalism or postcolonial identity. Yet these sites and frameworks are increasingly inadequate: Gulf states such as Qatar are moving beyond these themes by connecting cultural heritage not only to their political positions, but also to their economic futures. Janus-faced, heritage becomes a bulwark of tradition against Qatar’s neoliberal, extractive economy, even as it is simultaneously associated with future security as part of an anticipated knowledge economy. As a report on ethnographic fieldwork, this paper examines Qatar’s emergent national heritage at the nexus of state, corporate, and public influence. It asks: How should heritage—and its uses—be understood, considering this shift in emphases? And what are the implications for heritage management in a regional system consisting of a complex web of local, national, and international experts, funders, and authorities? Initial evidence suggests that reframing Qatari cultural heritage in terms of distribution, rather than production, helps illuminate its evolving role in the assertion and maintenance of power. In doing so, this research explores the broader significance of heritage as a multi-faceted, critical space for understanding economic and social change amid the rapidly shifting context of the Arabian Peninsula.

6E. Archaeology of Cyprus II

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

Thomas Landvatter (Reed College), “Cremation Practice and Social Meaning in the Ptolemaic Eastern Mediterranean”

Though in the popular imagination cremation is associated with ancient Greek funerary practice (in no small part thanks to Homer), in reality cremation was a relatively uncommon practice in the Classical and especially Hellenistic periods in areas of Greek settlement in the eastern Mediterranean: inhumation burials dominate by far. When cremation burials do appear, then, they elicit special attention. In this paper, I examine cremation practice in two places, Ptolemaic Cyprus and Egypt, where cremation was extremely rare or non-existent prior to the Hellenistic period, in order to better understand how cremation fits into the overall system of burial practice and the types of social signaling associated with it. In particular, I concentrate on a specific type of cinerary urn, the so-called “Hadra Vase,” which appears most commonly in Alexandria but also appears in a number of other areas in the eastern Mediterranean, including Cyprus. I will investigate how similar funerary practices—even using the same specialized objects—can take on different shades of meaning depending on the social context.

Karolina Rosińska-Balik (Jagiellonian University in Kraków), “Architectural Features of the Agora of Paphos (Cyprus)—Some Remarks”

Every day and at every hour cities of the Mediterranean are full of life. It was no different in distant times, when the inhabitants were tending to the centers of their cities. Nowadays this place is the main square, traditional marketplace or otherwise called the heart of the city. In antiquity, this role was

played by the agora. The agora of Paphos on Cyprus, nowadays visible only in incomplete outline, is an area most likely closed in a square with the side length of almost 100 m. The architecture of the agora known till today presents just a small piece of the complex picture of centuries of re-building, re-modeling, and changes of that most important square of the city. Building techniques that were used—from very precisely cut stone blocks to poor partitions—reflect deliberate large architectural projects and continual modifications or repairs after earthquakes or perhaps the usual ad hoc changes in the function of each room of that bustling heart of the city. In the paper, I would like to present an overview of architectural features revealed during research conducted by Jagiellonian University in Krakow (Poland), Paphos Agora Project (NCN grant number 2014/14/A/HS 3/00283).

Nancy Serwint (Arizona State University), “The Workshops of Ancient Arsinoe”

With the demise of Marion in the wars of the Diadochi in the late fourth century B.C., the primacy of Nea Paphos in western Cyprus underscores the eclipse in civic development in the northwestern part of the island. That hiatus was only short-lived because, in 270 B.C., Ptolemy Philadelphos established the city of Arsinoe to honor his sister and wife, and the new city rose nearly contiguous with the destroyed Marion. The early days of Arsinoe appear tentative, with scant remains of habitation. It is the discovery of industrial workshops in excavations undertaken by the Princeton Cyprus Expedition that signal the development of the nascent city and reflect an economic recovery for the area that stimulated further urban expansion over the course of several centuries. A consideration of industrial activity contributes to the understanding of how ancient Arsinoe established its stature as one of the most important urban polities in the western part of Cyprus.

Pamela Gaber (Lycoming College), “The 2017 Season of the Lycoming College Expedition to Idalion, Cyprus”

The Lycoming College Expedition was in the field from June 19 to August 4, 2017. Work concentrated in three fields: the city sanctuary below the West Acropolis palatial complex, the Lower City East Hellenistic and Roman industrial area, and the terrace of the East Acropolis, the “Adonis Temenos.” The season’s goals were to remove remaining balks and to complete the work in the west of the City Sanctuary area where we located the Roman gateway the last week of the 2015 season. Clearance of the gate area revealed a fieldstone paving as well as large ashlar blocks framing the opening. The pathway inside the opening appears to differentiate an area open to general ‘entrants’ from an area to the south that was not accessed from this large entryway, possibly implying specialist functionaries. During the 2015 season balks were removed in the western end of the temple complex. Hellenistic and Roman levels were excavated to the east and north in the sanctuary. The chronological sequence extending from 1200 B.C.E. to 700 C.E. was revealed as well as the known extent of the city sanctuary at Idalion: 24 m x 42 m. (We still do not have the eastern entrance to the temple). Lower City East excavation uncovered more of the Archaic and Hellenistic textile working area, and completing squares in the Adonis Temenos confirmed its chronological extent to be ca. 1100 B.C.E. to ca. 200 C.E.

R. Scott Moore (Indiana University of Pennsylvania), Brandon Olson (Metropolitan State University of Denver), and William Caraher (University of North Dakota), “The Circulation of Imported Fine Wares on Cyprus in the Roman and Late Roman Periods”

The island of Cyprus is located in the eastern Mediterranean and was ideally situated as both a destination and waypoint for trading vessels operating in that part of the Mediterranean in the Hellenistic to Late Roman periods. Continuous archaeological work on the island over the last fifty years has brought to light diverse assemblages of both imported fine wares, such as African Red Slip and Eastern Sigillata A, as well as locally produced wares. Recent scholarship on ceramics in Cyprus has hypothesized that locally manufactured ceramics circulated in six regions which were defined by geographical features. Unfortunately, a pattern for the circulation of imported

fine wares on Cyprus has been more difficult to discern and only typological variations between the eastern and western halves of the island has been suggested. A closer examination of the Roman and Later Roman fine wares allows for a more refined view of the circulation of imported fine wares on the island. While there is clearly a significant difference between the eastern and western halves, it is now possible to discern the patterning of micro-regions within these two halves by modeling the circulation pattern of imported fine wares on the island.

Ann-Marie Knoblauch (Virginia Tech), “Excavating Cesnola: Public Interest in Archaeological Field Techniques in 1880s New York”

In 1880 Luigi Palma di Cesnola was a darling of New York society. He was promoting his recently published book *Cyprus: Its Ancient Cities, Tombs, and Temples*. Furthermore, in August of 1878, Cyprus had become part of the British Empire, and so Cesnola's expertise, after 12 years on the island, was in high demand. In May 1880, the Metropolitan Museum of Art opened its Fifth Avenue location, with Cesnola as its first director. The majority of the new exhibit space was dedicated to the enormous Cypriot collection purchased by the Board of Directors from Cesnola. Within ten years, Cesnola's reputation had been heavily tarnished. A lengthy court case involving his liberal restorations of Cypriot antiquities was covered extensively by the press. Although Cesnola's name was cleared, his credibility (and that of the Met) suffered a serious blow through four years of headlines about the case. Furthermore, the newspaper reports convey Cesnola's demeanor throughout the trial as pompous and overbearing. While scholars have long been critical of Cesnola's field techniques, this paper investigates public reaction to Cesnola's scandals during the 1880s, his temperament as presented by the press, and the potential impact of both on the public perception of Cesnola as a field archaeologist. Did these incidents in New York lead to greater public critique of (his) archaeological field methods in Cyprus? This paper argues that the public fascination with Cesnola's fall from grace in New York in fact served to heighten public awareness of the need for increasingly scientific techniques in the field.

6F. Antiochia Hippos of the Decapolis and Its Territorium

CHAIR: Michael Eisenberg (University of Haifa)

Chaim Ben David (Kinneret College on the Sea of Galilee) and Mechael Osband (University of Haifa; Ohalo College), “The Territorial Borders and the Rural Settlements of the Hippos District during the Roman and Byzantine Periods: The Current State of Research and the Contribution from the Recent Excavations at Khirbet Majduliyya”

A polis can only be properly understood within the context of the rural sites within its borders and by identifying its socio-economic sphere of influence. The borders of the Hippos *Territorium* have been defined by scholars by relating to five main criteria: 1) identifying sites mentioned in historical literature as part of the Hippos district, 2) the route of the aqueduct leading to Hippos, 3) the distribution of Hellenistic and Early Roman watch towers, 4) the borders of the neighboring districts, especially Gaulanitis to the north-northeast and Gadara to the south, and 5) the ethnicity of the settlements within the Hippos district and neighboring regions in different periods. In this presentation we will re-evaluate the historical and mainly the archaeological evidence for defining the borders of the Hippos district. The northeastern border with Gaulanitis has been the hardest for scholars to determine. It had been assumed that the Hippos aqueduct began at the site of Um el-Qanatir. This has been found to be mistaken, leaving the northern border in greater question than before. The recent excavations at Khirbet Majduliyya, 3 km east of Um el-Qanatir and located near the northern border of the Hippos district, has shed new light on the borders of the district, the diachronic Jewish settlement pattern in the Hippos region, and the sphere of influence of the only polis in the region.

Adam Pažout (University of Haifa), “Regional Defenses in the Territory of Hippos: A Spatial Analysis Approach”

The past scholarship on military architecture of the city of Hippos-Sussita focused mainly on city fortifications. The present research, however, concentrates on a corpus of sites located in what is assumed to be the city's territory. The territory is bounded by the gorges of Ruqad and Yarmouk on the east and south and by the Sea of Galilee on the west, at the southwestern fringes of the Golan Heights. These fortified sites are thought to represent regional defenses in the chora of Hippos.

This study focuses on two periods with different political and military factors that could have shaped the regional defense system:

1) In the Hellenistic period, after the foundation of the city, the fortifications were centered on Hippos and organized to control its chora from external threat.

2) In the Roman period, with the establishment of a provincial administration and the involvement of the Roman army, the system changed and became more focused on control of provincial communication networks and surveillance of the local population.

GIS-based spatial analysis was used to analyze the spatial patterns of the sites and test the proposed two models regarding visual control and intervisibility of both fortified and unfortified sites, using the “viewshed” tool. In addition, the road system will be reconstructed using “least-cost path analysis,” allowing for better understanding of the relationship between settlements, with a focus on Hippos, the road network, and regional fortifications.

This paper will present a preliminary model of the region based on the results of ongoing research.

Michael Eisenberg (University of Haifa), “The Urban Expansion at Hippos (Sussita) during the Roman Period: A Newly Excavated Sanctuary at the Saddle-Ridge”

Antiochia Hippos (Sussita) of the Decapolis is among the largest archaeological enterprises of the Classical period conducted in Israel in the last two decades. During the last four years the University of Haifa team has initiated excavations along the city's saddle-ridge, outside its walls. The excavations have provided surprising finds concerning the urban expansion during the Roman period and the remains of a large compound.

The compound stretches 120 m along the western side of the saddle-ridge, from the defensive ditch cut in the middle of the saddle towards the southern basalt slopes of the mountain. The entrance to the compound is from the south via a monumental gate, most of which has been excavated. This propylaeum is of a single passage of almost 4 m wide flanked by two square towers of 6.4 m, built of basalt ashlar and dated to the early second century C.E., during which all the compound was apparently built. The famous bronze mask of Pan was found here above one of the plaster floors.

To the west of the gate a large bathhouse complex was partially excavated and farther northwest a theater was located at the end of 2016.

The evidence so far allows us to reconstruct a Roman period (probably Hadrian) sanctuary for Dionysus or another deity. It was built along the saddle-ridge when the small crest could no longer encompass the urban expansion of the second-third centuries C.E. During the fourth century the compound was partially destroyed and ceased to serve as a sanctuary.

Arleta Kowalewska (University of Haifa), “The Southern Bathhouse of Antiochia Hippos”

In 2005, during the investigation of the fortification system of the southern city wall of Antiochia Hippos, remains of a Roman public bathhouse were discovered. Since then, over half of its space has been excavated.

The paper shows the results of over ten seasons of excavations and research of the Southern Bathhouse, which include: the proposed reconstruction of the bathhouse, and its unique features of building technique (e.g. hypocaustum and tubuli) and decorations (marble revetments and figural art) employed; the analysis of the spaces of the bathhouse according to their function and the proposed plan of the bathing circuit; the dating of the bathhouse and

its construction phases (the second to the fourth century C.E., with major restructuring in the mid-third century).

The Southern Bathhouse is one of the three complexes discovered in Antiochia Hippos. It is a middle-sized facility (over 950 m²) that provides evidence for the wealth of the city in the Roman period, and the radical changes that took place in the city and the region in the late third and the fourth century C.E. It is one of the only bathhouses of the region of Syria-Palaestina that did not continue to function in the Byzantine period, and its comparison to other bathhouses of the region can point to characteristics of construction of bathing facilities, and the bathing culture in the Roman East.

Stephen Chambers (Concordia Lutheran Seminary, Canada), “A Story in Glass: How Distribution Patterns Assist in the Reconstruction of the History of the Northeast Insula”

More than 1,700 identifiable fragments of glass were found in the various buildings of Hippos’s Northeast Insula. Analysis of the locations in which these pieces were found reveals some very interesting patterns. Little glass was found in the worship-hall of the North-East Church, but relatively heavy concentrations were found in the domestic rooms surrounding it. Window-glass was distributed around the perimeter of the east end of the church and surrounding areas. Oil lamps were found in numerous areas but heavily concentrated in certain rooms. Storage vessels, bowls and plates, and goblets and cups were found in patterns that are suggestive of the types of activities associated with particular parts of the site. Although none of these patterns conclusively prove how individual rooms or buildings were used, they are sufficiently consistent within themselves, and among themselves, to support a theory of the complex’s history as a church, pilgrimage centre, and possible urban monastery.

Mark Schuler (Concordia University, St. Paul), “Re-visioning Structures and Spaces: a History of the Northeast Insula at Antiochia Hippos”

Based on the work of 15 field seasons, this paper will propose a history of the Northeast Insula at Antiochia Hippos. This paper begins by summarizing the surviving evidence for earlier structures and noting the role of a Roman-era street grid in giving shape to the insula and within which was constructed at least one peristyle house. This paper will then argue that the street grid was intentionally modified and interrupted in the Late Antique Period so as to feature a memorial chapel and related buildings constructed within the original grid and using elements of previous structures. This project adds to the limited catalog of peristyle houses in Israel and facilitates greater understanding of early Christian communal and memorial practices in urban contexts in Late Antique Palaestina.

6H. Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations I

CHAIR: Daniel E. Fleming (New York University)

Seth Richardson (University of Chicago), “Uncertain Omens and the Ambiguous Future: Prediction and Query as Figure and Ground”

The organization and exegesis of the world through the queries and predictions of omens seems a fixed feature of Mesopotamian thought. Yet despite the confident voice of this corpus, one need take only a small step back to see that its atmosphere of certainty (figure) was distinctive precisely for the background conditions against which it contended: a broad doubt and uncertainty about the future and the world (ground). The themes of faith-and-doubt, fate-and-free-will that pervade Akkadian literature are of course stalwart pairings of nearly all cultural dialogues. This paper will address their interplay within the omens themselves by focusing on a problematic category of “imagistic” and uncertain omens, where observable ominous phenomena were visually denoted, but where the true signifiers were substantially absent. In contrast to the “simple” appearances of lizards, eclipses, and purple demons, one finds also the footprints of demons, unidentified flashes of light, and the disembodied hands of gods. These painted a visually rich omenscape, but also

required viewers, reporters, and interpreters to grapple with “messages” that had been divorced or deferred from senders/agents in some way. Why would systems seemingly designed to *explain* the appearance of messages complicate that process by interposing ambiguity and uncertainty about the identity of the message itself? The answer lies in re-situating the omen literature away from a positivistic project of organization and categorization, and towards a dialogic epistemology of doubt that embraced ambiguity and questions about the efficacy of the system of knowledge itself.

Elizabeth Knott (New York University), “What’s in a Name? Ištar as Common Noun and Divine Name”

Around the beginning of the second millennium B.C., scribes began to use the noun *ištaru* as a generic word for “goddess.” While this noun could be written syllabically, it could also be written with a variety of logograms, including ⁴iš.tar, ⁴15, ^(d)eš₄.dar, and ^(d)innin—writings that were all also used for the divine name Ištar. With the overlap in writings of Ištar and *ištaru*, it is not always easy to distinguish between textual references to Ištar(s) in particular and goddess(es) more generally. In previous scholarship, the noun *ištaru* has been understood as a reflection of the preeminence of Inanna/Ištar, in which the pan-Mesopotamian importance of the goddess made the broader application of her name appealing. Yet this interpretation does not fully consider the ambiguity created by the overlap of cuneiform writings. In order to better understand the blurring of divine name and common noun, this paper tracks the rise and development of *ištaru* across the second and first millennia B.C. and distinguishes between different (apparent) uses of the noun. It proposes that the blurring of Goddess and goddess in the cuneiform writing represents a real disquiet surrounding the identity of the ubiquitous Ištar.

Nancy Highcock (New York University), “City and God: The Materiality of Old Assyrian Assur”

The role of Assur as both a city and a god has long been noted and several scholars have discussed the relationship between the two entities, particularly with regards to ways of writing Assur, with both the locative (KI) and divine determinative (DINGIR), in Old Assyrian royal inscriptions. Such intentional ambiguity formed a core part of Old Assyrian royal ideology. By building upon earlier studies of Old Assyrian texts and art, this paper will further develop the concept of a divine city, as a particular type of *numina loci*, and how it was imagined by those that lived there. I argue that the very infrastructure of the city expressed the materiality of the deity Assur and the “flesh of the city” (Inscription of Puzur-Sin), indivisible from the god’s agency, was integral to the Old Assyrians’ perception of themselves in a multicultural landscape. The ambiguity between god and city was not only intentional, but also an emphatic remark on the special status of this city in Middle Bronze Age Mesopotamia.

Michael Stahl (New York University), “Challenging the Concept of the ‘City God’: dNIN.URTA’s Social and Political Agency at Emar”

One of the most common interpretive categories scholars use to talk about city religion in the ancient Middle East is the “city god.” My paper challenges the “city god” category’s utility by investigating one deity to whom scholars almost universally apply this heuristic label: Emar’s ⁴NIN.URTA, whose identity Emar scribes consistently chose to represent ambiguously with a Sumerogram. Indeed, this scribal choice necessarily results in a certain tension, inasmuch as the local Syrian god and the Sumerian deity do not align fully in terms of profile or cult. While ⁴NIN.URTA possesses a special relationship with

Judean Pillar Figurines (JPFs) feature the nude female form in the biblical heartland of Judah, where the Second Commandment supposedly prohibited images and the monotheistic male god supposedly reigned. Traditionally, scholars prioritize questions of Emar as a collective, expressed particularly in his ownership of real property on behalf of the city, the Emar evidence offers serious reasons to question the interpretive value of the “city god” classification for talking about politics and religion at Emar specifically, and perhaps ancient Syria more generally. I argue that the generalizing analytic of the “city god,” at least in Emar’s case, obscures as much as it clarifies—if not more so—by concealing certain assumptions and perspectives about the

nature of ancient Middle Eastern society that potentially obfuscate the very questions and issues that most stand in need of analysis. In sum, I conclude that the analytic category of the “city god” does not fit seamlessly the totality of the Emar evidence, and potentially risks homogenizing otherwise diverse political-religious configurations in the ancient Middle East.

Jennifer Singletary (Georg-August-Universität Göttingen), “The Holy Ones: Taxonomies of Divine Beings in the Hebrew Bible”

This paper reconstructs and analyzes the often implicit and ambiguous taxonomies of non-obvious divine beings (such as deities, divine messengers, members of the divine council, and divine monsters) posited or assumed by the various texts compiled in the Hebrew Bible. How do different texts classify various divine entities? How rigid or permeable are the boundaries between different types of divine beings? What textual markers (such as particular vocabulary, language, or imagery) might indicate the classification systems for divine beings assumed or constructed by the writers? An examination of the range of shifting and ambiguous taxonomies of the divine promoted by different writers or groups in these texts suggests that divinity in the Hebrew Bible can best be understood as a spectrum or scale without clear boundaries between different types of divine entities.

Lauren McCormick (Syracuse University), “Fleeting Identity in the Judean Pillar Figurines”

identity: whom do JPFs represent? Female worshippers? A goddess? Which one(s)? I will move beyond the attempt to unveil who the figurines *really* were to explore how that identification—whatever it may have been—was left unsettled. On the one hand, the figurines are serial art pieces, linked to each other as different permutations of a common design. Adherence to a prototypical form seems to bespeak common, perhaps divine, identity. On the other hand, individuation was achieved across figurines through the use of multiple molds, body part sizes, and paint. Some JPF design elements (like the exposed upper body) gesture toward the divine, while others (like the absence of wings) signify a human association. I will demonstrate how JPF identity was obfuscated in order to argue that no singular identity was encoded onto the JPFs. Rather, I will argue that identities were variously bestowed by JPF users. Ambiguity is a genuine attribute of the JPFs: these figurines were sites wherein identity could be both achieved and denied.

6I. Meeting the Expenses: Ancient Near Eastern Economies II

CHAIR: Lorenz Rahmstorf (University of Göttingen)

Karl Petruso (University of Texas at Arlington), “A Theory of Everything in Ancient Weight Metrology?”

Fundamental to the study of ancient weight measurement is the isolation of masses of standard units used by early cultures. Often, scholars are tempted as a next step to search for relationships among two or more distinct contemporary weight systems – and to argue that the mass of a standard unit in one system was, with some adjustment up or down, convertible to the mass of a standard unit in another. It is assumed that the establishment of parities among ancient systems would have facilitated inter-polity transactions. Increasing social, political, and economic complexity in the Old World in the third and second millennia B.C.E. suggests that easy convertibility among weight standards would have been useful and hence appealing to craftsmen, merchants, and accountants who were involved in long-distance trade.

This presentation will examine the methodology of arguments for convertibility among ancient standards of weight from the Mediterranean to the Indus Valley, focusing on hypotheses of grand and sweeping scope—what might be referred to as archaeological versions of “theory of everything” explanations that are invoked in other academic disciplines. It will be shown that hypotheses based solely on modern calculations are anachronistic, are prone to errors in chronology and precision of manufacture and evaluation, and do not sufficiently take into account the technical procedures on which accurate conversion relies. Attractive though such hypotheses might be, it is

argued that theories of conversion among weight systems are to be advanced only with great circumspection and qualification.

Raz Kletter (University of Helsinki), “Major Changes on the Road to Small Change: Scale Weights, Hoards, and Modes of Exchange”

Definition of scale weights and of hoards/wealth deposits varies and so does their interpretation. In this paper I suggest that the nature of hoards and scale weights is related to the development of economic modes of exchange from barter through hacksilber to money (coinage). Hacksilber economy started around 3500 B.C. and was dominant in the ancient Near East until the invention of coins ca. 600 B.C. In accordance, typical hoards changed from hoards of complete objects to hacksilber (silver pieces of random weight) and then to coin hoards.

The changes occur at various times in various places. Modes of exchange shift gradually and existing modes are usually integrated as secondary components within new modes. Thus barter remained popular in the hacksilber world and we still use coins today. Similarly, hoarding of complete valuables never stopped and for a long time coins were still weighed, cut, and used as hacksilber.

While the presence of hacksilber hoards is indicative of ‘hacksilber economy,’ lack of such hoards is only negative evidence that should be treated carefully. It does not necessarily indicate lack of weighing.

Graciela Gestoso Singer (CEHAO–Pontifical Catholic University of Argentina), “Beyond Amarna: Hoards, Tribute, Gifts, and Exchange of Metals in the Levant”

Metal by weight was the worldwide expression of payment, in varied forms from standardized oxhide ingots transported in big cargoes, to small scraps of metal stored in bags or jars. The use of ingots and scrap metal, as forms of “payment,” is documented in the Amarna Period (14th century B.C.E.) according to four different sources: tomb

inscriptions, the Amarna Letters, a “hoard” found at Amarna, and the cargo of the

Uluburun shipwreck. Throughout the 15th–14th centuries B.C.E. in Egypt, ingots are generally listed as “tribute” from foreign countries; however, they may have been commodities in “trade” or “gift-exchange” networks. Textual and archaeological evidence indicates that the changes undergone by the systems and means of exchange extended to all of the eastern Mediterranean at the end of the Late Bronze Age, while evidence provided by maritime archaeology suggests the coexistence of royal imports of metals and prestige goods from palaces and small enterprises by independent merchants.

Royal merchants, who exchanged metals in talent-sized bulk, were slowly displaced by independent merchants, who traded small scraps of metal. Ingot fragments were used as “small change” in metal-weighing transactions. The expansion of the circulation of scrap metal, which was a natural consequence of the widening range of sub-elite consumers, had dangerous consequences for palace monopolies. Scrap metal became a commodity for independent merchants from at least ca. 1350–1300 B.C.E.

Eran Arie (The Israel Museum, Jerusalem), “A New Jewelry Hoard from Iron Age I Megiddo”

The jewelry hoard presented here was recently uncovered in Megiddo in a destruction debris well dated to the early Iron Age I. The hoard was found in a small beer jug that was positioned on a paved floor, only about 30 m from the Canaanite city palace. In my paper I will present the various groups of objects the hoard contained: a necklace made of electrum, carnelian, and silver beads, a bundle of silver objects, and ten elaborate electrum jewelry pieces. One earring from the latter group is a work of art that has never been seen before in the jewelry discovered in the region.

In light of the accurate excavation methods of the hoard, its good stratigraphic affiliation, and several additional examinations, such as metallurgy and residue analysis, I will discuss the stages of hoarding and point out the social, economic, and historical circumstances of this unique find. The Megiddo hoard joins about 25 Iron Age hoards uncovered in Israel.

The importance of the new hoard lies in the high quantity of the electrum it contains. Being well dated to the beginning of the Iron Age (ca. 1100 B.C.E.), it is instrumental in helping us understand the increased use of silver in the region, and the almost complete disappearance of gold artifacts, which occurred simultaneously with the withdrawal of Egyptian rule in Canaan at the end of the Late Bronze Age.

Tzilla Eshel (University of Haifa), Naama Yahalom-Mack (The Hebrew University of Jerusalem), Sarel Shalev (University of Haifa), Yigal Erel (The Hebrew University of Jerusalem) and Ayelet Gilboa (University of Haifa), “Silver Hoards in the Bronze and Iron Age Southern Levant: How was the Quality of Silver Monitored?”

Much can be learned from ancient documents regarding the weight and value of silver in antiquity, yet hardly anything as to how the metal quality was assessed. This can only be gleaned from the archaeological record. A collection of over 30 Iron Age silver hoards from the southern Levant has triggered an ongoing debate whether quality was controlled by pre-portioned silver that was exchanged in standardized weighed bundles, eventually inspiring the invention of coins.

Based on detailed contextual, typological, and chemical analyses of several hoards, we suggest that silver was used as a form of currency in the southern Levant already in the Middle Bronze Age. Subsequently, broken jewelry and scrap-silver were collected in bundles, occasionally stamped to indicate their quality, down to the tenth century B.C.E. During Iron Age I, copper was added to many silver items in the hoards. This may indicate a lack of central administration regulating the quality of silver, or was due to a local shortage in silver. Either way, bundling failed its purpose, and was gradually replaced with the practice of hacking silver. Throughout the Iron Age, at every transaction, silver was hacked and weighed, and miniature hacked silver items were used to balance the scales. The first coins to arrive in the southern Levant (sixth century B.C.E.), were hacked as well.

Bundling and hacking thus represent two different quality control methods, not to be seen as a single phenomenon.

6J. New Studies on Tel Azekah

CHAIR: Yuval Gadot (Tel Aviv University)

Oded Lipschits (Tel Aviv University), “Fortifications, Destructions, and the Life in Between: Azekah after Five Seasons of Excavations”

In this introduction I will present the main finds from the five seasons of excavations conducted at the site, and summarize their implications for the history of the site from the first settlement during the Early Bronze Age III period, through the Middle Bronze Age, when the site was fortified with a mud brick city wall on a solid stone foundation, and mainly during the Late Bronze Age, when remains were found in almost all the excavated areas. I will focus also on the Iron Age IIA and IIB periods, from which remains were also found in most parts of the site, while, as in other sites in the Shephelah, remains dating to the seventh century, the Iron IIC, are not as common as before. An important part of the presentation will be the next settlement peak at the site that happened during the Persian period and continued into the Early Hellenistic period, while during the Late Hellenistic and Roman periods the settlement shifted eastward and northward, before the upper tell was totally deserted.

Joshua Errington (Tel Aviv University; Macquarie University), “Processes in the Site Formation of Tel Azekah: A Test Case for the Modification of Landscape in the *Longue Durée*”

Tel Azekah (Tell Zakariya) was occupied at least as early as the Early Bronze Age through to the Roman, Byzantine, and possibly into the Early Islamic periods. Throughout the millennia, Azekah's occupants dramatically altered the topography of what was once a natural hill to fit their defensive, architectural, and domestic requirements, making the city serviceable, safe, and visually imposing. This paper presents evidence for the alterations imposed on

Tel Azekah's landscape period-by-period, from initial settlement during the Early Bronze Age until modern times. An assessment of the scale and layout of earthworks and construction of monumental architecture, and the reasons behind such labours, is provided for each period of occupation, in addition to a topographic reconstruction of the natural hill form and its evolution thereafter.

Critical to this study were the published results of Bliss and Macalister's three seasons of excavation in the late 19th century as part of the Palestine Exploration Fund's four tells project, combined with archaeological survey results and five seasons of excavation data provided by the current Lautenschläger Azekah Expedition. This study is therefore invaluable in re-evaluating and incorporating the results of early excavations into modern study. Furthermore, it brings under evaluation the changing understanding in site formation processes and their relationship to archaeological stratigraphy, which has been developing as a discipline from the late 19th century into the modern day.

Sabine Kleiman (Tel Aviv University) and Maya Hadash (Tel Aviv University), “Azekah's Regional and Inter-regional Connections during the 13th and 12th Centuries B.C.E.: A Narrative from Its Ceramic Evidence”

Tel Azekah has long been overlooked as a major player in the string of sites in the Shephelah during the Late Bronze Age. The site's archaeological record bears witness to its significance during the 13th and 12th centuries B.C.E., as it became a regional center possessing regional and intra-regional connections. Especially intriguing is the fact that Azekah survived the collapse of the international trading system at the close of the 13th century and thrived throughout the first half of the 12th century. A new network of regional connections had to be developed as new centers replaced old ones that disappeared.

This paper will focus on the ceramic evidence from the Late Bronze Age strata of Tel Azekah. An investigation of the imported Cypriot ceramics will be utilized to illustrate Azekah's strong economic relations during the 13th century. We will then present the results of the investigation of the exceptionally rich pottery assemblage, dating to the last third of the 12th century, that was found in the destruction of the city and was exposed in eight of the ten excavated areas. The ceramic finds exhibit a large variability of local types as well as several vessels of non-local fabrics and shapes. This evidence shows on the one hand the strong and highly developed local ceramic tradition at Tel Azekah, and on the other hand its lasting regional economic ties that reached as far as the Egyptian administrative centers.

Lyndelle Webster (Tel Aviv University), “A Radiocarbon-Based Chronology for Late Bronze Age Tel Azekah”

Southern Levantine chronology of the Late Bronze Age is heavily based upon Egyptian chronology—utilizing material culture connections that are limited in number, indirect in nature, and often imprecise. Radiocarbon sequences covering large portions of the Late Bronze Age are currently lacking in southern Israel, and fresh data are needed to provide a firm locally based absolute chronology. Recent radiocarbon dating at Tel Azekah aims to help fill this research gap; samples have been dated from the Late Bronze destruction layer on top of the mound, and from the extra-mural quarter, where a longer sequence (LB IIA–III) has been exposed.

This paper will present the new radiocarbon data and Bayesian modeling for Late Bronze Age Azekah. The results confirm the thriving nature of the site from the 14th century B.C.E. until deep in the 12th century B.C.E., when it was destroyed and abandoned for several centuries. A comparison with existing radiocarbon data from key sites such as Megiddo, Lachish, and Tell es-Safi will be provided. Implications for the arrival of Philistine culture will be highlighted, noting the difficulty reconciling with radiocarbon data from nearby Tel es-Safi, and the absence of Philistine 1 pottery from Azekah.

Karl Berendt (University of Alberta), “The People Left Behind: Disaster Skeletal Assemblage at Tel Azekah, Israel”

Azekah was a Canaanite city in the southern Levant. Following many years of prosperity, Azekah reached a disastrous end in the late 12th century

B.C.E. as part of the Late Bronze Age Collapse. In this destruction, traces of which are found all across the site, the remains of four humans were found beneath the rubble of a burned domestic complex. It appears that as this dwelling burned, dozens of massive ceramic vessels storing oil caught fire and exploded, and the building collapsed. This caused the inhabitants to be quickly buried and burned, where they remained untouched for more than 3000 years.

It is currently unknown whether these individuals reflect Azekah's ancient inhabitants, or how they fit into the greater cultural framework of the ancient Levant. Here I present the first results of osteological analysis of these skeletons. I review evidence from skeletal morphology about the individuals' age at death and biological sex. Pathology, stature, and musculoskeletal stress are analysed to complete this basic osteobiography. This information provides valuable clues on how they lived their lives, and how this might reflect on Azekah's ancient society. Using a forensic archaeological perspective, burning, scavenging, and other taphonomic processes are discussed to reconstruct the events surrounding their deaths. This information will be taken into context with what is known about the site to provide the first human perspective on Azekah's Late Bronze Age society, before its violent destruction.

Ido Koch (Tel Aviv University) and Sarah Richardson (University of Manitoba), "A Late Bronze Age III Workshop at Tel Azekah"

The remains of a Late Bronze Age III structure in Area T2 at Tel Azekah include a court with several installations, dozens of pottery containers, and a grinding kit assemblage with several implements and pigments. Pieces of the assemblage were analyzed using FT-Infrared Spectroscopy to determine material, to narrow provenance, and to suggest possible functions. In this paper, we will present the various architectural features of the complex, possible associated pottery and other finds, and the results of the material analysis. Based on these criteria we will suggest the possible types of productions of this workshop.

Alexandra Wrathall (Tel Aviv University), "The Resettlement of Azekah: The Iron Age IIA-IIB Ceramic Transition"

The transition between the Iron Age IIA and IIB periods (ninth-eighth centuries B.C.E.) is a decisive moment in the history of Judah as a kingdom, as it expanded westward and southward into the Shephelah and the Negev. As is often the case in archaeology, the finds, deriving from destruction layers at Tell es-Safi/Gath, Lachish, and Beer-sheba, only expose the end results, and not the long-term process. In the absence of transitional destruction layers, this paper will endeavour to bridge this gap through an analysis of a ceramic assemblage, which post-dates the destruction of Tel es-Safi/Gath (825 B.C.E.) and pre-dates that of Lachish III (701 B.C.E.), recovered from a pit at Tel Azekah.

This research project will integrate 'garbology', spatial distribution, and site formation theory, to provide an archaeological assessment of the pit's creation, function, and terms of disuse. Within the pit, which is indicative of short-term use, over 40 complete and semi-complete vessels were recovered and restored. The vessels represent a variety of types and decoration technologies. It will be argued that the assemblage attests to the late Iron Age IIA-early IIB transition, a period where hand-burnished ceramics were still in use alongside recently produced wheel-burnished vessels.

7A. Archaeology of Lebanon II

CHAIR: Hanan Charaf (Lebanese University)

Jeanine Abdul Massih (Lebanese University) and Shin Nishiyama (Chubu University), "New Archaeological Observations and Documentations in the Bekaa Valley (Lebanon)"

This paper surveys the archaeological documentation program for the sites of the Bekaa Valley. This program began with the mapping of the Roman Megalithic Quarry of Baalbek. The work in Baalbek is conducted by the Lebanese University in collaboration with the German Archaeological Institute (DAI). The documentation program for sites in the southern Bekaa Valley started in 2015 by a joint collaboration between the Lebanese University

and Chubu University (Japan). The southern Lebanon Archaeological Project focuses primarily on the southern plateau of the Bekaa and most precisely on the area extending from Hasbaya to the villages of Marjayun and Khiam. The study also covers the northern area of Kamed el-Loz for the importance of its quarries similar to other quarries elsewhere in the Bekaa. The documentation combines several methods of investigation from the archaeological survey to the mapping of sites. In this paper, preliminary survey results will be offered as well as images of the mapping techniques used, demonstrating the chronological transformation of this strategic region.

Paul Newson (American University of Beirut), "Landscape Archaeology in the Central Bekaa: Challenges and Opportunities"

The Bekaa Valley in Lebanon can be interpreted as a zone of cultural transformation, and a region that has experienced a particular settlement history as a result of a specific combination of physical geography and the resultant multiple micro-ecologies. These qualities have in the past attracted scholars, notably Leon Marfoe, who sought to establish various models to explain the special nature of the region's socio-cultural development. Many of these models were developed before the advent of current ideas of landscape archaeology and are due for reappraisal. Until recently, the prospect of undertaking a large-scale systematic program of fieldwork using current landscape archaeological techniques was limited. However, this paper will provide a summary of new, ongoing landscape studies of the Central Bekaa region. This region is particularly rich in archaeological remains of the Greco-Roman period, especially of monumental Roman temples and their associated villages. For it was during this period that the Central Bekaa became the focus of sustained settlement development as a result of its incorporation into the Roman colony of Beirut (*Berytus*). The emerging results from the current project are beginning to shed light on the extent of this period of increasing development, as well as yield new information on settlement trajectories in other periods. Alongside analyzing this new information, which is beginning to challenge previous notions of settlement history, this paper will also highlight some of the challenges to undertaking fieldwork in the Bekaa as well as some future opportunities.

Zeina Fani Alpi (Lebanese University) and Frédéric Alpi (Institut Français du Proche-Orient), "Eros/Putti Figures during the Greco-Roman Period in Lebanon"

Eros is widely shown as a *putto* together with either his mother Aphrodite/Venus, the goddess of Love, or his affectionate partner Psyche. An inscribed poem on a reused statue base illustrates vividly this latter case. The Heliopolis/Baalbek great altar has a depiction of him on his father Ares/Mars's shoulders. Out of his family circle but still as a child, Eros may also play the role of adult deities in Baalbek and the Bekaa, such as Apollo, some anonymous agrarian gods, or a member of the Bacchic procession of Dionysos. In the temple of Niha, we may also find him on "adventus scenes," riding a quadruped while entering a city. This diversity in staging points to the several positions occupied by young Eros in Greco-Roman Lebanon, where he appears not only involved in love affairs but attending to many other issues. This is the reason that he also seems popular on funerary monuments, where, as on temple walls or lintels, he can duplicate himself.

Anis Chaaya (Lebanese University), "New Insights into the Medieval Castle of Gbail/Byblos, Lebanon"

The medieval castle of Gbail/Byblos is one of the rare castles built by the Franks in the Latin East. This castle was studied by M. Dunand and P. Deschamps in the mid-1950s. However, archaeological excavations at the ancient site of Byblos where the castle is located came to a halt after the outbreak of the civil war in Lebanon in 1975, except for some modest restoration ventures aimed at rehabilitating the site for tourists. In 2015, a new research project started at the site focusing on the building techniques of the castle and the evolution of its construction. The program also included archaeological excavation conducted in several parts of the castle and the ditch surrounding it. The eastern part of the castle yielded important details pertaining to the

evolution of the construction of the castle and the organization of its defenses. Lapidary signs left on the walls add further to our understanding of the aspects of the building process of this defensive structure.

Nada Hélou (Lebanese University), “An Early Image of the Virgin on a Tomb from Tyre: An Iconographical Approach”

An old mural painting, discovered in the 1960s on a facade of a tomb (of the *loculus* type) in the necropolis of Tyre, was recently restored and exhibited at the National Museum of Beirut. The décor consists of two crosses, where the four arms are formed by a succession of red and green rings, flanking a central medallion enclosing the face of a female saint identified as the Virgin. Below this medallion and blocking the entrance of the *loculus*, an inscription dated to 440 A.D. is engraved on a marble slab. The face in the medallion resembles images of the Virgin Mary, except that the representations of the Theotokos at that time were not yet widespread in the Christian world.

The aim of this contribution is to identify this figure. If it is really an image of the Virgin Mary, it would be linked to the Council of Ephesus, which took place in 431 A.D. It was convened by the Pope following the upheaval provoked by the Patriarch of Constantinople, Nestorius, who had denied the maternity of Mary of the son of God. The Council of Ephesus confirmed the title of Theotokos (Mother of God) to Mary. The image of the Virgin on the tomb of Tyre would not only represent one of the oldest images of the Mother of God in the early Christian period, but also emphasize that the deceased buried in this tomb supported the decisions of the Council.

7B. Art Historical Approaches to the Near East I

CHAIR: Allison Thomason (Southern Illinois University Edwardsville)

Pedro Azara (UPC-ETSAB, Barcelona) and Marc Marin (UPC-ETSAB, Barcelona), “Sumer and the Modern Paradigm”

Sumerian items were discovered by Anglo-American archaeological missions in Iraq in the late 1920s and early 1930s. Discoveries, such as the royal tombs of Ur, were promoted through newspapers, magazines, books, lectures, photographs, and prints, as well as museum exhibitions. Images of these objects were published in magazines such *Cahiers d'Art* or *Documents*, and in books with collections of images of world art. Some painters, sculptors, poets, and architects, such as Henry Moore, Giacometti, Le Corbusier, Michaux, or Miró, most of them surrealists, were fascinated mainly by photographic and printed images of cylinder seals, tablets with cuneiform writing, and worshipper statues. These modern artists considered Sumerian “art”—until then unknown—as “primitive” art, or “sacred” art, as Bataille judged it. The shapes, expressions, and compositions of the Sumerian works were judged as primeval expressions of a lost united world, as the French poet and painter Henri Michaux wrote. Baumeister tried to understand the violence of the Second World War through the *Epic of Gilgamesh*. While all kinds of “primitive” arts have been considered as sources of inspiration of some modern western art, Sumerian influence has passed relatively unnoticed by art historians.

Virginia Herrmann (University of Tübingen), “Appropriation and Emulation in the Iron Age Gate Sculptures from Zincirli-Sam'al”

Monumental structures clad in relief-carved stone orthostats unite the fragmented political and ethnolinguistic landscape of the Iron Age Syro-Hittite kingdoms. This building practice passed down from the Hurro-Hittite Late Bronze Age evoked a collective memory of legitimate authority and was important for the construction of royal sovereignty. This paper presents a reassessment of the date of orthostats found in the South Gate and Citadel Gate of Zincirli, Turkey (Iron Age Sam'al), applying a seriation approach to the comparison of their stylistic details and iconographic themes and motifs with sculptural groups from other sites (especially Karkemish). The conclusion that the South Gate orthostats date to the early tenth century B.C.E. and are thus older than the ninth-century re-foundation of the city suggests that they were recycled from an earlier Neo-Hittite site. The Citadel Gate orthostats are found to creatively recombine elements from both Zincirli and Karkemish sculptures. The appropriation of architectural spolia in the South Gate and the emulation

or imitation of older works in the Citadel Gate reveal a dialectic between the embrace and rejection of the Hittite and Neo-Hittite past and traditional sources of authority by the founders of the new Aramaean dynasty of Sam'al.

Ariel Winderbaum (Tel Aviv University), “Images of Belief in Iron Age IIA Jerusalem: Iconic Inspection into the Belief Systems of Jerusalem at the Genesis of the Judahite Kingdom”

Jerusalem has been surveyed and excavated for over one hundred years, and yet very few remains from the Iron Age IIA period (tenth-ninth centuries B.C.E.) have been uncovered. This period, in which the first kings of Judah, maybe even the united monarchy, ruled, is important for many reasons, the most obvious of which is the fact that the Jerusalem of this period was the place and time where Judaism was forged into coherency.

In the last few years more Iron Age IIA layers have been found in Jerusalem, causing a shift in the perception of this city in that period. Unfortunately, very little has been found that can point to the religious customs of the inhabitants of Jerusalem.

The excavations in the City of David (seasons 2005–2008) and the Ophel site (seasons 2009, 2012–13), directed by Dr. Eilat Mazar of the Hebrew University in Jerusalem, have uncovered not only several buildings of the Iron IIA period (some monumental and all firmly dated) but also many glyptic artifacts, amulets, and figurines ascribed to this period. These finds are the first glimpse offered into the customs, rituals, and religion of the inhabitants of Jerusalem in this critical period.

Alison Barclay (Saint Mary's University), “New Thoughts on the ‘Syrianizing’ Bronzes from Mt. Ida, Crete, Ninth-Eighth Centuries B.C.E.”

Since the discovery of the Near Eastern-inspired artifacts found in the sacred cave on Mount Ida, scholars have speculated over the ethnicity of the artisan(s) and the place of manufacture for these artifacts. The predominant theory argues for immigrant craftsmen from Syria who either produced these artifacts themselves or trained local artisans in their techniques. While any attempt to determine the ethnicity of an artisan based on stylistic criteria can lead to overly speculative results, my research demonstrates that the analysis of criteria such as medium, technique, function, and iconography—when done with full consideration of contemporary socio-historical and archaeological contexts—may indicate the regional ethnicity of an artisan, or at least the degree to which they were familiar with the meaning of both object and iconography. Furthermore, it has been generally assumed that the “Syrianizing” bronzes found in the Idaean cave were produced at Knossos. This theory is based on archaeological evidence, which seemed to indicate that Knossos was the main urban and commercial center active in early Iron Age Crete. But the increasing archaeological evidence for Levantine activities on Crete (at Chania, Eleutherna, and Kommos) may support an argument that Eleutherna was the main center for the production and consumption of the “Syrianizing” artifacts found in the cave. Given the proximity of Eleutherna to the Idaean Cave, perhaps we can even suggest that the bronzes were created for, and possibly deposited by, a member of the immigrant population rather than the indigenous Cretan elite.

Shannon Martino (School of the Art Institute) and Matthew Martino (University of Chicago Laboratory Schools), “Visualizing Museum Collections in Place and through Time”

Archaeologists and art historians have long recognized that style overlaps boundaries; it is not confined to language groups, ethnicity, or governed areas. Rather, style is fluid and can be shared across these perceived social boundaries as well as across the boundaries of material and artifact type. It is often once an artifact reaches the museum that these boundaries become codified, however; the categorization of artifacts is often based on the research foci of their catalogers and their country of origin. While the relatively recent move for museums to make their collections' databases available to the public has been a welcome advance for researchers and the greater public alike, the visualization of that material remains an issue, particularly given the thousands of materials in those collections and the categories to which each object has been bound.

We aim in this paper to propose a method for visually representing the

stylistic variety of materials held by museums using an interface designed to be useful for both researchers and laypersons who wish to learn more about the past. Our case study will focus on one museum's collection for which we will create a diachronic viewing method for excavated artifacts that easily crosses borders and takes into account available contextual information.

7C. Glass in the Ancient Near East

CHAIRS: Katherine Larson (Corning Museum of Glass) and Carolyn Swan (University College London, Qatar)

Tori Benson (Cranfield Forensic Institute, Cranfield University), Angela McDonald (Centre for Open Studies, Glasgow), and Andrew J. Shortland (Cranfield Forensic Institute, Cranfield University), "Analysis of Near Eastern Early Glass Beads Found in Egypt and a Hint to the Origin of Glass?"

The earliest regular finds of glass in Egypt and Mesopotamia occur around the end of the 15th century B.C., although isolated examples are found earlier. This paper considers a set of glass beads found in Tomb 27 at Gurob, in the Southern Fayum in Egypt, reported in Brunton and Engelbach (1927) and now in the Hunterian Museum in Glasgow. Tomb 27 is dated to between the reign of Amenhotep I (1525–1504 B.C.) and Tuthmosis III (1479–1425 B.C.). This makes the glass very early for Egypt, contemporary to (or probably slightly earlier than) the first substantial finds of glass associated with Tuthmosis III.

Analysis of these beads was carried out by LA-ICPMS. Preliminary interpretation of the data has shown that they are typical Late Bronze Age plant ash glass and perhaps represent two main batches of glass. The trace element component of the glass is characteristic of glass from Mesopotamia, not Egypt—these therefore represent very rare, and early, examples of glass that has travelled across borders. Tomb 27 may be linked to a harem, which intriguingly complements finds connected with the foreign wives of Tuthmosis III.

Finally, analysis of the glass beads showed that not all of them were glass—some were glazed quartz. These would have had a very similar appearance, and appeared to be designed to match the glass (or vice versa). The composition of the glaze of the quartz beads was very similar to that of the glass itself, strongly suggesting that glass was being applied to the surface of the quartz.

Katharina Schmidt (German Protestant Institute of Archaeology, Amman), "Innovations in Iron Age Mesopotamian Glass Technology"

This paper discusses the little-known glass objects of the Iron Age in Mesopotamia and contributes to the history of glass by bridging the gap between the Late Bronze Age and the Hellenistic periods, both of which have been relatively well studied. Emphasis will be drawn to significant developments in the history of glass, including the intentional production of colorless glass, the introduction of mineral natron as flux, and the invention of high-lead, high-copper glasses. In particular, the group of so-called "cast and cut" vessels and inlays made of monochrome translucent and decolorized glass are of importance, as they not only epitomize chemical changes, but also vary from earlier Late Bronze Age examples with regard to the manufacturing techniques applied. The major questions to be investigated are to what extent glass forming borrowed techniques from metal, stone, and faience working, and whether typological similarities can be observed across these media. Workshop equipment, the amount of required fuel, and the organization of these workshops will also be tackled. In this regard, the study of contemporary cuneiform sources is shown to yield valuable insights, as tools and furnace types are mentioned in these texts.

Laure Dussubieux (The Field Museum), "Production and Circulation of the Glass Beads from Kish, Iraq"

The study of glass in the Middle East is essentially focused on vessel and utilitarian objects. Ornaments and more especially beads have been largely neglected and very little is known about their production and trade. Beads in general and glass beads in particular are durable artifacts traded over long distances that can contribute to the reconstruction of inter-regional exchange networks.

From 1923 to 1933 the Field Museum and Oxford University excavated the site of Kish, located in modern Iraq, 80 km south of Baghdad. Kish is an ancient city occupied as early as 3200 B.C. through the seventh century A.D. A little more than 400 glass beads were identified in the anthropology collections at the Field Museum with dating, when available, ranging from the Early Dynastic to the post-Sasanian period. The scarcity of the contextual information for most of the beads as well as an often poor preservation state created challenges for their study. This research is based on the typological observation of the beads as well as the elemental analysis of the glass using laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS). The results show a complex glass bead procurement pattern involving local production centers as well as production centers located in South Asia. Results were also used to revise the chronology of certain artifacts.

Katherine Eremin (Harvard Art Museums), Elizabeth LaDuc (University College London), Elizabeth Molacek (Harvard Art Museums), Patrick Degryse (Centre for Archaeological Sciences, Leuven), and Andrew J. Shortland (Cranfield Forensic Institute, Cranfield University), "Glass within the Tethys Pavement at Harvard University: Analysis and Interpretation"

The Harvard Business School has a large-scale mosaic pavement depicting the sea goddess Tethys surrounded by sea creatures, which was excavated at Antioch in 1938. The pavement is unusual in the large amount of glass present in the fish and other sea creatures as well as within Tethys herself. Recent research has focused on the analysis of the glass tesserae within the pavement to differentiate between original and later glass (presumed to date from the conservation of the mosaic in the late 20th century) and to determine the likely source of the original pieces.

Due to the substantial amount of glass present, the initial phase involved a survey of the pavement to determine the quantity and variety of glass present and determine the best strategy for analysis. This was followed by non-destructive analysis by portable x-ray fluorescence (XRF), which provided information on the main types of glass present and the dominant glass colorants/opacifiers. This quickly revealed that apparently similar tesserae could vary significantly in their chemistry, which necessitated an increase in the number of pieces analyzed compared to that originally proposed. The XRF analysis allowed the tesserae to be separated into initial compositional groups but showed that there was considerable variation even within a group. It was hence proposed that micro-samples should be taken from selected tesserae to obtain more accurate compositional data. This involved analysis scanning electron microscopy with energy dispersive microanalysis (SEM-EDS) and laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS). This paper presents the analytical methodology used to study the glass within the pavement and a comparison of the results obtained from the different analytical methods used.

7D. Archaeology of Jordan I

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

Michael Orellana Mendez (Andrews University), "Building an Iron IIB–IIC Pottery Assemblage for Tall Jalul"

Tall Jalul is the largest tell site in the central Jordan plateau and is part of the Madaba Plains Project (MPP). Its ceramic corpus includes an important assemblage of Iron Age IIA–C pottery, which is known only in a general way in Transjordan. This project, which is part of a doctoral research program, intends to increase the knowledge of Transjordan Iron IIB–IIC pottery by analyzing the assemblage found in Field G, locus 41, at Tall Jalul. The pottery from this locus has been selected for three reasons: (1) it contains Iron IIB pottery, (2) it has an unusual concentration of pottery in just one locus, and (3) it contains possible Moabite ceramics. The results presented in this paper, focused on the first stage of this project, include statistical data and a comparative typological analysis.

Trisha Broy (Andrews University), “Working toward a Definition of the Collared-rim Pithos”

Due to the terra incognita nature of the Transjordanian data before the last few decades, the overwhelming majority of past studies on the collared-rim pithos focus almost exclusively on the form as it is known from Cisjordan. Excavations in Transjordan have begun to reveal a different chronological scope and evolution of form than is observed in Cisjordan. Although any hard division between the regions is somewhat artificial, they are not so interdependent as to have identical ceramic horizons. This study will endeavor to examine the classification of the collared-rim pithos throughout both regions and identify the form variations that may be considered part of this vessel type.

Friedbert Ninow (La Sierra University; Friedensau Adventist University), Monique Vincent (La Sierra University), and Kent Bramlett (La Sierra University), “The 2017 Season of Excavation at Khirbat al-Balu’a—In Search of Patterns of Settlement”

Khirbat al-Balu’a, a large, 16 ha basalt site located on the southern edge of the Wadi al-Balu’a was the primary site guarding access to the Moabite Plateau in Central Jordan throughout the millennia. Survey and excavations so far have revealed an extensive walled fortification system dated to the Iron Age. Survey sherds from the site and its surroundings date from the Bronze Age into the Hellenistic, Roman, and Islamic periods, attesting to the long-lived importance of Balu’a’s position. Further excavation and survey intend to focus on establishing the stratigraphic sequence of the core of the site, while also exploring the Iron Age settlement. The sequence of settlement and abandonment during this period more than doubled the size of the site for a short period of time, leaving behind impressively intact architecture. Work in 2017 will be focusing on key features of the site (such as the *qasr* and fortification system as well as domestic architecture) to further understand the occupational history of the site.

Robert D. Bates (Andrews University) and Paul J. Ray, Jr. (Andrews University), “Between the Roads: An Update on the Iron Age Roads at Tall Jalul 2016–2017”

In 1992 and 1994 two Iron Age roads were uncovered in Field B at Tall Jalul, Jordan. Large sections of the western side of the “upper road” were found relatively close to the surface and it was dated to Late Iron Age II. A “lower road” was found on the eastern side, 1.5–2.0 m below the area where the upper road had been robbed out. A revetment wall was also found below the upper road abutting the lower road. In the preparation for the final publication of Field B, it was discovered that there was inadequate ceramic evidence to support the initial dating of the upper and lower roads. Additional ceramic evidence was needed to determine the nature of the interval between the construction of the two roads.

The purpose of this paper is to present the results of the 2016–2017 excavation seasons, in which the upper road and lower roads were removed in Squares B2 and B6 in order to clarify the stratigraphy between the roads and provide a firm date for the construction of these pavements. Preliminary results suggest that the revetment wall was not built in conjunction with the lower road but was added later. A clear ceramic sequence can now be reported.

Wilma Wetterstrom (Semitic Museum, Harvard University; Ancient Egypt Research Associates) and Joseph Greene (Semitic Museum, Harvard University), “Unpublished Plant Remains from Tell el-Kheleifeh Provide New Insights into an Edomite Entrepôt”

Glueck’s 1938–1940 excavations at Tell el-Kheleifeh produced archaeobotanical and geological collections not included in Pratico’s 1993 publication of the architecture, pottery, epigraphy, and metallurgy from the site. The unpublished plant remains, part of the Nelson Glueck–ASOR Archive at the Semitic Museum, Harvard University, are now being studied by Wilma Wetterstrom. These remains, nearly all charred, open a new window onto Tell el-Kheleifeh. They include foods to be expected at any Iron Age Near Eastern settlement: barley, wheat, dates, and figs. The figs—a liter of exceptionally

well preserved fruits—suggest the possibility of local cultivation. Plump and free of wrinkles, they appear to have been burned while fresh. Since fresh figs are perishable it is unlikely that they were imported but rather grown locally, tended by hand-watering. The barley, over 9,000 charred hulled grains found in a pot along with minute quantities of wheat and chaff, may have been cultivated locally as well. Rainfall runoff could have supported cereal farming in this semi-arid region (Ramsay and Parker 2016). Also present are woody species, which offer clues to local conditions. Charred palm timbers suggest limited access to true trees. Fragments of burnt fuel comprise a variety of species rather than one or two woods, suggesting that firewood came mainly from shrubs and small trees found in the Wadi Arabah.

7E. Archaeology of Cyprus III

CHAIRS: Nancy Serwint (Arizona State University) and Walter Crist (Arizona State University)

Katelyn DiBenedetto (University of Nevada, Las Vegas), “The First Permanent Settlers of Cyprus: Pushing the Neolithic Boundaries”

We all have mentors, who not only start us on our journey, but continue to have profound impacts on the course this journey takes. For me, this mentor was Stuart Swiny. In a single seminar, Stuart instilled in me a passion for a time period that remains understudied both on Cyprus as well as the broader Mediterranean islands: the Early Neolithic. Current archaeological evidence suggests that Cyprus was the first permanently settled Mediterranean island, defying conventional wisdom. This occurred around 11,000 years ago, during the Neolithic Revolution. Neolithic Cyprus presents a unique opportunity for investigating the management strategies of natural resources because human groups had to bring all major economic resources with them to the island. The island, which is semi-arid, also has a number of physical and environmental constraints, including limited freshwater sources due to the unpredictability of rainfall.

This, in turn, impacts access to arable land for growing crops and graze land. The question is how did these early human settlers manage these economic resources as well as the finite natural resources on the island, such as water and arable land, particularly given that Cyprus is a marginal and risky environment? While Stuart did not work in the Neolithic, he was a proponent of getting people to work on the island’s earliest time periods. Because of his guidance, my research attempts to push the boundaries for what we know about the earliest permanent human settlers of Cyprus.

Walter Crist (Arizona State University), “Changing the Game: Bronze Age Gaming Stones from Cyprus”

During the excavations at Episkopi Phaneromeni, Stuart Swiny identified a large number of enigmatic and hitherto rare artifacts, which he identified as Cypriot versions of the Egyptian games *senet* and *mehen*. Since his publication of this class of objects, they have proven to be ubiquitous at Bronze Age sites on the island and have even been found at some later sites. This paper examines research the contribution Swiny’s identification of these objects contributes not only to the archaeology of Cyprus, but to the archaeology of play in the ancient world. His identification has led to the largest corpus of archaeological games anywhere in the world, and this data set allows for research that is impossible elsewhere. My research focuses on the relationship between play and increasing social complexity and how people used games to react to and redefine their relationships with others *vis-à-vis* changing social boundaries that made it more difficult to interact with one another. Swiny’s contribution to the study of games in archaeology may prove to be foundational to bringing the examination of this often overlooked aspect of social life out of the culture historical paradigm it has been stuck in for decades.

Louise Steel (University of Wales Trinity Saint David), “What Happened in Room 103 at Aredhiou?”

Aredhiou Vouppes is located in the rural hinterland of Late Bronze Age Cyprus. Current understanding indicates this to be a farming site and a key

nodal point within the island's economic network, supporting copper extraction in the hilly flank zones. Large-scale agricultural production is illustrated by the material culture, which includes large numbers of ground stone tools as well as significant quantities of pithos sherds, alongside impressive storage facilities and workrooms.

Room 103, however, stands out from the other buildings at Aredhiou, as well as those identified at other contemporary sites, for its architectural features: the large open floor space (ca. 7.5 x 5 m), the sunken floor cut into the bedrock, and the massive rubble construction. The special nature of this room is further indicated by the objects recovered within it, which are distinct from the more usual utilitarian objects found elsewhere on the site. This paper will focus on how this space was used and incorporated within social action at Aredhiou, drawing upon spatial distribution and discard analysis, but also exploring peoples' embodied experiences of this space and likewise examining the material entanglements of the objects used (and abandoned) in Room 103. Through these analyses, this paper aims to demonstrate that Room 103 room was a place for gatherings and played an important role in ceremonial action at the site, where esoteric knowledge was revealed, shared and enhanced through manipulation of the senses; and as such it played a significant role in social reproduction at Aredhiou.

Kevin Fisher (University of British Columbia), "From Duplex to Courtyard House: Re-assessing Bronze Age Social Change on Cyprus"

It has been nearly 30 years since Stuart Swiny's "From Round House to Duplex: a Re-assessment of Prehistoric Bronze Age Society" provided a much-needed synthesis and cogent re-examination of the archaeological evidence for the organization of prehistoric Bronze Age society. As his title suggests, Swiny saw changes to house form from the round buildings of the Chalcolithic as an important indicator of social change. Three decades of archaeological work and the development of new frameworks for the study of built space allow us to once again re-assess the relationship between house and society during the Prehistoric Bronze Age, while moving beyond the scope of Swiny's original paper to consider the profound social changes that came after this period, shaped by new Late Bronze Age domestic architecture.

A. Bernard Knapp (University of Glasgow), "Piracy and Pirates in the Prehistoric Mediterranean"

Piracy, as well as the social and legal customs that regulated it, is likely as old as the emergence of sailing ships on the high seas, and some suggest that the Mediterranean was the birthplace of piracy. The practice(s) of piracy required at least some people who had essential maritime skills. The lesson we may take from many later, historical examples is that 'piracy' would have offered to certain seafaring peoples a way to enter the lucrative commerce of the eastern Mediterranean Late Bronze Age. The literature on 'piracy' during the Bronze Age, however, is limited, controversial, and often contradictory. And, despite a great deal of archaeological maneuvering to establish their existence, there is no mention in any Late Bronze Age cuneiform or Linear B document of 'piracy' or 'pirates' per se—or of any words translated as such. This paper considers a range of Late Bronze Age archaeological and textual evidence from Cyprus, Anatolia, and the Levant and considers (a) whether or not piracy was a prehistoric phenomenon, and (b) if it was, what sort of practices and activities pirates might have been involved in at that time.

Joanna S. Smith (University of Pennsylvania), "Facing a Crowd: Dedicatory and Museum Displays of Cypriot Art"

Crowds loom large in ancient Cypriot art. Collective burials preserve crowds of objects and bodies. Composite sculpted images abound, such as the Vounous bowl. Best known is the crowd of votive sculptures at the Iron Age sanctuary of Ayia Irini. Such object groupings or assemblages were important parts of ancient life. Understanding how these crowds developed and were controlled in the past may in turn inform us about how we can bring ancient viewing experiences to the public and make them relevant. A crowd can form a potentially dangerous crush of anonymous bodies. Disorderly crowds may be unruly and foment change. An orderly crowd may instead foster community

and unification through shared human experiences. Being part of a crowd can offer a sense of identity, belonging, and support. Facing a crowd of ancient objects allows one to feel the force of the group, through volume and repetition, and to perceive distinctive features, the extraordinary details of faces and dress. Museums use the crowd in different ways to immerse and engage the viewer. For example, with the Ayia Irini group in the Cyprus Museum, the viewer may stand in place of the altar, while in the Medelhavsmuseet, the viewer may join the crowd. This paper explores the potential for both contextually informed displays of crowds—drawn from object placement and disposal in tombs and sanctuaries—as well as thematically created crowds. It addresses the importance and impact of order and disorder, chronological and material variety, and scales of representation.

7F. Archaeology of Iran

CHAIR: Holly Pittman (University of Pennsylvania)

Golnaz Hossein Mardi (University of Toronto), "The Petrographic Analysis of the Dalma Pottery in Central Zagros, Iran"

The pottery of the early Middle Chalcolithic period in the east-central Zagros of Iran is known as the Dalma pottery. The Dalma tradition spread over northwestern Iran and central Zagros. It consists of painted, impressed, and plain wares. In east-central Zagros, the site of Seh Gabi in the Kangavar valley is a good representative of this tradition. A small amount of Dalma impressed and plain pottery has also been discovered in west-central Zagros, including the Mahidasht valley. The purpose of my research is to examine the organization of Dalma pottery production in central Zagros. This research builds on previous studies of the Dalma pottery. I aim to compare the Dalma painted pottery with the impressed pottery at the site of Seh Gabi by means of petrography to see how different these two types are regarding the raw material procurement and manufacturing technology. This petrographic analysis is carried out on 21 Dalma painted and 10 Dalma impressed thin sections. The petrographic result is then compared with the thin sections from two other sites: Godin Tepe, about 6 km southwest of Seh Gabi in the Kangavar valley (nine thin sections), and Tepe Siahbid, located in the Mahidasht valley in west-central Zagros (11 thin sections). This comparison allows me to investigate how different the ceramics are at different sites in the same valley as well as in different valleys, which will shed light on the nature of the Dalma pottery production in central Zagros.

Marcin Wagner (University of Warsaw), "The Temple of Fire from Topaz Gala depe in Southern Turkmenistan"

In 2009, archaeologists from the Institute of Archaeology, University of Warsaw started excavations at Topaz Gala depe in the Serakhs Oasis, in southern Turkmenistan. The remains of the fire temple from Topaz Gala depe are one of the oldest known. The radiocarbon analyses give a precise sequence of dates from the tenth to the middle of the eighth centuries B.C. To date, archaeologists have uncovered four chambers of the Zoroastrian fire temple. The most interesting is the main, largest chamber, divided by three pairs of transverse walls and pillars into four rectangular spaces, and associated with a specific function during the ceremony. Into this chamber archaeologists found in situ a clay altar with a thick layer of ashes, a square mud brick podium, a place for "sacred" ashes, and three storage jars. One of them was standing in the corner and was filled with ashes, presumably collected from the altar. Two similar storage jars, partly preserved, were standing upside down. This paper will try to explain the function of the individual spaces and the roles of the uncovered artifacts in the Zoroastrian ceremony.

This project received the financial support from National Science Centre (2014–2016, grant no. UMO-2013/09/B/HS3/04315).

Possum Pincé (Ghent University), “The Production and Distribution of Late Bronze Age Ceramics in the Kur River Basin (Fars, Iran)—New Insights Based on Handheld X-Ray Fluorescence Spectrometry and Thin Section Petrography”

This paper presents the results of an analytical and petrographic study on 99 Late Bronze Age ceramics from seven different sites in the Kur River Basin (Fars) of Iran. Based on a macroscopic study, these ceramics could be classified into three groups, namely Qaleh, Shogha, and Taimuran ware. These ceramic groups are more or less contemporary and seem to represent two reciprocal exchange networks in the basin during the Late Bronze Age (1600-700 B.C.E.).

To determine the manufacturing technology of these wares and to make a more profound reconstruction of the regional trade patterns and the socio-economic interactions between sites in the Kur River Basin during the Late Bronze Age, two archaeometric techniques were applied. The first analytical method was handheld X-ray Fluorescence (hXRF) spectrometry, which allowed the determination of the elemental fingerprint of the ceramics. Based on these results, a selection for thin section petrography was made to obtain a better understanding of the reasons behind the compositional groups deriving from hXRF spectrometry and to acquire new information about the production processes and the origin of the primary materials.

This study is part of a larger archaeometric project that investigates pre-Islamic ceramics from two regions in the Zagros mountain range, namely the Pusht-i Kuh region (Luristan) and the Kur River Basin (Fars). The studied ceramics belong to the Vanden Berghe collection kept at the Royal Museums of Arts and History (Brussels, Belgium) and several collections from the Penn Museum (Philadelphia, USA).

Serenella Mancini (Sapienza University of Rome) and Agnese Fusaro (University of Barcelona), “Estakhr (Fars): An Archaeological Reassessment of the Pottery Corpus”

This paper presents the preliminary results of the study of the ceramics collected during the 2012 campaign carried out by the joint Iranian-Italian Archaeological Mission in Estakhr (Fars, Iran). Estakhr, an important center in the Early Islamic period, was previously investigated by the Archaeological Missions of the Oriental Institute of the University of Chicago. Nonetheless, pottery was never published, except for a short report (Schmidt 1939); recent publications only consider fine ware (Nováček 2009).

The ongoing research focuses on the pottery from layers and structures belonging to the quarter west of the mosque. An important part of the research concerns archaeometric analyses. The pottery corpus mostly consists of unglazed wares, with the glazed class representing only about 6%. The corpus is characterized by high uniformity and is dated to the 9th–12th/early 13th century A.D. The finding of a substantial number of molds and kiln furniture items, besides the preliminary analysis of the fabrics, suggests a local ceramic manufacture. At the same time, some imports have been recognized: opaque glazed wares of the Early Islamic period and a Far Eastern stoneware specimen.

All considered, this comprehensive study, including stratigraphic-chronological analysis and research on technology, provenance, and decorative aspects, allows us to better understand Estakhr’s role both as a ceramic manufacturing centre and as a trading post.

Breton Langendorfer (University of Pennsylvania), “Serpentine Surfaces: Snakes and Animated Textures in the ‘Intercultural Style’ Objects from Jiroft, Iran”

Since their first discovery in Iraq in the initial decades of the 20th century, the carved chlorite objects of the “Intercultural Style” have intrigued scholars as evidence of long-distance trade across the world of the Early Bronze Age. Carved in a distinctive manner with a set repertoire of themes, these objects originated at workshops within the modern Iranian province of Kerman but have been found as far afield as the Indus valley and the Persian Gulf. This focus on the mechanics of production and distribution, however, has meant that comparatively less attention has been given to iconographic or aesthetic considerations. The discovery of a vast new corpus from Konar Sandal near Jiroft in the late 2000s provides a broader field of objects for study, coming from what appears to have been the central area of their production. This paper

seeks to approach the “Intercultural Style” from a visual perspective, focusing specifically on the iconographic prominence of snakes embellishing many of the Jiroft vessels. Whether depicted alone or in combat with other animals, the bodies of snakes are often used to fill visual space and overwhelm the viewer with a scintillating vision of coiled, scaled bodies, sometimes without the distraction of heads or tails. I argue that this approach is in fact part of a larger aesthetic emphasis within the Jiroft objects on the creation of coiling or swarming textures, working to enliven the object and animate its surface under the eyes and hands of the viewer.

Benjamin Mutin (Harvard University; French National Center for Scientific Research—CNRS) and Omran Garazhian (University of Nyshabur), “Recent Archaeological Research in the Southern Periphery of the Lut Desert, Iran”

This paper presents recent archaeological field research in the Bam region (Kerman), south of the Lut Desert in southeastern Iran. This research is conducted as part of the Bam Archaeological Mission, an Iranian-French cooperation funded by the French Ministry of Foreign Affairs and International Development. This mission is a full-scale project that aims to reconstruct the past of the Bam region. The first field season in 2016 was dedicated to survey. This survey recorded around 200 archaeological sites with remains dating between the Paleolithic and the Medieval period, with numerous, well preserved Neolithic, Chalcolithic, and Bronze Age sites. These discoveries are of particular interest, considering that some are literally unique, and especially that many questions remain as to these periods in southeastern Iran. Although significant renewed efforts have been made to investigate southeastern Iran within the last fifteen to twenty years, a large part of current knowledge of this region is based on archaeological projects, particularly stratigraphic excavations, conducted during the 1960s and 1970s. This paper presents the scientific objectives of the Bam Archaeological Mission as well as its first results and their relevance for the analysis of the ancient Indo-Iranian Borderlands and southern Middle Asia.

7G. The CRANE Project I

CHAIR: Timothy P. Harrison (University of Toronto)

Sandra Schloen (University of Chicago) and Miller Prosser (University of Chicago), “Integration as Inspiration: Achieving Research Goals Using the Online Cultural and Historical Research Environment (OCHRE)”

At the ASOR conference in San Diego, 2014, we presented the Online Cultural and Historical Research Environment (OCHRE) as the data integration platform for the ambitious CRANE Project which was gaining traction at that time. In Boston, 2017, from the opposite coast, and from the opposite end of the original five-year timeframe, we will pause to reflect on the scale, scope, and strategies of the CRANE integration endeavor. But this is not the stuff of mere nostalgia. Using examples from the integrated data sets of the participating projects, and using integrated functionality provided by the developing set of computational tools available in OCHRE, we will highlight a variety of outcomes that demonstrate how integration at multiple levels provides the means to achieve research goals. By working within a carefully curated, collaborative, and well-modeled database environment, the scholar is freed from the messy details of data management to pursue the more rewarding scholarship and analysis that inspired the data collection in the first place.

Stanley Klassen (University of Toronto), “CRANE Data Integration: Results after the First Five Years”

Data integration has been an integral part of the CRANE Project since it was first launched in 2012. To test the robust OCHRE database system utilized by CRANE, datasets from the Tayinat and Zincirli excavations were chosen. These projects provided an ideal test case as they possessed divergent recording systems and descriptive nomenclature. Following the successful integration of data from these two projects, this effort was expanded to include a wide range of data (both published and unpublished) from additional field projects within the Orontes Watershed. Over three terabytes of data have been integrated in CRANE thus far, captured in diverse formats (bitmapped images, vector maps,

structured tables, and unstructured text), each recorded according to its own project-specific taxonomy. This paper will provide a synopsis of the CRANE data integration process and our results after the first five years. It will highlight some of the challenges faced in dealing with the diverse datasets produced by the wide range of research traditions and recording systems represented by CRANE's partnering projects. Prospects for future expansion and the broader utilization of the ever-expanding CRANE database and research network will also be explored.

Darren Joblonkay (University of Toronto), "Archaeological Data Mining: A Digital Key to Unlocking the Past"

Contextual archaeologies have long focused on understanding the complex relationships evidenced by the association of artifacts unearthed from the extant archaeological record in order to reconstruct past lifeways. The ability to elucidate the complex patterns and relationships inherent within such data has long been thought to hold the key to a deeper understanding of the socioeconomic organization of past communities. In the digital age, large heterogeneous datasets, such as those created as a result of archaeological fieldwork, can easily be organized and manipulated within complex digital research environments to achieve remarkable results. In the following paper, I will demonstrate the utility of applying data mining techniques, particularly the use of association rules, to uncover meaningful relationships between archaeological data. Such relationships can be mapped and provide a graphical representation of the contextual association of objects in relation to one another. It is argued that this representation reflects the (fragmentary) structural organization of artifacts as a by-product of past communities of practice, the interpretation of which provides the archaeologist with a more nuanced understanding of the past socioeconomic organization of a particular community at a given moment in time.

Andy Chow (University of Toronto) and Eugene Fiume (University of Toronto), "The CRANE Ceramics Project: The Challenges of Automated Sherd Matching"

One of CRANE's goals is the development of tools to facilitate archaeological analysis, including the shape-matching of ceramic vessels, one of the most ubiquitous artifact types uncovered during excavation. Although archaeologists habitually perform this kind of analysis by eye, automated partial shape matching remains a challenging problem in computer science. The problem is further complicated by 'noise' that is intrinsic to ceramic sherds. In the context of sherd-matching, noise can be viewed as shape information that is extraneous to the design of a vessel. For instance, handmade ceramics contain noise in the form of uneven thickness and irregular curvature, produced during the manufacturing process. Another source of noise comes from damage and surface erosion, which appear as random chips and fractures. Lastly, noise is introduced during data acquisition, since freehand drawings cannot depict sherds with perfect accuracy. As a result, corresponding sherds from similar vessels that look similar to the human eye can differ significantly in shape from a shape-matching point of view. Sherd-matching algorithms must therefore circumvent this noise, as well as tolerate modest differences in orientation and scale, in order to correctly match sherds from similar vessels. The application of sherd-matching in archaeological field research contexts presents another set of challenges stemming from operational constraints, such as the ability to function offline on modest hardware. This paper will discuss several attempts at finding a solution to these challenges, including the limitations of each potential approach to the problem.

Stephen Batiuk (University of Toronto), "3D Visualization Tools for Analysis, Publication, and Public Outreach"

Archaeology has experienced an explosive growth in methodological approaches to the integration of archaeological data, with increasingly sophisticated visualization capabilities, as a result of the growing array of computer applications, 3D data capture technologies, and modelling software, fueled by an ever-increasing access to processing power. This paper will focus on CRANE's development of 3D models as research tools, employed

at multivariate scales of analysis (landscape, settlement, structure, and/or objects), and how these multiple scales integrate and facilitate the diverse research aims of the CRANE Project, including their utilization in publications and public outreach.

7H. Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations II

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

Bruce Routledge (University of Liverpool), "Duration Not Sequence: Rethinking Tell Formation at Tall Dhiban, Jordan"

Traditionally tells have been excavated and understood as a sequence of superimposed occupations. These sequences are then parsed and analyzed as discrete episodes defined by the parameters of acknowledged chronological specialisms. Yet, the actual experience of excavating a tell site suggests a rather different perspective. By their very definition tells are places where the past persists, quite literally as the ground beneath ones feet. Reoccupation, reuse, and recycling are central dynamics in tell formation and themselves measures of the shifting modes and temporalities by which people living in the same place have differentially engaged with the material past at different points in time. Using examples from the site of Tall Dhiban in central Jordan, this paper will explore the important role played by the duration of material features from the past in the continued occupation and reoccupation of tell sites through time. It will be argued that expanding our focus from sequence to duration offers us our best chance to produce integrated life histories of tells as emergent places up to and including the present day.

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 is not a problem to be solved or removed, but rather the very nature of the Syro-Anatolian city-states' identity. At the same time, however, 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 understood as a number of groups who were "living together, differently."

Jacob Lauinger (Johns Hopkins University), "The Statue of Idrimi Inscription: Composite Text or Pastiche?"

The inscribed Statue of Idrimi from Alalah (modern Tell Atchana) provides us with one of the earliest narrative accounts from Late Bronze Age Syro-Anatolia and thus serves a crucial source for reconstructing the history of that period. Yet certain fundamental questions remain concerning the composition of the narrative that complicate its use as a historical source. For instance, as observed by J. Vidal (2012) with respect to the text's opening section, "[the scribe] could compose a completely original story employing folkloric motifs and themes. On the other hand, [he] could simply compile and edit pre-existing oral and/or written traditions on the young Idrimi." This paper explores, first, whether the Idrimi inscription is best understood as a *composite* text made up of various pre-existing texts or a *pastiche* incorporating

a variety of different styles; and second, the extent to which this ambiguity may have been an intentional strategy on the part of the text's author/redactor.

Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University), “What about Considering an Author’s Intentionality for Revisiting a Text–Genre of a Narrative Story? A Concrete Example with the Cycle of Ba’lu and ‘Anatu”

The Cycle of Ba’lu and ‘Anatu (KTU 1.1-6) is traditionally known as a myth. But what are the criteria to assume that the ancient people share our modern classifications of genre, especially for narrative text? More importantly, such determinism can definitely bias investigations. I would argue that avoiding text genre will highlight new evidence for setting up a new hermeneutics and for reconsidering text genre. How? When using empirical and pragmatic approaches, especially for investigating an author’s intentionality, it gives the opportunity to follow a Popperian schema which is useful to avoid text genre, as well as determinism. Thus, it reveals new evidence in the Cycle of Ba’lu and ‘Anatu to argue for historical and political testimonies and not just myth. In particular, a few sections of this text can be useful to draw up an ethnography of politicians taking over new territories.

7I. Archaeology of the Southern Levant I

CHAIR: Owen Chesnut (North Central Michigan College)

Holly Winter (University of Sydney), “Palaces of the Dead: A New Perspective on Middle Bronze Age Palaces in the Southern Levant”

Traditional views on Middle Bronze Age palatial function have been challenged by recent work at Tel Kabri, where the excavators have argued against the common identification of southern Levantine palaces as redistributive administration centres. These ideas surrounding palace function were first developed by Flinders Petrie during excavations at Tell el-‘Ajjul in 1931–1932, where he uncovered a series of elaborately constructed elite residences that he termed ‘palaces.’ However, when reconsidering Petrie’s finds, the results from ‘Ajjul are largely supportive of the Kabri observations. A lack of evidence for key functional attributes of the classic redistributive palaces—large-scale storage and administrative paraphernalia—is comparable to that reported at Kabri. A short consideration of similar Middle Bronze Age ‘palaces’ elsewhere in the southern Levant, at sites such as Megiddo, Shechem, and Pella, is supportive of the aforementioned trend. Importantly, several of the major palace complexes are largely empty of significant finds, unless one associates burial goods with the structures placed above them, and what remains could easily be interpreted as funerary related. This paper explores an alternate hypothesis that approaches palaces as monumental loci for funerary cults, and therefore calls into question the traditionally held views on the function of these elaborate architectural complexes. Either the function generally attributed to these structures is incorrect, or administration and rulership in Middle Bronze Age Canaan leaves no unambiguous residues in the archaeological record.

Nurith Goshen (University of Pennsylvania; Israel Museum), “Building for Power: The Role of Construction in the Establishment of MBA South Levantine Rulership”

The archaeological record offers little direct evidence of Canaanite rulership during the Middle Bronze Age. Only a handful of iconographic and textual records are available to shed light not only on the nature of rulership but also on the mechanism by which it came to be. The main category of evidence is architecture, consisting of elite buildings, namely palaces and patrician houses. Building efforts were a common means to gain and exert power and authority. The abundant building and royal inscriptions attest to the symbolic importance of building projects in the ancient Near East.

Moving beyond the study of ground plans, building material and techniques prove to be a fruitful method to evaluate the elite circles of influence from the local to the international. A detailed analysis of building materials and techniques from different Middle Bronze Age southern Levantine palaces provides the groundwork to discuss local, regional, interregional,

and international connections. Close examination of the southern Levantine examples shows that while a multiscalar mode of influence may be expected, the buildings themselves point at highly localized endeavors. It appears that the emerging Middle Bronze Age rulers were mainly concerned with establishing their power locally. They used building projects, among other things, to harness local and regional populations into the building project, thus making them identify with the polity itself.

Shay Bar (University of Haifa), Ayelet Gilboa (University of Haifa), and Michael Eisenberg (University of Haifa), “Renewed Excavations at Tel Shiqmona: The Project, the Iron Age Strata, and the Transition from a Small Village to a Border Town between Israel and Phoenicia”

Tel Shiqmona is a small multi-period tell, 6 dunams in extent, located at the northern end of the Carmel coast in a strategic bottleneck between the Mediterranean shore and Mount Carmel. The late Josef Elgavish excavated the site between 1963 and 1979, and remains of 17 strata dating from the Late Bronze Age to the Early Islamic period were discovered, but only the Persian to Roman period strata have been published to some extent.

To lay the ground for a reassessment and subsequent publication of the Bronze and Iron Age strata of Shiqmona, in 2011–2013 Shay Bar renewed the excavations as part of a larger public archaeology project headed by Michael Eisenberg of the Zinman Institute of Archaeology of the University of Haifa. The first aims of the new project are to re-evaluate the stratigraphy partially published by Elgavish, to assess the dating, and to create a new database for the study of the site and the northern Carmel coast in the periods in which the site was inhabited.

Our lecture will present this long-forgotten site, the results of Elgavish’s excavations, and preliminary results from the new project, including a new Iron Age stratigraphy and an account of the transition from a small fishing village in the early Iron Age to a fortified site, possibly a border town between Israel and Phoenicia during the ninth–eighth centuries B.C.E.

Shirly Ben-Dor Evian (Israel Museum; Tel Aviv University), “Follow the Negebite Ware Road: The Copper Exchange Network in the Early Iron Age Southern Levant”

Following the identification of copper slag inclusions in the hand-made pottery of the Negev Highlands, the tight link between the copper production centers in the Arabah and the Negev settlements has been proven beyond a doubt. However, this copper exchange network remains obscure regarding its focal point, be it in the Edomite Plateau or in the Beer-sheba Valley. By tracing the network’s most conspicuous aspect, i.e., the Negebite Ware, this study suggests that the site of Kadesh Barnea was as significant to the network as was its counterpart in the Beer-sheba Valley—Tel Masos. This will be demonstrated by the site’s occupation history, its advantageous geographical position, and the on-site evidence for long-range inter-connections. It is therefore likely that copper from the northern Arabah mines at Wadi Faynan was carried through the Negev Highlands not only to the Beer-sheba Valley, but also to Kadesh Barnea, from where it was easily transported to the Mediterranean coast as well as to Egypt. Kadesh Barnea’s role within the copper exchange network probably grew hand in hand with Egypt’s renewed interests in the southern Levant under the reign of Pharaoh Shehsonq I of the 22nd dynasty. Kadesh Barnea remained central to the copper trade system until the abandonment of the Wadi Faynan mines in the ninth century B.C.E.

Heidi Fessler (Independent Researcher), “Transit Corridors and Assyrian Warfare Strategy in the Kingdom of Israel”

Several scholarly works claim evidence of Assyrian destruction at sites in the Kingdom of Israel, particularly during the time of Tiglath-pileser III (744-727 BCE). These claims mirror the Assyrian accounts of mass destruction of cities and villages belonging to the House of Omri. A re-evaluation of the archaeological record suggests that the Assyrian military did not lay waste to vast swaths of territory, but rather strategically targeted specific sites in order to establish outposts along a transit corridor between Assyrian territories and Egypt.

David Sugimoto (Keio University), “Construction Period and Function of the Tower at Burj Beitin, Palestine: Preliminary Considerations Based on Recent Excavations”

This paper discusses the construction period and function of the tower at Burj Beitin based on excavations conducted by the Palestinian Department of Antiquities and Cultural Heritage and Keio University, Japan, from 2012 to 2016. The site is located on the southeastern hill of the village of Beitin and is known for its conspicuous tower. It is also traditional knowledge that this is the “east of Bethel” where Abraham built an altar (Genesis 12:8), and there was once a church on the spot commemorating the event. However, the tower does not seem to be a part of the church, and the church’s existence was not proven until our excavations. Thus, the relation between the tower and church and the tower’s construction date and function are the focus of our investigation.

We suggest that the tower was constructed during the Crusader period and in use until the Mamluk period. There was a large church on the site during the Byzantine period, but it was destroyed before the end of the era. We also argue that the site functioned mainly as a center for an agricultural community and the surrounding courtyard was used for processing agricultural produce, although it could also be used for military purposes in emergencies. The geographical context, installations found in the surrounding area, and similar towers in neighboring areas support this view.

The discovery of agricultural communities, like the one that used this site, during the Crusader period will broaden our understanding of the period.

7J. Caesarea Maritima Session in Memory of Kenneth G. Holm: Renewed Excavations, Recent Discoveries

CHAIR: Peter Gendelman (Israel Antiquities Authority)

Peter Gendelman (Israel Antiquities Authority) and Mohamad Hater (Israel Antiquities Authority), “The Western Façade of the Roma and Augustus Temple Platform”

In 2014 the Israel Antiquities Authority commenced excavation along the western façade of the Temple Platform, site of the temple to Roma and Augustus. Exposing this monument—which Herod the Great built between 22 and 10 BCE—began with A. Negev in the 1960s and continued during the 1990s with excavations of the Combined Caesarea Expeditions and the IAA. In 2009 Peter Gendelman conducted an important additional probe.

Preliminary results of the 2014–2017 project confirm the conclusions drawn from the 2009 excavation, that 14 vaults comprised the western façade of the Temple Platform already in the early first century C.E., and that the vaults were arranged in three groups: four large ones each on the north and south, and six smaller ones in the center.

It is now clear that the central group served as substructure for propylaea that opened eastward toward the *temenos* or temple precinct, and that the four vaults each to north and south of the central group constituted two large 25 x 25 m vaulted structures. East of the propylaea, in front of the temple, remains of a high altar and of the *temenos* pavements recently came to light.

It has also become clear that the harmonious arrangement of the Temple Platform façade fell into disorder when the southern vaulted structure collapsed during the second century C.E., probably in an earthquake or tsunami. The southern vaults were reconstructed late in the fifth century when the octagonal church replaced the Roma and Augustus temple on the Temple Platform.

Rivka Gersht (Tel Aviv University; Oranim Academic College of Education), “Caesarea Sculpted Stones: New Excavations, New Perspectives”

All Israel Antiquities Authority excavations conducted at Caesarea 2010–2017 yielded sculpted stones. Excavation of the nymphaeum, whose niches were cut into the western façade of the Temple Platform, provided valuable information allowing a reevaluation of the setting of the statues within the niches and new identifications of the statues as members of the Julio-Claudian dynasty. Their significance corresponded with the images of the Augustan family in the temple to Roma and Augustus on the Temple Platform, and together they ensured the safety and wealth of the city and port. The excavations

of the vaults forming the western façade of the Temple Platform enriched the corpus of Christian furnishings uncovered in Caesarea. The ram carved in marble—found at the entrance of vault II together with a sigma tabletop and fragmentary chancel screens—could have belonged with the decoration of the church that replaced the temple of Roma and Augustus in ca. 500 C.E. The excavation next to the eastern gate of the Crusader city yielded a fragment of an early Roman head in relief and a Late Roman head of Asklepios, both made of marble. An additional marble statue—of Hermaphroditus—came from a warehouse in Area LL, along with a cube-shaped figure in local stone, kneeling and holding a puzzling rectangular object with both hands. Asklepios is not an unfamiliar image at Caesarea, but Hermaphroditus certainly is. Another puzzling sculpted piece is the relief with rhombus and double ax that came from the excavation by the eastern gate of the Crusader city.

Uzi Ad (Israel Antiquities Authority) and Yoav Arbel (Israel Antiquities Authority), “New Discoveries in the Harbor Quarter: The Northern Warehouse Complex”

Area LL is located to the north of the intermediate basin of Sebastos, the harbor of Caesarea. Earlier excavations exposed parts of a harbor-side warehouse. The 2016 excavations directed by Arbel and Ad exposed the entire complex and an additional storage facility to the west.

The excavation revealed ten strata dating from the Herodian to the Crusader periods. The Herodian and Roman remains show a massive construction, yet its plan and significance are not entirely clear. The Late Antique warehouse that replaced the earlier construction is composed of a broad mosaic-paved corridor flanked by two storage wings, each supported by eight underground vaults.

The newly discovered western storage facility was subdivided into four large rooms with corner pillars in the northernmost room. A wide opening linked the western complex northwards to a street flanked by shops. The complexes remained in use during the second half of the seventh century but for various purposes. The original spaces had been subdivided, floors elevated, and some doorways blocked.

The site was resettled during the Abbasid period. The debris was leveled, and new constructions were built above that incorporated some of the Late Antique walls but completely ignored the original plan. The new remains were dwellings, including industrial installations, granaries, channels, wells, cisterns, and cesspits. The residences lasted into the Fatimid period. During the Crusader period, the harbor fortification was built over the southwestern corner of LL. The site was abandoned after the Mamluk conquest in 1265.

Jacob Sharvit (Israel Antiquities Authority), “Sunken Treasures from Sebastos, Caesarea’s Harbor, and the Continuity of an Ancient Haven”

Throughout the age of sail, the most dangerous place for a ship to be caught in rough conditions was close to shore. It is not surprising, then, that the greatest concentrations of ancient shipwrecks are typically found in the vicinity of harbors. In February 2016, the Israel Antiquities Authority began the rescue excavation of a large Late Roman shipwreck near the north-facing entrance and outside the northern breakwater of Sebastos, King Herod’s port of Caesarea Maritima. The 40 x 60 m site has so far yielded the largest Roman shipwreck assemblage discovered in Israel, including many luxury goods of Italian and Egyptian manufacture. The significance of the discovery is twofold. Firstly, in addition to well-preserved elements of the ship itself, such as bilge parts, sheathing, and anchors, there are many unique items that provide insight into the material culture of the early fourth century A.D. A lead brazier, large steelyard, fishing equipment, ornate bronze lamps and figurines, glass cullet, marble architecture, Italian decorated lead mirror frames, tools, a 25 kg bronze coin hoard, and hundreds of other coins featuring the imperial rivals Constantine and Licinius were found, as well as fragmentary life-size bronze statues, likely representing at least two emperors. Secondly, the ongoing excavation and geomorphological survey is helping to resolve longstanding uncertainty and controversy about the status of Caesarea’s port facilities during this period. We present a preliminary overview of the 2016 season and our

evolving picture of Caesarea's northern breakwater and maritime commerce in Late Roman times.

Beverly Goodman Tchernov (University of Haifa), “Caesarea Tsunamis: New Islamic-Era Evidence from Abandoned Warehouses”

Although Caesarea Maritima is mentioned multiple times in historical tsunami references, published claims of physical evidence on the terrestrial landscape are few. This dearth of information has been attributed to two main factors: difficulty in recognizing and differentiating the deposits during excavations, and erasure or disruption of the deposits in antiquity. A recent review of archaeological reports suggested that a few tsunami deposits were present that dated to tsunami events in the second, sixth, and eighth centuries A.D., with the largest deposits associated with the eighth century A.D. In the summer of 2016, excavations in Area LL, immediately north of the harbor and on the modern coastline, were expanded, and anomalous sand layers were exposed. The sandy deposit lay within early Islamic (Umayyad) warehouses, covering a debris-filled floor that showed signs of abandonment by ca. 730 A.D. The deposit consisted of fine sand, matrix-supported and semi-articulated but disassociated construction stones matching the walls of the building, and roof tiles. Abbasid-era floors and rooms were constructed on top of the sandy deposit around 780 A.D. A well-documented earthquake in 748/749 A.D. and offshore evidence support a tsunami event, suggesting that this deposit was associated with that event. This deposit represents a rare opportunity in which tsunami deposits were preserved due to the abandonment of the warehouses *prior* to the event and construction on top of the deposit only a few decades following the event.

8A. GIS and Remote Sensing in Archaeology

CHAIR: Kevin D. Fisher (University of British Columbia)

Marco Ramazzotti (Sapienza University of Rome), “Encoding the Space: The Epistemic Frames of the Atlas of the Ancient Near East (AANE)”

The Atlas of the Ancient Near East (AANE) is a research program, recently awarded at Sapienza University of Rome, aimed at the encoding, display, and analysis of cultural heritage and landscapes in the ancient Near East. The project started with an intensive multidisciplinary survey of the different natural and cultural landscapes of the ancient Near East and will continue for the next three years with a series of publications regarding the synchronic and diachronic archaeological, historical, epigraphic, and linguistic assessment of the main Near Eastern geographic macro-areas (Central and Southern Mesopotamia; Northern Mesopotamia and Northern Syria; Syria and Palestine; Iran; Anatolia and Armenia; Arabia and Ethiopia; Egypt and Sudan). At the same time, this thematic and multi-layered description of each macro-area will provide the collection of a large number of datasets that will be organized, updated, and analyzed by data-mining algorithms in an open-source Web Geographic Information System (AANE Web-GIS). The AANE Web-GIS will offer to both scholars and students a modern and flexible research tool for the diachronic and synchronic modeling and displaying of the natural and anthropic landscapes of ancient Western Asia.

Jeffrey C. Howry (Harvard University), “Journeys of the Curator—Recreating the Travelogues of David Lyon in the Near East”

The Harvard Semitic Museum's first director, David Lyon, documented two trips to the Near East (1902 and 1908) with a newly-bought camera and a detailed diary. His images and commentary present the perspective of a scholar familiar with the historic legacy of the places he visited in the first decade of the twentieth century. The paper will provide an overview of his trips and what he chose to document. His record of people in non-studio contexts, as well as places ranging from the most historic monuments to everyday street scenes, provide a view which can be shared by means of an online mapping platform. Perhaps most valuable to today's scholar is the ability to visit the sites where David Lyon took his images by using a 'location aware' interactive map that

allows the user to view the landscapes and sites as seen today and compare them with how they appeared 110–120 years ago.

Carrie Fulton (University of Toronto), Andrew Fulton (Independent Scholar), Andrew Viduka (Flinders University), and Sturt Manning (Cornell University), “Using Photogrammetry in Large-area Survey of the Late Bronze Age Anchorage at Maroni-Tsaroukkas, Cyprus”

Recent advances in digital recording technologies through photogrammetry have greatly enhanced the speed and accuracy of documenting underwater remains, yet applications are generally limited to discrete sites or individual objects. Surveys of large areas are time intensive when divers record transects through traditional methods, and the results have larger spatial error when surveys are conducted more quickly. In this paper, we discuss the development of a camera system to capture high-resolution photographs for use in photogrammetry to rapidly conduct geo-referenced survey transects of the Late Bronze Age anchorage at Maroni-Tsaroukkas, Cyprus. In order to evaluate different methodologies for precision, accuracy, and speed of acquisition and analysis, we compare the results of our two survey methodologies implemented in June 2017: 1) traditional diver-recorded transects and 2) our custom camera system attached to a diver propulsion system. The camera system, consisting of a digital camera connected to a Raspberry Pi 3 microcomputer, captures images at a set interval along with associated spatial positioning that is then used for photogrammetric analysis. Since actions of erosion and turbulence are continually exposing and burying the material remains of the anchorage, our camera system can be easily utilized over multiple seasons for rapid resurvey and underwater mapping to contribute to a full survey of the region without excavation. Our methodology can be expanded to other nearshore areas to aid ongoing scholarly discussions about the interconnectedness of trade networks in Cyprus and the eastern Mediterranean and used by researchers conducting large-area maritime surveys.

Howard Cyr (University of Tennessee, Knoxville), “Connecting the Dots: Benefits of an Integrated Geoarchaeological and Geophysical Approach at ‘Ayn Gharandal, a Late Roman Fort in Southern Jordan”

Using recent investigations of the Roman military site of 'Ayn Gharandal, located along the eastern margin of the Wadi Arabah desert in southern Jordan, this paper focuses on the benefits of an integrated geoarchaeological and geophysical research design to examine local environmental settings before, during, and after Roman occupation. Near-surface geophysical and geoarchaeological techniques have a long and successful record of accomplishment in Near Eastern archaeological research. Separately, each approach provides minimally invasive methods that augment traditional archaeological practices and allows for rapid and efficient collection of subsurface data across large areas and within sensitive and logistically complex sites. Although both are relied upon at various stages of investigation, they are rarely employed in tandem. The two approaches provide independently verifiable results and remedy some of the problems inherent to each technique. In support of geophysical analyses, geoarchaeological techniques such as sediment core analysis and geomorphological analysis of remotely sensed data such as aerial photography and satellite imagery provide an effective means to ground truth gradiometry and ground penetrating radar data. The subsurface data collected through geophysical analyses allow for a reliable correlation of sediment core and unit profile data across an area. Tied to specific points in space, these datasets are easily incorporated into a geographical information system and evaluated with reference to recorded architecture, artifact, and feature locations. Integrated into a GIS database, these multi-disciplinary datasets provide support for site-based archaeological interpretations and inform on broad-scale changes in environmental, hydrological, and geomorphological conditions at 'Ayn Gharandal.

Jane C. Skinner (Penn State University), Jamie Quartermaine (Oxford Archaeology), Michal Artzy (University of Haifa), and Ann E. Killebrew (Penn State University), “An Integrated Use of GIS, Photogrammetry, and LiDAR to Reconstruct Tel Akko, Israel and Its Hinterland”

The incorporation of GIS, photogrammetry, and LiDAR data is a powerful tool for the documentation and interpretation of the archaeological record. This paper presents the results of the application of these technologies across many facets of the Tel Akko Total Archaeology Project, under the direction of Ann E. Killebrew (Pennsylvania State University) and Michal Artzy (University of Haifa). These include: 1) the integration of M. Dothan’s unpublished 1973–1989 excavation results on the tell with 3D documentation technologies employed by the current expedition; 2) the reconstruction of site formation processes and settlement patterns on Tel Akko combined with a test-pit survey and geophysical prospecting; and 3) a regional landscape survey utilizing GIS, photogrammetry, LiDAR, orthophotography, and ground truthing to produce a high-resolution reconstruction of Akko’s human and natural environment.

8B. Art Historical Approaches to the Near East II

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

Helen Dixon (Wofford College), “The ‘Look’ and ‘Feel’ of Levantine Phoenician Sacred Space”

Phoenician temples and shrines from the Iron Age Levant have been studied primarily from a comparative perspective, with isolated features, floor plans, or inscriptions examined against comparanda from ancient Israel/Judah or the Punic sphere. However, with nearly a dozen relevant structures excavated from Iron Age II–III period sites in coastal Syria, Lebanon, and northern Israel, there is now a significant data set from which to study Levantine Phoenician religious space in its own right.

This paper will begin with a survey of extant evidence for architectural style, decorative elements, and (briefly) iconography of objects displayed within several Phoenician temples and shrines. Both diachronic change and regional diversity among these structures will be highlighted, insofar as these can be distinguished. Finally, a preliminary reconstruction of a Phoenician shrine space will be offered, as a model for thinking through the art historical, spatial, and iconographic problems raised by existing data.

Avary Taylor (Johns Hopkins University), “Experiencing ‘Embroidered’ Spaces: The Garment Details in the Bas-Reliefs at the Northwest Palace of Nimrud”

The detailed “embroidery” of the garments depicted on the figures carved on the bas-reliefs of the Northwest Palace of Assurnasirpal II at Nimrud have received little attention despite the wealth of information they offer about the palace and its projections of royal ideology. This paper examines the variety of scene types engraved on the clothing of Nimrud’s orthostats, as well as the relationship between the scenes, the figures on whom they are depicted, and the rooms in which they appear. Though the garment engravings are iconographically significant in their own right, as the range of their imagery goes well beyond that seen elsewhere in the Northwest Palace, meaningful data are gained from a spatial analysis of their location. It is demonstrated that these dress details are exclusively reserved for high-traffic areas of the palace. Furthermore, there is a strong correlation between specific scene type (mythological, ritualistic, secular, etc.) and certain rooms within these areas. Therefore, a combined iconographical and spatial study of the details on the clothing provides compelling new evidence pertaining to the functions of the rooms within the palace and the expected travel route and experience of the palace visitor, while also nuancing our understanding of displays of Assyrian royal ideology through representations of dress.

Türkan Pilavcı (Columbia University), “Channeling the Liquid, Doubling the Act: Ovoid Shaped Relief Vases in Hittite Libation”

Ovoid vases, with vertical handles, pointed bases, and everted rims, have been attested archaeologically and in visual arts since the Middle

Bronze Age in Anatolia. In the Old Hittite period such vessels were decorated with painted symbols or applied relief narratives depicting various Hittite rituals. These vessels have received wide scholarly attention due to the rich iconographic scenes embellishing their bodies in registers, creating a corpus compatible with the Hittite visual arts at large. In this paper, rather than treating the iconography of the reliefs in question, I will focus on the form of this ovoid shaped vessel that dictates its role in Hittite libation rituals as catching and collecting the sacrificial liquid poured out of another container. How can we define the ‘agency’ of this form within the said ritual? How does the form enable the object to actively perform in an act of offering beverages to the divine? Bringing to the forefront the hollow tubular channel around the vessel’s everted rim, I argue that the material turn in anthropological and art historical studies can be utilized to evaluate this Hittite object. With the bull head protomes protruding in the round from the hollow tube, the vessel itself channels the libated liquid around its rim and controls the flow of it out through the protomes. The form doubles the act of libation in Hittite context, transferring the object from a vessel for catching the liquid to a subject in the ritual with primary agency.

Liat Naeh (The Hebrew University of Jerusalem), “What May (and May Not) Be Divided in Half: Images of Plants, Hathor-like Goddesses, and Banquet on Bronze Age Inlays in the Levant”

This paper offers a unique, comparative view on the way Middle and Late Bronze Age bone and ivory inlays were first cut in premeditated ways to add a layer of religious meaning to their iconography, and in contrast, how similar cutting of inlays eventually became the hallmark of a time when figurative depictions lost their meaning and relevance in the final days of the Bronze Age Levant.

During the Middle Bronze Age, wooden boxes in the Levant were often adorned by two symmetrical bone inlays, pressed together to form a schematic tree. By the Late Bronze Age, pairs of symmetrical, mirroring bone and ivory inlays were used to represent not only trees, but also additional plants, as well as the face of a Hathor-like goddess—deliberately splitting them by a vertical axis, for unknown reason. Other symbols, however, were never divided in half.

In stark contrast to such evocative, pre-planned cutting, the well-known Megiddo ivory inlay, featuring a banquet scene with a sphinx throne, illustrates how, during the final days of the Bronze Age, an artisan endeavored to repurpose the inlay and split it into several pieces, unsuccessfully. A new study shows marks, drills, and some never-before-seen tiny incisions that map the artisan’s approach, exposing a lack of regard to the sequence and symbolism of the banquet. Amazingly, the time and context of such secondary use is revealed by newly discovered series of signs that may be a West Semitic inscription on the Megiddo banquet ivory.

Agnete Lassen (Yale University), “Hidden and Revealed—Kassite Seal Stones in the Yale Babylonian Collection”

Modern seal visualizations use a variety of techniques—roll-outs, photography with raking light, enlarged or enhanced images—to allow the viewer to appreciate the minute images. These techniques are a response to the seals’ minute size, as well as to the awkward cylindrical shape of the seal, hindering view of the full scene and, in some periods, the mottled and/or opaque material that obscures the carvings. There is a clear shift from uniformly colored stones, like hematite and serpentine, in the later third millennium and first half of the second, towards mottled and opaque stones, like agate and chalcedony, in the second half of the second millennium. Unlike hematite and serpentine, these stones obscure and hide the glyptic carvings. The change in stone was accompanied by a shift in sealing practices in southern Mesopotamia: during the Old Babylonian period less of the seal was rolled out on the tablet—focusing on the inscription—culminating in the Middle Babylonian period with often just the seal cap visible in impressions. This begs the question what the intended viewing contexts were for seals and glyptic imagery. This paper will explore images hidden and revealed in ancient Mesopotamia, posing that, like inaccessible and hidden rock reliefs or temple sculpture in the inner cella, not all art was meant to be immediately apparent.

8C. Rethinking Israel (Joint session with the Society of Biblical Literature)

CHAIR: Oded Lipschits (Tel Aviv University)

Neil Silberman (University of Massachusetts Amherst), “The Ever-Changing History of Israel”

In the last fifty years, no archaeologist has had a greater impact on contemporary understandings of the history of ancient Israel than Israel Finkelstein. This paper will attempt to place his intellectual contribution in the context of historiographic method and literary genre. It will argue that Finkelstein’s profound influence on the field has been not only the collection of an impressive body of new archaeological data, but, to my mind even more important, the creation of a new form of biblical archaeological narrative. Not content to allow biblical archaeology to remain a compliant handmaiden of historical theology, Finkelstein has exposed the emptiness of literalistic archaeological quests to “prove” or “disprove” the historicity of the Hebrew Bible. He has rather led the way in recognizing how the scriptural history of Ancient Israel can best be understood as a palimpsest of retrospective ideological projections—none of them either completely mythic or factually objective—beginning with the spread of literacy in the Northern Kingdom, profoundly reoriented in Judah from in the late eighth century B.C.E., and continuing to the present day. The paper will conclude by suggesting that Finkelstein’s use of material culture to identify the material reality of the biblical *authors* rather than the biblical *events* has fostered a wide scholarly appreciation of the ever-evolving character of the history of ancient Israel.

Eric H. Cline (The George Washington University), “Israel and Archaeology: Person, Place, and Influence”

It would take far more than 20 minutes to do justice to the topic when talking about Israel Finkelstein and archaeology, especially since one could argue that the archaeology of Israel refers to two separate yet related topics: the modern person and the ancient region. Still, an attempt at an overview and summation will be made in this paper, including 1) his own contributions at various sites where he has excavated or directed excavations during his career, such as Izbet Sartah, Shiloh, and Megiddo; 2) the influence he has had through his published works for both academic and general audiences, such as *The Archaeology of the Israelite Settlement*, *Living on the Fringe*, *The Bible Unearthed*, and *The Forgotten Kingdom*, not to mention the numerous influential articles that have appeared in a variety of journals and Festschriften; and 3) the graduate students whom he has trained and who have gone on to become major players in the field in their own right, such as Eran Arie, David Ilan, Assaf Yasur-Landau, and Alexander Fantalkin.

Matthew J. Adams (W. F. Albright Institute of Archaeological Research) and Yuval Gadot (Tel Aviv University), “Megiddo through the Ages”

In this discussion, the authors present a broad overview of Megiddo and the impact of the Tel Aviv University Megiddo Expedition. The discussants will focus on the social, educational, and academic role of Israel Finkelstein as one of the directors of the Expedition.

Dafna Langgut (Tel Aviv University), “More Than Meets the Eye: Microarchaeology at Megiddo”

In this paper I will discuss the contributions of Israel Finkelstein to the field of Archaeological Science, mainly during the last decade. The first half of my discussion will be devoted to the history of this field in the southern Levant. In the second half of this presentation two case studies will be presented. They will demonstrate how tiny microscopic remains can provide us fascinating information about past vegetation and climate conditions, ancient diet, social status and more.

8D. Archaeology of Jordan II

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

Debra Foran (Wilfrid Laurier University), “The 2017 Excavations at the Ancient Town of Nebo (Khirbat al-Mukhayyat)”

Khirbat al-Mukhayyat is located approximately 6 km northwest of the city of Madaba and has long been associated with the ancient town of Nebo. The Khirbat al-Mukhayyat Archaeological Project (KMAP) was established in 2012 to investigate the sacred aspect of the landscape around the site and explore the economic and ritual importance of Mukhayyat across multiple cultural and historical periods. This paper will present the results of KMAP’s third season of excavation, which were concentrated on the site’s Iron Age and late Hellenistic remains.

KMAP’s inaugural season of excavation took place in 2014 at which time three fields of excavation were opened. Two of these fields formed the focus of efforts during the 2016 season. In Field C West, the discovery of a *miqveh* prompted further work, uncovering a number of plaster and bedrock installations which may support the hypothesis that, during the late Hellenistic period, the site was used primarily for agricultural and ritual purposes. In Field B, excavations allowed us to determine an Iron Age foundation date for the defensive architecture in this area. This fortification system had gone out of use by the Hellenistic period, at which time Field B was used for ritual activities that involved the placing and subsequent burying of a number of cooking vessels.

Efforts during the 2017 field season will be concentrated in Field B in the hopes of exposing more of the Iron Age occupation at Mukhayyat and elucidating the nature of the late Hellenistic cooking pot deposits.

Cynthia Finlayson (Brigham Young University), “The Nabataean Coins of Ad-Deir: New Numismatic Evidence from the Ad-Deir Plateau, Petra”

This paper presents new information concerning the numismatic evidences emerging from renewed scientific research on the Ad-Deir Plateau. During the 2013–2016 excavation and conservation efforts of the ongoing Ad-Deir Monument and Plateau Project, just over 300 ancient coins were retrieved from the clearances of the western *temenos* entrance to the Ad-Deir Monument as well as Cistern B just to the north of the Monument itself. This collection represents the largest comprehensive numismatic grouping ever retrieved from the Ad-Deir Plateau via scientific archaeological excavation and thus presents new information concerning the occupation sequences and potential functions of the Ad-Deir Plateau itself. Significantly, the coinage of Aretas IV (r. 9 B.C.E.–40 C.E.) dominates this collection, but a possible coin of Aretas II (r. ca. 103–96 B.C.E.) was also retrieved. Additional coins from the later Nabataean kings, Malichus II (r. 40–70 C.E.) and particularly Rabbel II (r. 70–106 C.E.) were also recovered. While Nabataean coins were almost exclusively found in the *temenos* slot entrance to the Ad-Deir Monument with no Byzantine examples yet identified, the Eastern Cliff Cistern B to the north of the Monument contained predominantly later coins from the reigns of Constantine I and Constantius II. This paper discusses the probable reasons for this distribution of numismatic evidence and suggests further evidences for the presence of a Nabataean summer palace on the Plateau dating from at least the reign of Aretas IV. This evidence thus begs the question of the current association of the Ad-Deir Monument with Obodas I.

Leigh-Ann Bedal (Penn State Behrend) and Robert Wenning (University of Münster), “Hidden in Plain View: An Overlooked Betyl in the Shadow of Petra’s Khazneh”

Despite its status as one of the most famous archaeological sites in the world, and more than two centuries of study, documentation, and excavation, surprising and unexpected discoveries are continually made at Petra, the ancient capital of the Nabataean kingdom. Examples are the row of rock-cut tombs underneath the monumental façade of Al-Khazneh, the monumental garden and pool complex in the City Center, and marble statues of Aphrodite

uncovered in a small bathhouse in a residential quarter on the North Ridge, to name just a few. But not all of Petra's treasures are buried underground, and some are hidden in plain view. This paper describes the revelation of an as-yet-undocumented inscribed *betyl* (aniconic god block), one of numerous carved into rock faces throughout the Petra valley. The *betyl* itself is noteworthy for its craftsmanship and design, but it is the location of this *betyl* that is most remarkable because it is carved on the face of Petra's most iconic monument, Al-Khazneh. Despite this prominent context—exhaustively documented and viewed daily by hundreds of visitors—the *betyl* remained undetected until now, spotted by one of the Bedouin residents. This paper includes a study of the *betyl*'s typology and argues its importance as evidence that Al-Khazneh was the product of Nabataean stonemasons.

David Culclasure, (North Carolina State University), “Supplying the Roman Military in Wadi Arabah during Late Antiquity”

Over the past several decades, Wadi Arabah has undergone extensive archaeological study. As this information is made public, it is necessary to compile the published data to better understand how the Arabah functioned during its ancient history. To that end, the primary goal of this paper is to offer one of the first syntheses of published archaeological remains.

In Late Antiquity, the Arabah was filled with military installations and fortifications. As more is known about each individual site in the area, regional trends become apparent and various programs of production, distribution, and supply provide the ability to reconstruct the infrastructure of the military complex in Wadi Arabah. This study is an attempt to retrace these lines of supply and understand how the Roman military was provisioned in the Arabah during this period and is the next natural progression in the scholarly study of the Arabah.

In this paper, I argue that the garrisons in the region had the ability to supply themselves by manipulating the local, hyper-arid environment rather than rely upon imperial (external) supplies alone. In addition to foodstuffs, this paper examines the extent to which other resources soldiers would require, such as ceramics, building material, and textiles, were produced locally rather than imported from external suppliers. The aim of this paper is to underscore the elaborate economic system this region maintained during Late Antiquity.

Noor Mulder-Hymans (University of Groningen), “The Bread Ovens and Egg Ovens of Tell Abu Sarbut in the Roman and Abbasid Period”

In 2012 the Renewed Excavations of Tell Abu Sarbut were launched in cooperation with the University of Groningen, the Netherlands. The goal was to uncover the Roman occupation layers of this small non-urban site situated in the Central Jordan Valley in Jordan. Previous excavations at the site (1988–1992) were focused on the Mamluk period, but also revealed some Roman remains.

The new excavations yielded an alleyway, houses with several rooms built of mud brick, and courtyards with (bread) ovens, pottery, and other finds from mainly the Roman period (first century B.C.–first century A.D.) and the Abbasid period (eighth century AD). The bread ovens were made of clay and were of different sizes and shapes. They were located in the courtyards. A bread oven could be dug into the ground, or standing on a hard packed floor or on mud brick tiles. In addition to the well-known round bread ovens two “egg ovens” were excavated, which are unique in their shape and function.

This paper will tell the story about the (bread) ovens at Tell Abu Sarbut from different periods, their function and use, their location and production techniques, and their importance for the community. Bread ovens of the same type are still in use in the Middle East, even though commercial baking is now more common.

Arwa Massadeh (Department of Antiquities of Jordan), “Al-Balu’a between the Site and People”

Al-Balu’a is a site located south of Wadi el-Mujib (Biblical Arnon) and about 5 km (3 mi.) east of Jebel Shihan, in the district of Kerak in central Jordan, ancient Moab. Al-Balu’a is the largest Iron Age ruin in the area, in which all periods of occupation are represented until the Mamluk periods.

In this paper I will talk about the local community of the Al-Azazme tribe, who with their families settled around the site of Balu’a in the summertime during the excavation conducted by the Germans. They put their tents nearby and prepared themselves to participate. Many stories can be told about these families and how they changed their movement to be near the site, about their traditions, their lifestyle, the circulation of their movement during summer and winter, and the main role they played during the mission and the way they reacted to work, help, and even protect the site. Many interesting stories can be told about these families, and their simple tents, and how they insist to a part of the whole work. I will talk about their history and their original region, and how they began to be part of the community they settled nearby, and how they began to understand the importance of education and settled near schools and how the government takes care of them in every aspect of life.

8E. Digging “Lustily” into Cypriot Prehistory: Studies in Honor of Stuart Swiny

CHAIRS: Zuzana Chovanec (Tulsa Community College) and Walter Crist (Arizona State University)

Helena Wylde Swiny (Harvard University), “Why Cyprus?”

Since I have known Stuart Swiny for over 50 years, and we have been married for 47, I am in a position to tell you about him; to give insights into who he is, what he has accomplished. Stuart grew up in two cultures, which gained him understanding of different ways of living, thinking. He was born in the UK, moved to France before he was a decade old, and was educated there, passing Baccalaureates. In Nice he participated in his first archaeological “dig.” After finishing at the Institute of Archaeology, London, where we met, he became a Research Fellow at the Institute of Persian Studies, Teheran, joining in several excavations and surveying in Azerbaijan and Kurdistan. Stuart was asked by the British Academy’s Sir Max Mallowan to set up the Institute of Afghan Studies in Kabul. We were there for several years. Circumstances brought us to Cyprus in 1974; not for the first time. Cypriot prehistory became Stuart’s focus and Ph.D. subject. The Directorship at CAARI brought the Swinys to Nicosia. We would oversee its transformation into a unique establishment for the island. He so enjoyed managing the premises and assisting the residents’ research. A highlight in Stuart’s life was his time at SUNY Albany, the excitement of teaching a subject that he knew so well, the opportunity of “giving” what Cyprus had taught him. Many stories weave their way through these accomplishments and I entertain you with a few. You will also learn more about the question “Why Cyprus?”

Francesca Chelazzi (University of Glasgow), “Settlement Archaeology in Bronze Age Cyprus: The Pioneering Legacy of Stuart Swiny in the Southwest Forty Years Later”

The work of Stuart Swiny in settlement archaeology is even today a pioneering legacy in Cypriot archaeology. His focus on sites’ environments, on the relationships between contemporary settlements, and on the rivers as an important factor governing site location was of central importance at a time when the regional and environmental emphasis was first peaking out in Cypriot archaeology. Moreover, his excavations at Sotira *Kaminoudhia* and Episkopi *Phaneromeni* provided priceless data concerning the Bronze Age agro-pastoral economy, modes of production, household organization, and regional networks of exchange, as well as material production.

Forty years later, Swiny’s work is a milestone in the study of settlement patterns and strategies of land use, in the southwest and throughout the island. The archaeological record collected and analyzed by Swiny constitutes an important legacy that second-generation studies have the imperative to review and reconsider. My paper aims to present the re-analysis of the settlement pattern, strategies of land use, and socio-economic interactions in southwestern Cyprus, starting from the central activities undertaken by Swiny in this portion of the island.

Thomas Davis (Tandy Institute for Archaeology, Southwestern Baptist Theological Seminary), “The House of the Dancing Bird”

A full assessment of the impact and legacy of Stuart Swiny must include his profound influence on the Cyprus American Archaeological Research Institute (CAARI). The thriving research institute of today would not have survived its youth without the vision and direction of Stuart and Laina Swiny. Even though he is a Scot (not an Englishman!), Swiny’s deep commitment to American-dominated ASOR’s vision enabled him to successfully direct one of the three ASOR Institutes. Stuart’s broad definition of archaeology allowed the institute to become a clearing-house for all international scholars working on the island and garnered crucial early support from the Fulbright Commission and the government of Cyprus. Vassos Karageorghis, the Cypriot Director of Antiquities when CAARI was founded, initially envisioned CAARI as just one among many foreign archaeological institutes to be founded on the island; he has since come to realize the lasting value CAARI provides: “To my mind further foreign archaeological institutes are not necessary in Cyprus.” This state of affairs is primarily the product of the efforts of Stuart Swiny.

Laura Swantek (Arizona State University) and William Weir (University of Cincinnati), “A Dig of a ‘Certain Kind’: Stuart Swiny and the Past and Future Potential of Sotira Kaminoudhia”

This paper will discuss Stuart Swiny’s passion for Cypriot archaeology and the legacy of his work at Sotira *Kaminoudhia*. Stuart Swiny was an influential force in prehistoric archaeology on Cyprus; focusing his attentions on the beginning of the Bronze Age, his excavations at Sotira *Kaminoudhia* and survey work in Southern Cyprus brought to light new information regarding this pivotal period. In his long-standing role as CAARI director and as a professor at the University at Albany he touched a generation of young archaeologists with his encouragement, kindness, and humor. A “Swiny Dig” involves hard work, near constant observations of traditional Cypriot culture, a love of ground stone, and the insistence that students blend with the local community. These experiences broadened our worldviews and continue to shape our work. The focus of this paper will be on Stuart’s role as an archaeologist, but more importantly as a mentor, educator, and friend.

Zuzana Chovanec (Tulsa Community College) and Sean M. Rafferty (University at Albany), “A Legacy of Education and Collaboration: Stuart Swiny’s Role in Cypriot Studies at the University at Albany”

The relationship between Stuart Swiny, Cypriot archaeology, and the University at Albany began serendipitously in the early 1970’s when he worked with John Overbeck on the survey around Dhali. After coming to the University at Albany as Visiting Professor in 1996 at the invitation of Paul Wallace, he served as a faculty member in both Classics and Anthropology, as well as the long-time Director of the Institute of Cypriot Studies. During his 18 years at the University, Stuart Swiny served as a dedicated teacher and mentor, diligent researcher, professional collaborator, and tireless advocate for the history of Cyprus. This paper explores the impact that Stuart Swiny’s contributions have had on both the University at Albany and Cypriot archaeology.

Alan Simmons (University of Nevada, Las Vegas), “Thinking Outside the Hippo: A Personal Tribute to Stuart Swiny”

I first met Stuart when he was director of CAARI. Although not a “deep time” prehistorian, he was intrigued with claims of a possible pre-Neolithic site associated with Cyprus’s extinct pygmy hippopotamus. This was very significant for two reasons: it would indicate a human antiquity greater than the Neolithic, and it would associate humans with an extinct and unique Pleistocene fauna. My role in all this was in many ways fortuitous. I had never been to Cyprus, but was intrigued, if skeptical, when told about the site. So, I visited CAARI and met Stuart, who encouraged me to excavate at Akrotiri *Aetokremnos*. As they say, the rest is history, and these investigations changed my professional career. In the way that only Stuart could convey, he noted that this might happen when we started the excavations. Since that time, Stuart has not only influenced my career but has become a close personal friend. Stuart has always encouraged thinking outside of the envelope, both to his students

and his colleagues. This is a tribute to his intellectual breadth. It is thus with great pleasure that I look forward to a slow hippo roast that will only be tempered by contemporary political correctness standards.

8F. History of Archaeology

CHAIR: Kevin M. McGeough (University of Lethbridge)

Rannfrid Thelle (Wichita State University), “Early Explorations of the ‘City of David’ in the Context of British and German Agendas in the Holy Land”

British and German imperial interests in the “Holy Land” increased from the late 1830s onward, and, by the 1860s, over three decades of involvement in the Holy Land provided a base upon which organized archaeological exploration would build. In this paper I explore the epistemological paradigms that undergirded and governed British and German archaeological projects, focusing on the “City of David.” By tracing the agendas of European powers vis-à-vis the Ottoman Porte and specific domestic agendas for the Holy Land, I locate these first excavations in their political and ideological contexts.

I examine the efforts of Charles Warren by considering a variety of factors, such as military strategic interests, economic interests, religious-cultural visions, diplomatic efforts, and exploration/archaeology. His own letters and writings from this expedition form an important source for how he understood his mission, as well as how the Survey of Western Palestine project (Wilson, Conder, Clermont-Ganneau) forms the larger context for other excavations. Missionary activity, the Templars, efforts of cultural expansion, and the concept of a “friendly crusade” contribute to understanding German archaeology in the Holy Land, including Herman Guthe’s excavations in Jerusalem. I also touch on Conrad Schick for a view of the relationships between European powers and Ottoman authorities in Jerusalem.

This paper forms part of a chapter in a larger project on ethical and political challenges to heritage management and historiography.

Caitlin Chaves Yates (Metropolitan Museum of Art), “Archaeology’s Role in the Development of the Ancient Near Eastern Art Department at the Metropolitan Museum of Art”

In 1932 the Department of Ancient Near Eastern Art (ANE) split from the overarching Department of Decorative Arts. Although the Metropolitan Museum’s collections had included archaeological material since its formation, the creation of the ANE department stimulated new attention for the objects from the Near East. At the same time the rise of Herbert Winlock, an Egyptologist, as director reaffirmed the museum’s commitment to archaeological work. The ANE department began excavations in Iraq and Iran, continuing to support excavations to this day across the Near East. The role of the art museums, such as the Met, in archaeology during the early 20th century was different from the investment in archaeology by other, more research focused, institutes such as the Penn Museum, the Oriental Institute, or even the German State Museums (who collaborated with the Met at Ctesiphon, Iraq). The selection of objects and the archival material within the ANE department’s collection reflect the emphasis on acquiring particular types of objects, with a focus on specific “trendy” time periods and an interest in being directly involved in the excavations. Archaeology and the art museum had a reciprocal relationship during the early 20th century that both influenced how and where excavations were conducted, and determined the future of the ANE department’s collection, both in its breadth and depth.

Sveta Matskevich (The Hebrew University of Jerusalem) and Daphna Tsoran (The Hebrew University of Jerusalem), “Lost & Found: The Institute of Archaeology (The Hebrew University of Jerusalem) and Israel Exploration Society Archival Collections”

Historical records of the Department of Archaeology of the Hebrew University of Jerusalem, founded in 1936, together with the archive of the Israel Exploration Society, were lost out of sight due to numerous relocations of the Institute during the 1950s–1960s. Finally, in the early 1970s, boxes, crates, and files of papers were piled in an empty room on the roof of the new wing of

the Institute building. During 2014–2015 we conducted a “salvage excavation” and the documents rescued from storage formed the basis for the Archive of the Institute of Archaeology that today comprises three major collections: the scientific and administrative archives of the Institute; the archive of the Israel Exploration Society, from its foundation in the early 1920s till 1968; and personal archive of Moshe Stekelis, the first professor of prehistory at the Hebrew University of Jerusalem.

The archive is of immense importance for our understanding of the history of archaeology of the region. The Institute of Archaeology in Jerusalem and the IES were the first two local archaeological institutions founded in the early 1920s that through teaching and excavation shaped Israeli archaeology. In this paper, we will present the organizational plan and strategy of the archive development, display some highlights of the collection, and promote its high scientific value for everyone interested in the history of archaeology of the Levant.

8G. The CRANE Project II

CHAIR: Timothy P. Harrison (University of Toronto)

Sturt Manning (Cornell University) and Brita Lorentzen (Cornell University), “Highly Resolved Timeframes for the CRANE Project: Bayesian Chronological Modeling on Orontes Sites from the Third to First Millennia B.C.E.”

The CRANE Project has obtained and examined large numbers of organic samples from several key archaeological sites within the Orontes Watershed covering the third through first millennia B.C.E. We have aimed to select appropriate samples from defined and secure archaeological contexts in order to undertake analysis aimed at rigorous and highly resolved chronological timeframes for the project’s focus sites, including Tell Tayinat, Tell Nebi Mend, and Zincirli, among others. Samples of charcoal have been identified and investigated for dendrochronological potential and short-lived samples identified and linked to specific contexts. A large number of radiocarbon dates have been obtained on selected samples. Bayesian chronological modeling approaches, seeking to integrate prior archaeological and historical knowledge with the radiocarbon dating information and probabilities—and seeking to query certain scenarios—have been pursued and various dating models constructed and investigated for each site sequence. This paper will report on the start of the dating for the CRANE sites and the wider potential for high-resolution absolute dating in the region.

Dominique Langis-Barsetti (University of Toronto), “The CRANE Site Database Project”

Born out of the collaboration of scholars from a number of disciplines, the CRANE Project has also brought together archaeological field projects located largely within the Orontes Watershed. In conjunction with the effort to integrate data from these projects, a region-wide site database was created to facilitate analysis of a wide array of related research questions, ranging from settlement patterns to ceramic distributions. Site data were collected from published and unpublished surveys conducted within the Orontes Watershed and vicinity over the past 100 years. This comprehensive regional database, totalling more than 4,000 archaeological sites dating from the Palaeolithic to the Ottoman period, includes quantitative and qualitative data such as site size and periods of occupation, but also seeks to locate sites with precision in a GIS environment. The CRANE Site Database is currently also being incorporated into the Online Cultural and Historical Research Environment (OCHRE). This paper will present the results achieved to date.

Kamal Badreshany (Durham University), Graham Philip (Durham University), and Melissa Kennedy (University of Sydney), “Ceramic Development in the Upper Orontes Basin from the Neolithic to the Late Bronze Age: Dealing with the Challenge of Diffuse and Dynamic Ceramic Regionalism in Ancient Syria”

This paper presents an overview of the final results of a large-scale

program of petrographic and geochemical analyses undertaken on ceramics from the 1976–1994 excavations of Tell Nebi Mend, and the survey Settlement and Landscape development in the Homs Region, Syria (1999–2010). The study tracks the development of ceramic technologies and modes of production across a wide range of vessel types from the Neolithic through to the end of the Bronze Age. The resulting data provide deeper insight into key influences on the development of the ceramic traditions of the Upper Orontes valley, which in turn enhances our understanding of the formation, maintenance, and remodeling of distinct regional assemblages in the pre-classical Levant.

Doğa Karakaya (University of Tübingen), “Current Progress in Archaeobotanical Research at Tell Tayinat and Zincirli”

Recent archaeobotanical investigations, conducted in conjunction with the CRANE Project, thus far have focused on the Bronze Age developments of crop production at Tell Tayinat and Zincirli. Archaeobotanical studies concerning Iron Age plant data are relatively scarce, despite the long history of research in the Near East. In this paper, I will aim to analyze the plant remains from the Iron Age II and III occupation levels at Tayinat and Zincirli in order to comprehend whether any contrasting patterns in food eating habits are discernible. A preliminary analysis of Tayinat plant remains demonstrates that agricultural production was based primarily on free-threshing wheat, barley, and to a lesser extent pulses such as lentils and bitter vetch. However, emmer wheat, which was previously a ubiquitous crop at Tayinat, completely disappears from the plant assemblage during the later Iron Age. With this study, it is hypothesized that the Neo-Assyrian occupation of former Syro-Anatolian states might have initiated a period of interregional exchange for new practices of food eating habits due to imperial policies of mass deportation and novel agricultural management strategies.

Lynn Welton (University of Toronto), “Modeling the Interaction of Social and Environmental Processes in the Orontes Watershed: The CRANE Simulation Project”

A key CRANE research objective has been to use the various archaeological and environmental datasets being assembled from the Orontes Watershed to examine human-environment interaction by modeling both natural systems and social processes, as well as the interaction of these variables in contributing to emergent social complexity. To address these questions, an integrated GIS-based environment for the Orontes Watershed was created. The resulting suite of data is now facilitating the exploration of long-term patterns in settlement dynamics and land use with respect to environmental variables. Ongoing research involves the examination of paleoenvironmental dynamics by downscaling global climate data to create regional climate models. These climate-modeling outputs can then be used in agent-based modelling simulations to analyze local regional responses to climate variability and change over time. These agent-based models use as a framework ENKIMDU, developed by John Christiansen of the Argonne National Laboratory. ENKIMDU has the capability to create a virtual world on which to run simulations based on environmental and social parameters. Through ENKIMDU’s holistic ‘bottom-up’ approach, the simulated historical trajectories of human-settlement landscapes appear as the cumulative outcomes of small-scale activities and interactions, for instance by individual persons, households, crop fields, and domesticated animals. The ultimate goal of this CRANE initiative is to make these data available to the broader research community, and to develop tools that allow researchers to apply these modeling systems to their own research questions and objectives. This paper will present the results achieved to date.

8H. Ambiguity in the Ancient Near East: Mental Constructs, Material Records, and Their Interpretations III

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

Jay Crisostomo (University of Michigan) and Eduardo Escobar (Stevanovich Institute for the Formation of Knowledge, University of Chicago), “An Assortment of Kinds: Determinatives in Cuneiform Scholarship”

Bats are birds, glass and metals are stones (and a plant can be a “stone” too), turtles and lizards are fish, man-made canals are as natural as rivers, and the list goes on; this, we learn from the use of determinatives in cuneiform scholarship. Such categorizations may seem to us ambiguous, even incommensurable. Determinatives are unpronounced markers that, in the cuneiform writing system, precede Akkadian and Sumerian nouns and provide information regarding the semantic groupings of those terms. Our talk examines the broader intellectual consequences of determinatives (part of Landsberger’s “*Eigenbegrifflichkeit*”), a topic with cognates in the historiography of scientific pedagogy, taxonomy, and what philosophers have called “natural kinds.” We examine the use of determinatives in cuneiform texts in order to address how they functioned, not as tacit markers, but as active agents in the production of knowledge. This collaborative analysis will place special emphasis on determinatives and “kinds” reflected in lexical and scientific scholarship, with particular focus on how the processes of list-making and generative knowledge employed in cuneiform scholarship effect the use of determinatives.

Martin Worthington (University of Cambridge and Institute for the Study of the Ancient World), “The Rain, the Wheat, and the Trick”

Since at least the year 1890, scholars have felt that there must be more than meets the eye to the message which, according to Tablet XI of Gilgamesh, the god Ea has the Mesopotamian Noah deliver to his people in advance of the Flood: it must be an ‘*avertissement trompant*.’ A number of theories have been put forward to this effect, usually in brief notes. This paper presents my results arising from a book-length treatment of the problem (unpublished at the time of writing the abstract), which suggests a new solution: the message is indeed deliberately ambiguous, and can be interpreted as having two different senses conveyed by two different sentences, which are phonetically identical. Working out what this means for whom (characters, audience, ‘authors’) proves surprisingly intricate, with implications for intertextuality, narratology, and the history of religion.

Gina Konstantopoulos (University of Helsinki) “Public and Private: the Role of Text and Ritual in Constructing and Maintaining Protected Spaces in Mesopotamia”

A large body of ritual texts and incantations were designed to aggressively combat or protect against a host of demonic and otherwise supernatural threats that were integrated into the Mesopotamian worldview. While these texts, well-documented and broadly represented over the span of Mesopotamian textual history, could be reactive, working to counter threats that had already targeted an individual, they were also proactive, aiming to preemptively drive out potential dangers. These apotropaic ritual texts created a protective space, often reinforced through the positioning of apotropaic figurines of gods, monsters, and demons, which were placed and buried at liminal points within the building. While the use of one group of supernatural beings to protect against another, often very similar group of supernatural beings, is representative of the inherent flexibility and ambiguity of such creatures, these texts also represent the different ways in which public and private spaces were demarcated and protected. This paper explores the creation of these different spaces through an analysis of a number of texts, principal among them a first millennium ritual specifically designed to block any threats from entering a house, and places these texts within the context of how figurines and reliefs could be used to reinforce such protected spaces. In doing so, it further

questions the different ways by which such protected spaces were maintained and manipulated in the public and private sphere.

Miriam Said (University of California, Berkeley), “Stamped and Staring: Pazuzu Stamp Seals and the Ambiguity of Form”

Pazuzu, one of the better-attested demons from the lower levels of the Mesopotamian pantheon, has long been a figure of interest to scholars of text and scholars of material culture alike. His mythological tradition is preserved in several exorcist texts from the first millennium B.C.E. and also in text carved directly onto related artifacts. His image survives in a variety of forms, including figurines, seals, and cast into plaques or carved onto stone. Despite this fairly varied repertoire of representation, Pazuzu objects are often used as secondary source materials to substantiate discussions of textual analyses, or essentialized into iconographic studies with an emphasis on his most prominent feature – his head. To date, there have been few meaningful investigations into the materiality and function of the different object categories associated with this demon.

This talk focuses on one subset of Pazuzu objects, namely stamp seals from collections of the British Museum and Louvre. Due to recognizable iconographic features, these stamp seals have been grouped together into a singular typological category, when in fact there are noticeable formal differences amongst them. This talk puts pressure on these objects as a coherent body of material and addresses the various permutations of the stamp seals in order to better articulate how formal differences impacted their function and lent themselves to a multiplicity of uses. It also considers the elision of the Pazuzu head with the structural base of the seal and what impact ambiguously blended bodily forms has towards potential aesthetic and ritual effects.

Victoria Almansa-Villatoro (Brown University), “An Image that Means Another: Syncretism and the Case-Study of a Mummiform Dwarf”

The amulet inv. 285 is part of an incomplete set of Late Period Sons of Horus amulets. It is currently held at the Egyptian Collections of the University of Pisa. Even though its state of conservation is quite good, the amulet is classified as “unidentified” since its peculiar features do not seem to fit any of the four Sons of Horus criteria of appearance.

The amulet probably represents the only depiction of the mummiform dwarf Ptah Pataikos known so far. The facial features of the amulet, along with the scarab carved on its bald head, argue for this hypothesis. The association and iconographic overlap of roles between monkeys and dwarves during the Late Period could have resulted in a syncretic representation of the baboon son of Horus Hapy as mummiform amulet with the head of the dwarf Ptah Pataikos. The funerary, regenerative, and solar features of Pataikos, common to those of the monkey, can explain the use of the amulet within the context of funerary genii.

This amulet is important, not only because it represents an *unicum* in the Egyptian iconography, but also because it sheds some light on the understanding of Late Period syncretism and how the depiction of a certain feature, such as a dwarf head, is sufficient to link an object to a completely different set of associations, such as a baboon appearance. It allows the observer, in this case, to “read” the Pataikos as Hapy, as if it were a written text rather than an image.

8I. Archaeology of the Southern Levant II

CHAIR: Owen Chesnut (North Central Michigan College)

Joshua Walton (Capital University), “The Iron Age IIB Remains from Ashkelon: A Preliminary Report”

As one of the Philistine pentapolis cities, Ashkelon serves as an ideal setting for studying Philistine culture and settlement in the southern Levant. Whereas previous studies have focused heavily on the initial settlement of the Philistines in the Iron I and their eventual demise in the seventh century, less is known about Philistine occupation in the eighth century B.C.E. While the Philistine city-states are well represented in the Assyrian textual records, the

archaeological remains have not been sufficiently published. Questions remain regarding the occupational history of Philistine sites (such as Ashdod) and extent of Assyrian involvement in the region.

Recent research on the material unearthed over the past 30 years by the Leon Levy Expedition to Ashkelon contributes new data to our understanding of Philistia in this period, from Ashkelon's expanding commercial relationships with Phoenicia to its continued interactions with Egypt and Judah, and an emerging threat from Assyria. This paper will present a preliminary report on the architecture and material culture of the site dating to the Iron Age IIB in order to reconstruct Ashkelon's role in the region at this time.

Vanessa Workman (Bar-Ilan University) and Adi Eliyahu-Behar (Bar-Ilan University), "Early Iron Workshops at Tel Megiddo and Tell es-Safi/Gath: Comparative Analysis of Working Debris and Paraphernalia"

The beginning of the 'Levantine Iron Age' is characterized by a limited appearance of iron objects and a lack of archaeological evidence for iron production. Not until two centuries later, in the late tenth–early ninth century, does substantial evidence for production appear at a handful of archaeological tell sites in the region. This paper will include the preliminary results of a comparative study of two iron working debris assemblages dated to this early phase of local production in the southern Levant. The two iron workshops were recently excavated at Philistine Tell es-Safi/Gath and Israelite Tel Megiddo—two major urban sites frequently cited in the biblical narrative. The workshops uncovered within these two strong political entities indicate that the technology was introduced to the small, autonomous early Iron Age territories already by the tenth century B.C.E.

Evidence from both sites includes remains of hearths and working surfaces, accumulated ash, slags, hammer scales, and paraphernalia such as tuyère nozzles and bronze crucibles. Analysis focused on the attempt to reconstruct and identify production stages, from ore to object, performed in the urban setting and to isolate indicators of technological decisions and processes via variations in microstructure and chemical composition. This data is compared to that collected by previous studies on tenth–ninth century iron working repertoires. The study aims to better understand the technological nature of and preferences in production at each of the sites and to identify possible traits of 'technological style' of these two cultural entities of the southern Levantine Iron Age.

Eric Welch (University of Kansas), "The Gats of Gath: Ninth Century Olive Oil Production in Area K at Tell es-Safi/Gath"

During the ninth century B.C.E. the Philistine city of Gath was likely the largest city in the region before meeting its demise at the hands of the Aramean king, Hazael. As a part of the ongoing archaeological research at Gath, a new area of excavation was opened in the tell's lower city during the 2016 season. Area K is located on the southern bank of the Elah River immediately inside the Iron Age fortifications. Prior to excavation, a large agricultural installation was visible on the surface in the area. In the course of excavation, a second large stone vat and rolling crushing stone were revealed. Additional fragments of press components were identified on the surface outside of the excavation area. At present, this area is interpreted as a designated zone for olive oil production within the walls of ancient Gath. This paper will present the remains of the agricultural installations and the results of the first two seasons of excavation in Area K. Special attention will be devoted to reconstructing the function of the presses and situating them within the established regional typology for olive presses. Finally, this paper will consider the implications for the presence of intensive olive oil production at Tell es-Safi/Gath in light of regional production trends during the Iron Age II.

Barry M. Gittlen (Towson University), "An Enigmatic Death At Tel Mique-Ekron, Stratum IB"

The excavation of Tel Mique-Ekron resulted in a series of significant discoveries and interesting problems. One of the strangest problems involves an assemblage of artifacts both common and unique to seventh century B.C.E. Ekron Stratum IB.

The olive oil industry is extensively arrayed across three descending terraces in Field III. On the northernmost (the lowest) of these terraces stood Building 507. This olive oil factory contained the same array of limestone crushing basin, two presses (one on each side of the basin), and several weight stones used with the presses as found in the factories on the southernmost terrace at a level roughly 2 m higher. Destroyed by the Babylonian army at the end of the seventh century, Stratum IB, including Building 507, was covered by a thick layer of burned debris and fallen mud bricks.

Within Building 507, beneath this destruction debris, sat an impressive assemblage of pottery, stone, shell, ivory, and metal objects. Many of these artifacts appeared intentionally arrayed within Crushing Basin 12031. On the bottom of this basin, accompanied and surrounded by this array of artifacts, rested a pair of adult human legs, complete and intact from the knees to the tips of the toes. This well-stratified, well-dated, sealed, and intact, though rather macabre, context poses a most perplexing interpretative problem.

Casey Sharp (University of Haifa), Ladislav Smejda (University of West Bohemia), Itzhaq Shai (Ariel University), and Chris McKinny (Bar-Ilan University), "New Methods in Excavating the Periphery: Tel Burna Area C in the Bronze and Iron Ages"

In the summer of 2015, the Tel Burna Excavation Project opened Area C approximately 200 m northeast of the tell with the goal of better understanding the immediate agricultural hinterland of the site. During the 2015 and 2016 seasons, installations of various sizes and shapes were found cut into the bedrock, and many are clearly visible from the surface due to a relatively thin layer of topsoil. Although some amount of Byzantine and Persian occupation is known at the site, survey results in this area indicated the predominant presence of Bronze Age occupation and Iron Age II finds that are concurrent with excavated areas on the tell. Rock-cut installations revealed exclusively Bronze and Iron Age finds. Finds on the bedrock surface included basalt grinding stones, flint blades, and a number of nearly complete vessels from the LB IIB and Iron Age II. Although a lack of architecture and stratified surfaces obscures an exact dating, we appear to have an agricultural area with installations that were used and reused throughout the history of the site. Area C offers a unique opportunity to understand the immediate agricultural economy of Bronze and Iron Age site in multiple periods.

8J. Religion in "Edom"

CHAIRS: Erin Darby (University of Tennessee, Knoxville) and Andrea Creel (University of California, Berkeley)

Juan Manuel Tebes (University of Michigan), "Late Bronze Age/Iron Age Extra-mural Shrines of the Arid Southern Levant and the Syro-Arabian Desert Cultic Architecture"

Five extra-mural shrines dated to the Late Bronze and Iron Ages have been excavated in the arid areas south and south-east of the Levant (Negev and south-central Transjordan). Although they present features congruent with the long tradition of local desert cultic architecture, most previous treatments of these shrines have focused on their relationship with the religions of the contemporary settled communities of the Levant and Egypt. This article re-examines this cultic architecture in the light of current knowledge of the desert cults of the Syro-Arabian desert and steppes, from the Neolithic to the Early Islamic periods. Although the different elements of the local cults, particularly the building of open-air courtyard shrines and the use of standing stones, were present in several prehistoric and historical periods, these sanctuaries provide the earliest evidence of the incorporation of elements imported from the religions of the neighbouring settled societies as integral components of the desert cult, being adapted to the cultic heritage of the nomadic semi-pastoral peoples that inhabited in the area.

Regine Hunziker-Rodewald (University of Strasbourg), “Ready to Give Birth—Towards an Interpretation of the Iron Age Female Terracotta Figurines from Edom”

Subsequent to the most recent interpretations of the female figurines’ function in Judah and Ammon in the context of ritual and votive practice, the present paper approaches the heavily pregnant figurines from Edom with a new hermeneutics of their iconography. When compared to the Iron Age female figurines from the central and the northern parts of Transjordan, the Edomite females’ appearance is surprisingly different. The heavily protruding belly, the swollen, big and opened up vulva, and the gesture of cupping the breasts show a female ready for childbirth and breastfeeding. To date, in the area of ancient Edom, no figurine has been found holding, carrying, or nursing a child. In contrast to the majority of the Ammonite and Moabite figurines, the Edomite females represent a stage post-conception and pre-birth. They have almost exclusively been found in domestic contexts and belong to the fingerprint data of ancient women’s reality in the risk zone of conception, pregnancy, and childbirth. In biblical texts this female reality is reused by (male) authors in the curse of Genesis 3:16 or the threat of Isaiah 13:8. Despite their awareness of the pains and dangers implied, the biblical authors’ point of view concerning the women’s reality in the context of childbirth is most often limited to the phrase “and she conceived and bore.” The Iron Age females from Edom ‘speak’ another language: these are voices raised in between conception and childbirth, testifying to incantations, prayers, and vows by the concerned.

Joel Burnett (Baylor University), “Do We Have an Image of Qaus? Ceramic Anthropomorphic Statues in Edom and Beyond”

The god Qaus appears frequently in Edomite personal names, including those of two of its kings mentioned in Assyrian sources, and perhaps in the bulla of Qausgabr from Umm el-Biyara and in an epistolary blessing from Ḥorvat Uza in the Negev (Vanderhooft 1995; Knauf 1999; Rollston 2014; Burnett 2009, 2016). This deity is sometimes suggested as the male figure portrayed by anthropomorphic cylindrical terracotta sculptures occurring most abundantly at Ḥorvat Qitmit in the Negev and at ‘En Hazeva in the northwestern Arabah (see, e.g., Dearman 1995). While sculptures of this type have also been recovered from the Edomite heartland, they appear in other areas of Transjordan and beyond (Daviau 2012; Petit and Kafafi 2016) and their iconography can be traced to more widespread areas of the Levant (Beck 1995). In this discussion, I will consider questions of these statues’ representation, function, and possible Edomite identity in light of their geographic distribution, archaeological contexts, and iconography.

Andrea Creel (University of California, Berkeley), “Connectivity on the Edge of Empire: Ḥorvat Qitmit as Ritual Node in a Landscape of Movement”

The seventh century B.C.E. open-air ritual site of Ḥorvat Qitmit lies on a hilltop near the Naḥal Qitmit in the northeastern Negev, approximately 5 km southeast of Tel Malḥata. In the publications of the site, the excavators characterized Ḥorvat Qitmit as an “Edomite shrine” and subsequent interpretations focused on the political and ethnic associations between the site and southern Jordan, how the site may mark shifts in territory between Judah and Edom, and/or the relationship between the site and local trade networks. However, many of these interpretations rest on anachronistic and static notions of political organization and identity. Furthermore, these interpretations often neglect the spatial and experiential contexts of Ḥorvat Qitmit within an arid landscape inhabited by communities of varying mobilities and flexible subsistence strategies.

I suggest that we may better understand this site as a potent ritual node in a landscape of movement. In this model, I contextualize Ḥorvat Qitmit within a meshwork of liminality, movement and mobility, visibility, aridity, marginality, community, and the remote hegemony of the Assyrian Empire. I characterize Ḥorvat Qitmit as a site of continuity and innovation, the local and the non-local, and a site of community for sedentary urban and itinerant rural populations in a sacred landscape. This site generated and channeled powerful flows of materials, people, and ideas, indexing the role of ritual in interaction, innovation, and negotiation. Accordingly, my analysis of Ḥorvat Qitmit also

demonstrates the need for more complex interpretations of the Negev and southern Jordan in the late Iron Age.

Erin Darby (University of Tennessee, Knoxville), “Religion and Edomite Expansion: The View from ‘En Hazeva”

Religion has played a key role in the “Edomite expansion hypothesis,” the theory that Edomites (however variously defined) spread from their homeland in southern Jordan into Israel’s Negev in the Iron Age II; but, how secure is the data upon which these reconstructions of religion rely? When examined in greater detail, the hypothesis rests on a relatively small amount of archaeological data, and the quality of the excavations and publications remain a key impediment to interpretation. These problems add to the already recognized issues plaguing how scholars define “Edomite” and the extent to which the biblical text can and should color archaeological interpretation.

In order to re-evaluate the evidence for Edomite expansion, this paper will use the site of ‘En Hazeva as a framing device to discuss how the archaeology of religion figures into scholarly reconstructions of Edomite-vs-Judean control of the Negev. The paper will also evaluate similar data from other sites in southern Israel, combining this information to question the expansion hypothesis. In light of the current state of archaeological research, the paper will then evaluate whether scholarship currently meets the minimum data threshold to make such arguments and will close by positing a more nuanced approach to the question of Iron Age II borders that reflect our current state of knowledge of material culture and religion in the Negev.

SATURDAY, NOVEMBER 18

9A. 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)

Estelle Herrscher (Aix Marseille University; French National Center for Scientific Research—CNRS), Liana Bitadze (Tbilisi State University), Modwene Poulmarc’h (ArchéOrient; French National Center for Scientific Research—CNRS), Nikolos Vanishvili (Georgian National Museum), Giorgi Bedianashvili (Georgian National Museum), Gela Giunashvili (Georgian National Museum), Giorgi Gogochuri (Georgian National Museum), Kakha Kakhiani (Georgian National Museum), Johny Kozsiashvili (Kashuri Museum, Georgia), Bidzina Murvanidze (Georgian National Museum), Elena Rova (University of Venice), Guy André (Aix Marseille University; French National Center for Scientific Research—CNRS), “Dietary Practice Changes during the Bronze Age in the Southern Caucasus: Evidence of Millet Consumption Using a Multi-isotopic Approach”

At the crossroads of Europe, between the Middle East and Central Asia, and located between Black and Caspian seas, the Caucasus is a key region to investigate the modalities of the distribution of plants, husbandry management, as well as human dietary practices. Our research aims at documenting human dietary practices through the southern Caucasus during the Bronze Age and dating the first evidence of millet consumption. Based on 29 archeological sites located through Azerbaijan, Armenian, and Georgian territories, 127 wild and domesticated terrestrial animals and 103 humans were sampled for carbon and nitrogen stable isotope analyses on bone collagen and apatite. In addition, 22 archaeological seeds were also analyzed for stable isotope measurements from two sites. The animal carbon stable isotope data show a wide dispersion suggesting the presence of both C3 and C4 plants along the Kura River. High carbon stable isotope values recorded only for domesticated animals would suggest either the presence of wild C4 plants in the surrounding environment or mobility of herds since the Early Bronze Age. A shift in carbon isotope values for some animals and humans would indicate a change in cereal cultivation, which could be attributed to millet crop and its consumption in the Middle Bronze Age (1939–1774 cal B.C./1621–1450 cal B.C.). This dietary pattern is

also observed during the Late Bronze Age with a wider isotope heterogeneity for humans, questioning the impact of environmental and cultural factors on dietary practices breadth. This research was funded by the National Agency for Research (ANR13-JSH3-0003-01).

Benjamin Irvine (Freie Universität Berlin), “Stable Isotopes of Sulphur to Further Investigate Dietary Habits in Anatolian Early Bronze Age Populations”

This paper develops research as part of a doctorate focusing on examining the dietary habits of several Early Bronze Age (3000-2000 B.C.) populations in Anatolia that utilized stable isotopes of carbon and nitrogen. The investigated sites are from different environmental regions and consist of İkiztepe (northern Anatolia, Samsun region, on the Black Sea coast), Titriş Höyük (southeastern Anatolia, Urfa region), Bademağacı (southern Anatolia, Antalya region), and Bakla Tepe (southwestern Anatolia, Izmir region). Sulphur isotopes of bone collagen from human and animal skeletal samples were analyzed to further investigate dietary habits, and in particular the possible consumption of marine or freshwater resources as opposed to solely terrestrial ones. This research is incredibly significant as it is the first time that quantitative scientific methods, and in particular stable isotopes of sulphur, have been employed to address questions and hypotheses about dietary habits in the Early Bronze Age period of Anatolia. Analysis of sulphur isotopes was employed on bone collagen from ca. 50 human and faunal osteological samples taken from the Anthropology lab of Hacettepe University, Ankara, Turkey, and was conducted at the laboratory of Simon Fraser University, Canada. The results are still forthcoming, but will help to provide supplementary information in defining the dietary habits of this pivotal and important time period and region in the archaeology of the Near East.

G. Bike Yazıcıoğlu-Santamaria (University of Chicago) and Lynn Welton (University of Toronto), “A Reassessment of 87Sr/86Sr Data from Human Remains at the Anatolian Bronze Age Sites of Kültepe and İkiztepe: New Observations in Light of Weaning Age”

Sampling strategies in biogeochemical investigations of ancient human mobility are becoming more nuanced with an advanced understanding of dental chronology, enamel mineralization, and lactation process. It is now recognized that 87Sr/86Sr ratios of enamel from teeth that form pre-weaning are heavily influenced by strontium flow from the maternal skeleton, thus yielding the 87Sr/86Sr ratios of the sampled individual's mother's former place of residence, rather than the individual's place of birth as was previously held true. This recently understood phenomenon provides a logically coherent explanation for inter-tooth variability in 87Sr/86Sr ratios from a single individual and allows for chronologically refined observations on lifetime mobility, post-marital residence patterns, and generational change in immigrant populations. This new interpretative framework, however, also requires us to reassess the conclusions of former investigations by reinterpreting data in light of dental chronology and weaning age. This paper combines 87Sr/86Sr data from the authors' doctoral dissertations on Kültepe/Kanesh (25 individuals; intramural Middle Bronze Age graves; Yazıcıoğlu-Santamaria) and İkiztepe (72 individuals; Early Bronze Age cemetery; Welton). The proposed logic of inference is exemplified by a contextual evaluation of Kültepe samples and is applied to İkiztepe. İkiztepe samples are re-classified according to tooth type (1st, 2nd, 3rd molars, premolars, canines) and re-evaluated in light of a recent weaning age assessment based on elemental analysis (Sr/Ca) by Kameray Özdemir and Yılmaz Erdal. The ultimate goal of this paper is to determine the implications of this methodological conundrum on interpretations regarding ancient mobility and to suggest improved sampling strategies for future researchers.

Maureen E. Marshall (University of Illinois at Urbana-Champaign), “The Biogeochemistry of Agro-pastoralism in the Bronze Age Tsaghkahovit Plain, Armenia”

Despite significant shifts in socio-political organization during the Bronze Age (3500–1150 B.C.) in the southern Caucasus, all societies seemed to

have relied on a combination of agricultural production and pastoral practices. Indeed, Early and Late Bronze Age contexts excavated by Project ArAGATS—the American-Armenian Project for the Archaeology and Geography of Ancient Transcaucasian Societies—in the Tsaghkahovit Plain, Armenia, have turned up similar zooarchaeological and archaeobotanical remains, suggesting that people were engaged in the farming of barley and wheat and herding practices that focused on sheep and goats. These remains also suggest a homogenous diet among the people living in the area. However, recent archaeobotanical evidence and information on the clay sources of ceramic vessels found in the Late Bronze Age sites of the Tsaghkahovit Plain have called into question regional interaction and dietary practices. Investigating the diet of past populations can not only tell us about the economy and subsistence practices, but also shed light on social relationships, daily lives, and individual lived experience. As a step in this direction, this presentation will provide a brief overview of the Late Bronze Age socio-political context, agro-pastoral practices, and diet in the Tsaghkahovit Plain. I will highlight some of the challenges of working in a geologically diverse area, present the results of biogeochemical analysis ($\delta^{13}\text{C}$ $\delta^{18}\text{O}$ in carbonates, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in collagen, and 87Sr/86Sr) of human remains, and discuss steps for future investigations.

9B. Approaches to Dress and the Body I

CHAIR: Megan Cifarelli (Manhattanville College)

Amir Golani (Israel Antiquities Authority), “Beyond Ornamentation: Contextualizing Research of Personal Adornment in the Ancient Near East”

Whether revealed in graves, referred to in texts, or portrayed in reliefs, the context of personal adornments in the Ancient Near East clearly indicates their use beyond simple ornamentation. Jewelry was made to be seen, carrying intrinsic value as prestige, cultic, and economic items. Its personal nature makes it a crucial component in social interaction, creating a method used to convey information concerning wealth, status, rank, gender, ethnic identity as well as religious beliefs. Raw materials and techniques are a measure of technological sophistication and cultic significance and an indication of trade connections and patterns, also making jewelry an important element for commerce. The methodological underpinnings for the study of personal ornaments are thus necessarily interdisciplinary, examining the archaeological context of what was found, how, and where, as well as its cultural context. Cultural context can be drawn from textual sources, statues, figurines, reliefs, and pictorial representations, all showing jewelry's significance by how and by whom it was worn and for what purpose. However, as much of our research originates from an art historical perspective drawn from elite burials, sacred texts, and stylized depictions of divine royalty, our understanding may primarily reflect an elite narrative, possibly skewing our understanding in its favor. Examining the context of a larger dataset including less impressive items with analysis of changing patterns of use and meaning would better place personal ornaments as media reflecting avenues of inter-cultural contact, exchange, and the assimilation of cultural traits and the changes affecting them over time.

Nili Fox (Hebrew Union College-Jewish Institute of Religion, Cincinnati), “Sanctifying Body Marking: Biblical and Archaeological Evidence”

Humans have a long history of “dressing” their bodies with temporary and permanent marks. We know that forms of body marking such as tattooing, scarification, and cicatrization were employed in the ancient Near East since the Neolithic period. Although concrete evidence of these practices rarely survives in the archaeological record, several images of body-marks have come to light on Egyptian mummies and on objects of art, often associated with the mummies. A few figurines from the Levant also sport similar marks. In addition, numerous ancient Near Eastern and biblical texts mention body marking in the context of legal and cultic practices thereby furthering our understanding of its cultural significance. Clearly, the utilization of this type of “dress” is widely attested.

Ancient perspectives on body marking, specifically what appears in

a variety of biblical texts to reference tattooing, have long baffled scholars. The problem stems from the contradictory biblical attitude. Lev 19:28 clearly prohibits such marking while Gen 4:15, Isa 44:5, and Ezek 9:4, for example, identify these marks as beneficent, signaling divine protection. My approach to the problem diverges from previous scholarship in two ways. First, by focusing on context I show that exile or an exilic context colors the biblical perspectives. Second, I view body marking in the broader context of biblical sanctification of “dress” generally, that is, the prescriptions enacted by those charged with concretizing the laws and customs of a late biblical Israel.

Christine Palmer (Gordon-Conwell Theological Seminary), “Israelite High Priestly Apparel: Constructing an Identity between Human and Divine”

Social scientists have probed various ways of conceptualizing the body in human experience—the individual body (experience of self), the social body (symbol rooted in culture), and the body politic (culturally-regulated body). Considering biblical Israel’s priesthood, perhaps an additional dimension may be adduced to coin the expression “the ritual body.” In Israel’s religious practice, the high priest’s body is viewed as a ritual object. The priest is presented in an unblemished state, he receives ritual action identical to that of sacred objects in the sanctuary, and is then invested in holy apparel whereupon he becomes the locus of mediation between human and divine worlds.

High priestly investiture is instrumental in constructing a new ritual identity. It is sacred apparel that transforms a man into a priest, transferring him from the domain of the common into the domain of the holy. Clothed in garments that reflect the tent shrine in styling and fabrication, priestly dress enables access to sacred space and the crossing of ritual boundaries. In his role as intermediary, the high priest displays upon his dress the engraved signet tokens that legally represent the nation. Furthermore, his attire replicates the visual phenomena associated with theophany, displaying a sanctioned sartorial expression of the divine presence. The “ritual body” of biblical Israel’s high priest is a socially-constructed microcosm of the divine-human relationship. Vested with symbols representing the nation of Israel and symbols representing the divine presence, the high priest embodies the covenant relationship and enacts it through rites of the cult.

Sarah Mady (The Graduate Center at the City University of New York), “Transvestite Female Saints in Byzantine Traditions: The Case of Marina of Qalamoun”

Transvestitism was often seen as the only choice for many women to lead an ascetic life in early Christianity. This study examines the act of transvestitism from multiple approaches focusing on the case of Marina, a saint who reputedly was born in the village of Qalamoun and who lived in the Qannubin monastery in the Wadi Qadisha (The Valley of the Saints), Lebanon. Saint Marina, like numerous other female saints, disguised herself as a monk in order to lead a monastic life and was later falsely accused of fathering a child whom she raised after being expelled from the Qannubin monastery. Stemming from the Saint Marina Rock Shelter in Qalamoun and its murals depicting the life of the saint, in addition to her hagiography compared to those of other transvestite saints, this study draws from psychology, religion, anthropology, and archaeology in order to explain the act of transvestitism and its popularity in the Byzantine world. The main areas of this study examine: 1) the reasons that led several women to become monks, 2) how their social and religious transvestitism deconstructed their female bodies, 3) the eventual deconstruction and outcome of their transvestitism, and 4) the cult entailed by the story of Marina.

Betty Hensellek (Cornell University; Metropolitan Museum of Art), “Banqueting, Dress, and the Idealized Sogdian Merchant”

Studies on late seventh and early eighth century C.E. Sogdian wall paintings focus heavily on the identification of patron deities, the unfolding plot of epics, and the origin of fables and tales. In this paper, I wish to open a different set of questions pinpointing a less scrutinized subject: the banquet. What was the purpose of including the banquet scene in a room’s decorative repertoire? Why might it be significant that these depictions follow a routine

placement just above the built-in bench in a room of gathering? How might historical individuals have interacted with this image type?

I will argue that scenes of banquetting were carefully placed within rooms of gathering at the site of Panjikent. This phenomenon was highly significant for a non-aristocratic, mercantile class. By considering the architectural planning for rooms of gathering as well as the paintings of banquetters found within these spaces, I will suggest that a possible cultural code could have been pieced together by individuals encountering these images. Ultimately, I will reconsider the ubiquitous belief that the wall paintings of Panjikent were simply imitations of an aristocratic lifestyle. I will on the contrary argue that the banquet in particular was a potent image of conviviality for those of Sogdiana’s unique mercantile class.

9C. Theoretical and Anthropological Approaches to the Ancient Near East

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

Anne Chapin (Brevard College), “The Expert’s Eye: Theory, Method, and Connoisseurship in Aegean Fresco Studies”

The study of Aegean frescoes is regarded today as a “woolly discipline”—that is, an area of scholarship that lacks clarity or substance. This criticism reflects the current inability of today’s scholars to define the development of Aegean fresco painting through time, by region, or by culture (specifically, Minoan or Mycenaean), even after a century of study. This paper focuses on chronological aspects of Aegean painting and argues that connoisseurship has long played a negative role in the diachronic study of the material by subverting standard archaeological methodologies grounded in stratigraphic analysis. Rather than acknowledging the limits of the archaeological evidence, frescoes have been assigned to various periods of Aegean prehistory without the strong support of stratigraphy and without a secure understanding of the stylistic and iconographic development of the art form. The result is a confusing array of contrasting ideas and conflicting interpretations that now encumbers rather than enhances the study of Aegean painting. This paper reviews the history and theory of connoisseurship in relation to standard archaeological methodologies, and concludes that (1) connoisseurship’s utility for the study of Aegean painting is limited and (2) the current scholarly morass need not exist. The paper concludes with a short presentation of the author’s current project, which is a scientific, stratigraphic review of Aegean painting from Crete and the Cycladic Islands.

Neil Erskine-Fisher (University of Glasgow), “Religiosity in Routine: Movement, Landscape, and Bridging the Data-Theory Divide”

Archaeological investigations of ancient Near Eastern religion have most often treated theory-laden methodologies with some scepticism, preferring positivist reconstructions or comparisons with textually-attested practice and belief. Similarly, studies of landscape are dominated by positivist investigations of communications, power, and trade networks, with theoretical analysis of ancient perceptions of landscape largely absent. This distrust of theory may be reasonably founded in the vagueness that characterises much archaeological literature when it attempts to move between survey and excavation data and the theoretical frameworks used to interpret them—the result of borrowing from other disciplines approaches without reformulation for archaeological applications.

Investigating the religiosity of landscapes through routine movement presents a possible solution. A theoretical methodology rooted in Deleuzian thought allows us to reconstruct the development of individuals’ religiosity-loaded understandings of their surroundings. By applying this methodology to routine journeys, we can confidently identify ancient individuals’ sequential experiences of specific environmental, architectural, and artifactual data located along a given route. This provides a solid archaeological basis for our reconstruction, and avoids the vague relationship often exhibited between data and theoretical interpretations. By applying this Deleuzian approach to ancient Near Eastern journeys at different scales, from the local to interregional, this

paper demonstrates routine movement's usefulness as an evidentiary base from which to analyse ancient religious experience, and allows the application of a theoretically-nuanced approach whilst remaining thoroughly grounded in archaeological data.

Christopher Brinker (Johns Hopkins University), “The Rehabilitation of Segmentary Lineage Systems as a Heuristic Model”

The segmentary lineage model of mobile pastoral societies was developed from the work of various ethnographers of Central and Southwest Asia and North Africa during the twentieth century. Certain theoretical deficiencies in anthropology before a major shift in the focus of that field in the 1970s and 80s led to the off-hand rejection of the model as having any inherent social or political significance. Current consensus among scholars of the ancient Near East tends to maintain this rejection, despite ongoing ethnographic research in those areas. I present a critically revised model of the segmentary lineage system and demonstrate how, with reference to epigraphic and material evidence from Early and Middle Bronze Age Syria, that model provides a useful heuristic device by which to investigate the changing form and nature of mobile pastoral societies in the ancient Near East. A major initial result of this inquiry is the observation of a significant difference between the Early Bronze Age, when such groups seem to be lacking, and the Middle Bronze Age, when such groups are apparently plentiful.

Kristine Garroway (Hebrew Union College-Jewish Institute of Religion, Los Angeles), “Childist Archaeology: Children, Toys, and Skill Transmission in Ancient Israel”

Almost 25 years ago, Grete Lillehammer issued a charge to archaeologists to find children and childhood in the archaeological record. Since then, studies have increased worldwide, but they remain a small part of ancient Near Eastern archaeology. This paper is a call to incorporate children more fully into the archaeological record. If one goal of archaeology is to study at a micro/macro level theories of cultural dynamics, then that record remains incomplete, even flawed, without the inclusion of children. Children are not simply an alternative focus of research, but need to be an integral part of all archaeologies. The paper offers not an archaeology of childhood, but a new theoretical lens, childist archaeology. In brief, childist archaeology can be understood as an offspring of feminist archaeology: it 1) seeks to assign a voice to the silent other, 2) examines ways in which the archaeological materials present a bias (here adult-centric), and 3) seeks to “fill in the gaps” left by the data with respect to children. Using play and objects of play identified in the published archaeological literature—specifically “spinning toys” (inter alia Tell Jemmeh, Hazor, Megiddo, Bethel, Gezer, Tel Malhata, Beth-Shemesh, Tell en-Naşbeh) and “miniature objects” (Tel Nagila, Megiddo, Beth Shean, Jerusalem)—as a case study, the paper applies a childist archaeology to children in ancient Israel and concludes that play should be understood as an integral part of skill transmission and the enculturation of children into full adult members of society.

Maurits Ertsen (Delft University of Technology), “Youths in the Future, Elderly in the Past, but Ancestors in the Present”—Time and Space in Ancient Near Eastern Irrigation”

There is ample evidence of long-term, irrigation-based societies in the ancient Near East. Most studies on these are based on a long-term perspective of centuries/millennia at a larger (regional or global) spatial scale. Insightful as these studies are, relating them to activities at the shorter and smaller scales that sustained societal stability remains a challenge. How do we move from today to the next 1000 years, or how did our ancestors move from their today to our present, in the small steps that produce reality? Taking up this challenge is key for two reasons: it is theoretically more convincing to do so and it offers action perspectives to current agents, as long-term and large-scale correlations do not allow for such production-oriented perspectives. There is no escaping from larger-scale correlations. I propose to discuss how to bring together the timescales of studies of humans and complex systems, taking selected cases of ancient Near Eastern irrigation as empirical examples—with a focus on Mesopotamia. I will discuss how irrigation systems and human

agencies are produced at exactly the same temporal and spatial scale—which is today and here, actually many todays and heres—and how the daily scale produces what we observe as complex systems' behaviour. The critical role of material infrastructure (like canals, fields, and dams in water systems) will be highlighted, as conceptually infrastructure appears to be (almost) similar to social structure.

Frederic Brandfon (Expedition to the Coastal Plain of Israel), “Digging a Hole and Telling a Tale: Science and Art in Archaeology”

In 1997 and 1998, performance artist Mark Dion conducted archaeological investigations in Venice, Italy and along the Thames River, London. Participating as an advisor and lecturer was Prof. Colin Renfrew of the MacDonald Institute of Archaeology. Objects discovered were photographed, catalogued, classified, and ultimately displayed in the Nordic Pavilion at the Venice Biennale, and the Tate Gallery in London. Dion considers the entire process a work of art, properly housed in an art museum like the Tate.

It is equally possible to see his work as a thought experiment. Given that a casual observer of Dion's project could find little to differentiate it from a scientific project directed by Renfrew, what can we as archaeologists offer to distinguish the work of archaeologist Renfrew from the work of artist Dion? The answer to that question is found at the intersection of the philosophy of art (see for example Arthur Danto, *The Transfiguration of the Commonplace*) and the philosophy of science (see for example Thomas Kuhn, *The Structure of Scientific Revolutions*). While science provides an understanding of the world that is, art provides an understanding of how we think about that world. I conclude that archaeology is neither art nor science, because it provides a way of understanding contingency, a world that is, but could have been different. The significance of this paper is its analysis, from a philosophical perspective, of claims that archaeology is a scientific pursuit.

9D. Putting Your Degree to Work: How to Apply for Careers Inside and Outside the Academy (Workshop)

CHAIRS: Tiffany Earley-Spadoni (University of Central Florida) and Fred Winter (F. A. Winter Associates)

This workshop will discuss the often overlooked practical aspects of seeking employment such as CVs vs. resumes, cover letters, networking, dossiers, references, when to apply, etc. It will be led by Fred Winter, who worked first as a tenured university professor, subsequently for the National Endowment for the Humanities and the Department of Education, and presently runs his own consulting firm addressing non-traditional academic employment; and Tiffany Earley-Spadoni, who previously worked in the private and public sectors and is now a tenure-track university professor. They will focus the discussion on the unique traits of academic vs. private-public job markets and how to apply for each. This workshop is meant to complement the “Careers Options for ASOR Members” session.

9E. Archaeology of the Natural Environment: Archaeobotany and Zooarchaeology in the Near East

CHAIRS: Melissa S. Rosenzweig (Miami University) and Madelynn von Baeyer (University of Connecticut)

Melina Seabrook (Stony Brook University) and Kathryn C. Twiss (Stony Brook University), “Animals of Ur: Preliminary Faunal Data from the Ur III and Old Babylonian Deposits”

This paper provides a preliminary overview of the faunal remains from Drs. Elizabeth Stone and Paul Zimansky's 2015 excavations at the site of Ur in southern Iraq. The studied animal remains consist of hand-picked macrofauna from two excavation areas. The remains come from what excavators identified as household and street contexts. While we expect that a majority of the bones represent domestic refuse, it is possible that some of the bones derive from other deposit types. We summarize taxonomic proportions in the assemblage (acknowledging the limitations of hand-picked assemblages on this front) and

describe the bones' surface conditions and modifications. We compare and contrast fauna from the Old Babylonian and Ur III periods in order to see if we can identify any meaningful distinctions between two periods widely believed to have very different forms of economic and social organization. Our analyses expand the as yet extremely small body of zooarchaeological literature from southern Iraq, shed light on domestic economies minimally represented in texts, and provide important new evidence about the characters of the Old Babylonian and Ur III periods.

Kathryn Grossman (North Carolina State University), “Animals in the Orontes Basin: Contextualizing the Zooarchaeological Assemblage from Tell Qarqur, Syria”

Tell Qarqur is a double-mounded site with a 10,000 year occupation history, located in the Ghab basin, a depression along the banks of the Orontes River in northwestern Syria. This paper highlights the unique nature of the animal economy at Tell Qarqur by comparing faunal remains recovered from the site during the 2005 to 2010 seasons with published faunal assemblages from other sites in the Orontes basin. Analysis of the faunal assemblage from Qarqur shows dramatic changes in the abundance of wild animals—including mammal, fish, bird, reptile, and invertebrate remains—and in the proportions of the usual suite of Near Eastern domesticates (sheep, goats, cattle, and pigs). Interestingly, these changes in the faunal assemblage at Qarqur do not always map neatly onto geopolitical changes in the region, suggesting a resilience in foodways and animal economies at the site. By contextualizing Qarqur's faunal remains within animal use patterns across the broader Orontes region, I will show how Qarqur's inhabitants relied on a distinctive, flexible, and adaptive food procurement strategy to both survive and thrive across the millennia.

Edward F. Maher (North Central College), “Where the Wild Things Are: Non-Domesticated Animals from Late Bronze Age Jaffa”

Analysis of over 14,000 animal bone and tooth fragments collected during previous and current excavations at the coastal site of Jaffa, Israel has yielded a wealth of zooarchaeological data. In addition to the common barnyard stock such as sheep, goats, and cattle, which are regularly featured at contemporary sites, the field investigations have revealed isolated contexts that underscore the use of certain wild animals. This paper will present select data relating to the remains of non-domesticated species that include fallow deer (*Dama dama*), red deer (*Cervus elaphus*), striped hyena (*Hyena hyena*), and lion (*Panthera leo*). Of particular note is the contribution of the lion (and possibly the hyena) to local cultic orientations based on their find spots and associated cultural modifications. The cluster of thousands of deer antler fragments found on the floor of an associated gate system will also be considered.

Alexia Smith (University of Connecticut), Thomas Hart (University of Texas at Austin), Lucas Proctor (University of Connecticut), and Gil Stein (Oriental Institute, University of Chicago), “Ubaid Period Agriculture and Fuel Use at Tell Zeidan, Syria: Integrating Macrobotanical and Phytolith Data”

Between 2008 and 2010 excavations at Tell Zeidan, Syria, led by the Oriental Institute of the University of Chicago and the Syrian Directorate General of Antiquities and Museums, revealed a sequence of Halaf, Ubaid, and Late Chalcolithic occupation. Surveys suggest that Tell Zeidan was one of the largest Ubaid settlements in northern Mesopotamia and questions of how the inhabitants of such a large site sustained themselves in a semi-arid zone have been raised. This paper integrates macrobotanical and phytolith data from Ubaid period Zeidan to discuss the nature of agricultural production, crop processing, and fuel use within domestic contexts and kilns. Similarities and differences between the macrobotanical and phytolith records are presented.

Andrew Fairbairn (The University of Queensland) and Nathan Wright (McDonald Institute for Archaeological Research, University of Cambridge), “Feasting and Burning in Middle Bronze Age Anatolia: Archaeobotanical Evidence for Elite Food Consumption from Büklükale”

Büklükale is a large Middle to Late Bronze Age city controlling a major

crossing of the Kızılırmak (Halys) River in central Turkey. Archaeobotanical research of a series of shaft-like rooms in a palace complex has revealed a remarkable assemblage of burnt and mineralized plant remains directly AMS dated to ca.2000-1700 cal B.C., including fruits, spices, nuts, and herbs, as well as probable bread and fuel remains. Taphonomically, the remains suggest deposition of consumption waste or even eaten food in a waterlogged, high mineral environment such as a latrine. The later burnt deposits have a more complex history and suggest the burning of seeds and fruits before they entered the shaft, perhaps as part of the ceremonies surrounding the deposition of cups, jugs, and other high status items. The assemblages appear to be a mix of both everyday consumption and specialized ceremonial consumption in a high status context in which elites had preferential access to exotic and rare plant products. As well as representing a unique cultural assemblage, the Büklükale finds constitute the earliest known archaeobotanical traces of many economic species in Anatolia. This paper discusses the significance of the finds for understanding the site and the role of plants in Middle Bronze Age society.

John Marston (Boston University) and Kate J. Birney (Wesleyan University), “Hellenistic Agricultural Economy in the Southern Levant: New Evidence from Ashkelon”

The Hellenistic period saw a reorientation of trade networks, cultural ties, and foodways across the eastern Mediterranean. Agricultural practices of this period, however, remain poorly understood, especially in the Levant. Here we present new botanical evidence from Hellenistic Ashkelon that sheds light on both the Seleucid and Ptolemaic agricultural economies of the third and second centuries B.C.E. Emmer, for example, is an unusual find for the Hellenistic period and reflects an Egyptian influence on agriculture in the southern Levant during this period, in contrast to earlier Iron Age agriculture at Ashkelon when free-threshing wheat was the primary cereal cultivated. We find evidence that cereals were furnished to the city as cleaned grain and that initial crop processing took place off site. Local farming focused on cereals, especially free-threshing wheat, barley, and emmer wheat. Beyond this, the Ashkelon material also offers a rare opportunity to compare the archaeobotanical remains from several neighborhoods across the Hellenistic city. Integrated with their archaeological context, the archaeobotanical data thus not only illuminate larger questions of regional and political economy but also offer a glimpse into local market practices and the household economy in a bustling port city.

9F. Ancient Texts and Modern Photographic and Digital Technologies

CHAIRS: Annalisa Azzoni (Vanderbilt University) and Christopher Rollston (George Washington University)

Jana Mynarova (Czech Institute of Egyptology, Charles University), “Acquisition and Adaptation of Cuneiform Writing in Peripheral Areas: A Case Study of Amarna Cuneiform Palaeography”

The publication of some important cuneiform corpora from the Late Bronze Age Levant over the past decade has drastically changed the perspective taken towards issues pertaining to the acquisition and adaptation of cuneiform writing in the so-called peripheral areas. This development can especially be observed following the current research in cuneiform palaeography. The meetings in Leiden (2009) and Warsaw (2014) already demonstrated the potential of cuneiform palaeography for our understanding of the process of writing, the composition of the respective texts, and many other aspects. It is striking that the most complete tool for the study of one of the principal “peripheral” cuneiform corpora of the second millennium B.C., the Amarna corpus, remains to this day the sign list of O. Schroeder, published already in 1915. In 2012 a new project dedicated to the digital epigraphy and palaeography of the Amarna tablets started at the Charles University in Prague. The paper intends to present some key aspects of the Amarna cuneiform corpus, paying special attention to some methodological issues pertaining to the connection between the paleography of the individual texts and the patterns of communication during the Late Bronze Age.

Michael B. Toth (University College London; R. B. Toth Associates), Roberta Mazza (University of Manchester), and William A. Christens-Barry (Equipoise Imaging), “New Technologies to Reveal Texts in Mummy Cartonnage”

Dissolving cartonnage in order to retrieve papyri by dealers and collectors continues to this day. The destructive methods and limited documentation of the original object result in the loss of cultural heritage. In a quick-response pilot project, an international team tested the feasibility of non-destructive imaging of multiple layers of papyrus found in Egyptian mummy cartonnages. This project used multiple advanced imaging techniques to determine the potential to see texts in papyrus mummy mask cartonnage layers and document the objects. It builds on the extensive experience of pioneers in multispectral imaging systems, X-ray Fluorescence Analysis and Synchrotron Rapid-Scanning, X-ray Micro Computed Tomography, Optical Coherence Tomography and Terahertz Imaging, as well as data and program management and integration. Team members came from the fields of papyrology, digital humanities, medicine, particle physics, imaging science, and biomedical and systems engineering. The team implemented a phased, agile approach with increasingly complex imaging, processing, and integration techniques. Imaging started with optical multispectral imaging, followed by optical coherence tomography and terahertz imaging, followed by imaging with higher energy level x-rays. The team imaged actual cartonnage, as well as a small fragment and surrogate test objects that did not require conservation care, handling, and transport. The project is making all its data freely available, with lessons-learned on findings and imaging methodologies for further research in capturing images of hidden texts. This global effort highlights the current destructive techniques being used to study mummy masks, and offers impetus for documenting the original state of objects and their production.

Anat Mendel Geberovich (Tel Aviv University), Arie Shaus (Tel Aviv University), Shira Faigenbaum-Golovin (Tel Aviv University), and Barak Sober (Tel Aviv University), “Arad Ostrakon 16 Rediscovered via Multispectral Imaging”

Arad Ostrakon 16 is part of the famous Elyashiv Archive, dated to ca. 600 B.C. It was published as bearing an inscription on the recto only. New multispectral images of the ostrakon have enabled us to reveal a hitherto invisible inscription on the verso, as well as additional letters, words, and complete lines on the recto. We will present the new images and offer our new reading and re-interpretation of the ostrakon. In addition, we will give a glimpse into other Old Hebrew ostraca rediscovered with multispectral imaging.

Katherine Jones (The George Washington University), “Likely Lies: A Statistical Analysis of the Prevalence of Modern Forgeries”

The authenticity of newly discovered artifacts is of critical importance. Scholars examine ancient inscriptions for linguistic consistency, carbon dates, and intentions, among other factors. However, it can be difficult for the average person to determine authenticity. This raises problems within the antiquities community. How ought media report on potentially forged artifacts? Are a few expert opinions enough to claim legitimacy? Which factors should be most heavily weighed when determining validity?

This paper seeks to establish an objective, statistical model for determining the authenticity of textual artifacts. A model is produced using digital statistical packages that analyzes qualities of an inscription, considers evidence against its legitimacy, and predicts the probability that it is forged.

The model was created using 48 case studies—25 forgeries and 23 non-forgeries. Eight criteria were considered for each study. The model would consider each criterion and output the odds that an artifact was inauthentic. Within the data set, it had a success rate of 81%.

The model establishes that poor script, incorrect date, and forger’s motives are most heavily weighted in determining whether an artifact is legitimate. Poor provenance and sensational content also contribute. Each of these factors had a statistically significant impact on odds ($\alpha=.05$).

This objective, computerized model has the potential to prevent media

outlets from breaking incorrect information, or scholars from weighing some factors over more relevant evidence. It also demonstrates which aspects of an artifact are most significant and should therefore be examined preliminarily, potentially saving time and money for researchers and epigraphers.

9G. The Enigma of the Hyksos I

CHAIRS: Manfred Bietak (Austrian Academy of Sciences), Hanan Charaf (Lebanese University)

Danielle Candelora (University of California, Los Angeles), “Defining the Hyksos: A Reevaluation of the Term *Hk3 H3swt* and Its Significance”

The eastern Nile Delta in the Second Intermediate Period is a stereotypical example of a liminal zone, characterized by cultural transience and intermingling between native Egyptians and Levantine immigrants. The resultant hybridity visible in the archaeological record has become the subject of numerous studies of the material consequences of identity negotiation. However, few sources survive that both reference and were commissioned by these Levantine immigrants, barring scholars from accessing how they viewed themselves—a crucial aspect of understanding identity. Yet it is possible to access a portion of this emic perspective for the Hyksos kings in particular by studying the inscribed objects that these rulers commissioned for themselves. A diachronic examination of the title *Hk3 H3swt* will counter the notion that the Egyptians labeled the Hyksos with this title, denying their agency in this process. My analysis reveals that while the title was applied to foreign rulers from the Old Kingdom on, including Asiatic, Nubian, and generalized enemy leaders, no contemporary Egyptian texts which refer specifically to the Hyksos actually employ the title *Hk3 H3swt*. Instead, I will demonstrate that these kings selectively adopted this Egyptian term as a self-defining title as they negotiated their foreign, yet royal, identity within the Egyptian worldview. In an effort to commemorate their own foreign identities from an ideal Egyptian perspective, the Hyksos adopted aspects of the Egyptian royal titulary accompanied by traditional Egyptian throne names, but incorporated their own Semitic names alongside the customary Egyptian term for foreign ruler.

Aleksandra Ksiezak (University of Toronto), “Tell el-Yahudiyeh Ware in the Eastern Nile Delta—Production, Distribution, and Fabric Use Specialization at the Site of Tell el-Maskhuta during the Second Intermediate Period”

Tell el-Yahudiyeh juglets belong to a distinct group of vessels from the Second Intermediate Period whose earliest examples are attested in Palestine and the Levant. They are an unmistakable marker of the Asiatic presence in the Mediterranean characterized by a specific form and mysterious function—from serving as cosmetic containers to being connected to the opium trade. Their development spans over hundreds of years and over numerous regions of the Near East and results in the formation of many local sub-types that continuously share red/brown to black burnished surfaces with frequent white incised/punctuate decoration. Petrographic analysis of the ceramic material discovered at Tell el-Maskhuta, a Hyksos settlement in the Wadi Tumilat, allows us to compare the mineral composition of their fabrics with geological data. Such comparison in turn allows us to estimate the provenance of clays and other raw materials used in their production. Application of the Exploitable Threshold Model showed the possible clay mining sites around both Tell el-Maskhuta and Tell el-Dab’a and allowed the estimation of the origin of the Tell el-Yahudiyeh juglets, and showed possible links between the capital city and a peripheral settlement deemed to be a shepherding village. In addition, the material from the Middle Bronze Age/Second Intermediate Period layers at Tell el-Maskhuta exhibits interesting changes in fabric use, particularly in the case of red/brown vessels. These changes are linked to a process of specialization and adaptation accompanying a shift in manufacturing technologies, likely influenced by social changes caused by increased Egyptian presence at the Hyksos settlement during the decline of their domination in the Nile Delta.

Ezra Marcus (University of Haifa), “Trade Floruit and Crisis: A Maritime Approach to the Hyksos Phenomenon”

The Hyksos phenomenon is one of the most enigmatic but provocative episodes in the history of the second millennium eastern Mediterranean: a Levantine population settles gradually within the Deltaic realm of the powerful Egyptian Middle Kingdom and, while still maintaining cultural and economic relations with its region of origin, assimilates and penetrates the Egyptian social, economic, and political milieu, culminating in a Canaan-Egyptian hybrid population that ascends to dominate Egypt after only little over a century. Numerous models have sought to explain this immigrant success story, which lasted several hundred years. However, most of our evidence, both textual and material, comes from Egypt and the Egyptians, which after successfully expelling these illegitimate foreigner usurpers left behind a biased record that continues to taint historiography. Instead of accepting this record at face value, the new ERC-funded “Hyksos Enigma” project, led by Professor M. Bietak, seeks to take a broader and more holistic approach to these issues. Within that framework, the present speaker is exploring the role of trade as a factor in the success and demise of the so-called Hyksos, placing their settlement within a larger phenomenon of Middle Bronze Age maritime coastal settlement and trade. This paper will explore the current state of research, and present the approach and proxies to be employed in reconstructing patterns of trade in this period and their relevance to the Hyksos question.

Nina Maaranen (University of Bournemouth), “The Hyksos in Egypt—A Bioarchaeological Perspective”

The term Hyksos commonly refers to the foreign dynasty that inhabited and held power in Egypt during the Second Intermediate Period, ca. 1640–1530 B.C.E. Although research suggests the Hyksos were of Levantine origin, the exact provenance of the dynasty has remained elusive, calling for further employment of archaeological material. Previous work has integrated archaeological, artistic, and textual evidence, but human skeletal material has remained lightly investigated. To remedy the situation, human remains drawing from known Hyksos samples and potential Near Eastern sites are analysed under the auspices of the ERC-funded project “The Hyksos Enigma.” The skeletal material is investigated using both conventional methods as well as novel approaches in order to create biological and demographic profiles for further bioarchaeological analysis. Biological affiliation is investigated using methods analyzing skeletal and dental similarity and dissimilarity, employing techniques considering both metric and non-metric information. This allows for the exploration of similarities and differences within the population currently defined only as Hyksos, as well as between populations from sites associated with the Hyksos. The presentation offers a first look into the project, explaining the reasoning behind the selected methodology and presenting potential sites. Preliminary results are presented from a skeletal sample from Tell el-Dab’a, the ancient Hyksos capital Avaris. A special emphasis is placed on dental analysis and its role in biodistance analysis. Researchers studying associated material and areas are invited to discuss the results.

Hendrik Bruins (Ben-Gurion University of the Negev), Johannes van der Plicht (Groningen University; Leiden University), Lawrence Stager (Harvard University), and Michael Dee (Groningen University), “Middle Bronze Age Stratigraphies at Ashkelon and Tell el-Dab’a: Radiocarbon Dating and Material Culture Comparée with Emphasis on the Hyksos Period”

Ashkelon was the major archaeological city-state along the southern Mediterranean coast of Canaan during the Middle Bronze Age. Stratigraphic Phases 14, 13, 12, and 11 (Grid 2) relate to four successive stages of a mud brick city gate. The material culture of Middle Bronze Age Ashkelon has been differentiated according to the sequence of the four gates and their associated ramparts, walls, and streets. Subsequently, Phase 10 (MB IIC) ends the Middle Bronze Age stratigraphy at Ashkelon. The capital of the Hyksos, Avaris, was situated at Tell el-Dab’a, the largest and most important MB site in Egypt in the eastern Nile Delta. Stratigraphic correlation was made between Tell el-Dab’a and Ashkelon, based on material culture. Tell el-Dab’a Stratum G/4 (MB

IIA, Dynasty 13) relates to Ashkelon Phase 14 (Gate 1). Tell el-Dab’a Stratum G/1-3 (MB IIA, Dynasty 13) relates to Ashkelon Phase 13 (Gate 2). Tell el-Dab’a Stratum E/3 (MB IIB, Dynasty 13) relates to Ashkelon Phase 12 (Gate 3). Concerning the Hyksos period associations, Tell el-Dab’a Stratum E/1 (MB IIB, Dynasty 15) relates to Ashkelon Phase 11 (Gate 4) and Tell el-Dab’a Strata D/3 and D/2 (MB IIC, Dynasty 15) relate to Ashkelon Phase 10. We present 48 radiocarbon dates of Ashkelon: eight dates of Phase 14, one date of Phase 13, and three dates of Phase 12. Regarding Hyksos linked strata, we have 29 dates of Phase 11 and seven dates of Phase 10. The results will be discussed, both in radiocarbon context, including a Bayesian sequence model, and conventional historical-archaeological age assessments.

9H. New Work on Sardis from the Harvard-Cornell Excavations to Sardis

CHAIRS: Nicholas Cahill (University of Wisconsin–Madison) and Jane DeRose Evans (Temple University)

Nicholas Cahill (University of Wisconsin–Madison), “The Lydian Palace at Sardis”

Research at Sardis in the last nine years has focused on low hills north of the Acropolis. This region within the Roman city walls was for many years thought to be outside the city center of Sardis during the Lydian period (e.g., Hanfmann 1983), but is now known to be the center of the city in the Lydian period as well. In this presentation I will summarize evidence for the identification of this area as an elite center for administration and other activities resembling Near Eastern palaces. The region was raised above the lower city on massive terrace walls. The buildings on these terraces are known mostly through fragments and spolia, but marble architecture and painted, figural terracotta revetments and roof tiles identify them as very high-status structures. Finds including a sealstone, an ivory furniture inlay, weapons, and armor are not domestic, but consistent with finds from Near Eastern palaces. The stratigraphy and history of the region is complex, but recently excavated pottery and C14 dates imply occupation in the Bronze Age and Early Iron Age, suggesting a longer and more complex history than previously suspected.

William Bruce (Gustavus Adolphus College), “Religious and Domestic Life in Lydian and Achaemenid Sardis”

The excavation sector Pactolus North (PN), located outside the fortified city of Sardis along the banks of the Pactolus River, was an area of continuous habitation and activity during the Lydian and Persian periods of Sardis’s history. Among the activities at PN was gold refining: here electrum, a compound of gold and silver, was separated into pure gold and silver. This area was later covered over by domestic houses and an altar devoted to the local goddess Kybebe. When excavated, PN was thought to be the center of the Lydian city, and destruction deposits were linked to catastrophes known from historical sources. Recent topographical studies, however, have shown that PN was not in the center of the city, nor even within the city’s fortified area, and the identification of the destruction deposits at PN has been called into question. Furthermore, it was originally assumed that the gold refinery was constructed to separate natural placer electrum recovered from the Pactolus River. Recent geological research in this area suggests, however, that the Pactolus did not contain electrum but pure gold; thus a new interpretation for the function of the gold refinery is needed. When and why the gold refinery went out of use is also an important question. The conversion of the space into a cult center surrounded by domestic units is still not fully understood. I hope to elucidate these issues in light of the revised chronology and phasing of the sector.

Philip Stinson (University of Kansas) and Bahadır Yıldırım (Harvard Art Museums), “Architecture and Sculpture of a Julio-Claudian Temple in Central Sardis”

A Julio-Claudian temple located in central Sardis provides important evidence for the re-urbanization of the city after the earthquake of 17 C.E., as recorded by Roman and Greek historians. This large Corinthian octastyle temple is situated axially at the back of a spacious colonnaded terrace fronted by

a monumental staircase, drawing parallels with not only Hellenistic sanctuaries in western Anatolia, but also the Roman imperial fora. Recent excavations by the Sardis Expedition have recovered more of the architectural and sculptural decoration of the temple, including figured capitals and entablature elements alluding to local cultic and mythic traditions. A new restoration of its elevation and details of its decoration will be presented, and a dating to the middle of the first century C.E. The significance of this temple's prominent setting in central Sardis as part of an urban complex in close proximity to the stadium and theater will be discussed in addition to evidence for its identification as an imperial cult temple either of municipal or provincial type.

Vanessa Rousseau (Weisman Art Museum, University of Minnesota), "If These Walls Could Talk: Late Roman Decoration at Roman Sardis"

Public and domestic spaces at Sardis employ coordinated programs of surface decoration in multiple media that present an especially fine example of the repetition and interplay of motifs typical of Late Roman interiors. This material allows consideration of the interaction of broadly contemporary decoration in both domestic and sacred spaces to reveal a distinct visual language for the city that is in keeping with broader movements in late antique visuality and materiality. A rich palette of polychrome ornament shared identical or complementary motifs in wall painting, stucco, opus sectile, revetment, mosaic, and very likely on textiles and other furnishings that do not survive. These largely non-figural motifs blurred the boundaries between media and must have created a lively horror vacui effect. Approaching this mixed Sardian corpus in the context of late antique visuality and materiality provides a framework to consider how this layering of ambiguous, non-specific imagery might be meaningful in creating phenomenological effects in interior spaces. The nuanced trickery of these emphatically two-dimensional designs could signal multiple referents and reflections, making the imagery multivalent through allusion and illusion. The potential significance and effect of this aniconic imagery could shift according to nature of the space, while maintaining a dialogue between functionally different spaces and their materials.

Frances Gallart Marqués (Independent Scholar; Archaeological Exploration of Sardis), "A Wink and a Smile: The Terracotta Quadrupeds of Late Roman Sardis"

Despite our current inability to corroborate the existence of coroplastic workshops at the site, it appears that terracotta figurines were being produced near or within the city of Sardis throughout much of its history: they make their first appearance in the material record of the ninth century B.C.E., and continue without interruption up until at least the seventh century C.E. Sometime after the fourth century C.E., however, a clear shift in preferences in both subject matter and technological style can be easily identified in the samples from the site; likely resulting from the similarly shifted demographics of the Sardian population, their analysis provides an opportunity to better understand the changing functions of figurines.

Of particular interest is a group of smiling terracotta quadrupeds with rounded gentle features, and plodding, ponderous bodies. The group, popular throughout the city, and recovered from both secular and religious contexts, includes meandering camels, thoughtful zebus, and contented equids, among others. Often begun within the same molds, the statuettes were then carefully manipulated to create different animals and compositional groups of varying complexity. Especially when considered against the vibrant ornamentation of Late Roman buildings, the resulting figurines, and the seeming contrast between their crude bottom halves and their finely modeled, lively tops, suggest potentially malleable meanings for the otherwise pedestrian animals.

Jane DeRose Evans (Temple University), "Coins and Pottery: Tracking the Numismatic Profile of Fourth and Fifth Century Sardis"

Copper-alloy coins of the fourth and fifth centuries litter every site in the Roman East, but the problem of deciding whether these coins are indigenous, residual, or infiltrated has plagued numismatists for years. The composition of the supply pool has been argued to be compromised by wide-ranging recalls or

demonetizations of coins as silver content and size of the flan plunged between 324 to 498 C.E. (e.g. Harl, *Coinage in the Roman Economy*). Numismatists would thus argue that the fourth century coins were not available in the fifth century and thus cannot appear as indigenous in deposits. Some numismatists have ventured into this analysis by comparing pottery and coinage, with results that vary widely (e.g. Poblome at Sagalassos; Moorhead at Butrint; Butcher at Beirut). Modifying a statistical method introduced by ceramologists (Mean Ceramic Date), I look at Late Roman deposits in Sardis that have been dated by the pottery included in the strata to try and differentiate between indigenous and residual, in the fourth and fifth centuries. The results do not give precise indicators of the nature of the deposit, but by checking the p value, they give an indication of the composition of coin deposits of the fourth, early fifth, mid-fifth and late fifth century. This type of analysis has important ramifications as we try to understand the economy of the eastern empire and the local cities and the distribution and use of coin in the Late Roman period.

9I. Archaeology of the Southern Levant III

CHAIR: Owen Chesnut (North Central Michigan College)

Mike Freikman (The Hebrew University of Jerusalem), "Into the Darkness—Shamanism in the Archaeological Context"

The cave of Zrada, located near Rosh Ha-Ayin in Israel, was discovered by the local speleologists and later surveyed by our expedition. It is a highly-branched cave more than 40 m deep found on a steep slope of a cliff overlooking Nahal Shiloh. Several Pottery Neolithic jars were found in the spaces located in the depth of the cave. They were carefully placed on their side and hidden in the darkest side spaces. No evidence for Neolithic domestic activities was found in the cave, but objects which could be explained as evidence for ritual activities were discovered inside the cave. We propose that these vessels were ritual depositions interred by the people who visited this cave during the Neolithic period. It appears that the finds from Zrada were not at all unique. Depositions of objects dated to the protohistoric periods buried in deep caves have also been reported from the renowned cave in Nahal Qanah and other sites near the Zarda cave, and use of caves for ritual purposes is also attested in other parts of the Neolithic Near East, such as the vicinity of Catalhöyük. In this paper I will present the relevant data collected from different protohistoric sites and try to present the place of a dark cave in the landscape of the prehistoric Near East. Furthermore, I will propose an explanation for this phenomenon as part of the shamanistic cult that prevailed in this region during this period.

Vered Eshed (Israel Antiquities Authority) and Avi Gopher (Israel Antiquities Authority), "Agriculture and Lifestyle: Paleodemography of the Pottery Neolithic (8500–6500 cal B.P.) Farming Populations in the Southern Levant"

This study presents the paleodemographic characteristics of the Pottery Neolithic period (8500–6500 cal B.P.) populations of the southern Levant. The Pottery Neolithic sample consists of 108 individuals originating mostly from sites in the Mediterranean zone of Israel, with some from the Negev. This study is the first to present a demographic profile of the Pottery Neolithic period. Mortality curves and various demographic parameters (e.g., life expectancy at birth, female and male Mean Age at Death [MAAD], sex ratio and child/adult ratio) were reconstructed. These were compared to a large, general sample of the preceding Pre-Pottery Neolithic B and C periods originating in sites spread throughout the Mediterranean zone of Israel and in the Trans-Jordanian Plateau. Demographic differences regarding the sex and age of these populations are present. Conclusions are drawn for the demographic dynamics between the Pre-Pottery Neolithic period studied here and the Pottery Neolithic vis-à-vis economic change that has taken place along the discussed timeline—i.e., the introduction and the establishment of farming societies.

Ralph Hawkins (Averett University) and David Ben-Shlomo (Ariel University), “The Bedouin at Modern Ras el-Auja and the Early Iron Age Settlers at Khirbet el-Mastarah”

This paper uses the ethnographic study of a modern Bedouin village to answer questions about Khirbet el-Mastarah, an early Iron Age village in the Jordan Valley. This site was one of 54 discovered in recent surveys that appear to reveal a demographic shift in the region. The vast majority are simply large stone enclosures, probably used to corral animals, which may indicate that the new population was nomadic. Six of the sites, however, include clusters of buildings and courtyards, were clearly meant to be permanent villages, and may represent the initial sedentarization of this nomadic population.

One of these sites, el-Mastarah is of special interest. It includes several houses, animal pens, hints of walls, and a cairn field. It appears to have been established as a permanent village, but was founded in a hidden location in the desert, 5 mi north of Jericho, at the beginning of the foothills leading into the hill country, far from roads and water sources. In 2017, in order to try to understand the seemingly illogical location of this site, we conducted ethnographic research at Ras el-Auja. This paper will present our examination of the residents’ subsistence strategies, including water procurement, the use of sheep and goats, the establishment of a fertilizer business, and outside employment. It will also explore the unifying role of religion in the village. It will be seen that understanding how the Bedouin adapted to sedentary conditions in this location can clarify the adaptive strategies of the settlers at nearby el-Mastarah.

Daniel Leviathan (The Hebrew University of Jerusalem) and Yosef Garfinkel (The Hebrew University of Jerusalem), “New Light on the Origin of the Triglyphs in the Doric Order”

The enigmatic origin of the Doric architectural order has been debated since at least the time of Vitruvius, with questions remaining unanswered to this day, such as the origin of the Doric triglyphs. Excavations at the early tenth century B.C.E. site of Khirbet Qeiyafa, Israel, yielded an architectural stone model that sheds new light on the origin of the Doric triglyphs. The façade of the model is decorated with a row of tripartite protruding elements, clearly depicting triglyphs. The triglyphs predate any other examples by at least three centuries and point to a Near Eastern, as opposed to Greek, origin of this element. Furthermore, the model supports large parts of Vitruvius’s testimony on the subject and answers some of the major questions still remaining about the Doric order.

It thus appears that the triglyph, like so many Near Eastern and Egyptian motifs, styles, and elements, reached and strongly influenced the Hellenic culture during the seventh century B.C.E., passing through other areas in the Eastern Mediterranean on the way, such as Cyprus and Asia Minor. This could explain why the triglyphs appear suddenly in a nearly complete form during the early sixth century B.C.E., without any earlier development in Greece. The triglyph arrived as an already complete architectural element in the Hellenic culture after it had developed in the Near East during the Late Bronze Age, reaching its complete and mature Levantine form, as attested by the Khirbet Qeiyafa model, in the tenth century B.C.E.

Johanna Berkheij-Dol (Leiden University), “The Shape of Rounded Fenestrated Models and Their Contents: Were Shrine Models with a Hollow Base Ever Made to Contain a Figurine?”

Over the past century, rounded, fenestrated objects that are being classified as “shrine models” have been found all over the Middle East. The function of these objects is much disputed. Despite the fact that only a minority of the excavated objects had a small figurine inside of them, several scholars have argued that they were deliberately made to contain figurines.

In my paper, I will focus on the models from the Late Bronze Age and the Early Iron Age found in the Northern Rift Valley region. I will present my ideas concerning the objects and the images they contained. In my opinion, the shape of the base plays a crucial role: in the few instances in which figurines were found in fenestrated objects, the images were placed in an upright position on a flat base, which helped stabilize the object. However, we also possess half

a dozen shrines that have a hollow base. If one would want to place a statuette in this type of model, a fixture of clay or a stand would be necessary to stabilize the object. No traces of such fixing methods have ever been found. Thus, we can assume that rounded shrine models with hollow bases were never meant to house a figurine. In my opinion, the models were used for transportation back and forth between house and sanctuary, not to house a figurine.

9J. Mesopotamian Civilizations: The Economic Scope of Institutional Households I

CHAIRS: Claudia Glatz (University of Glasgow), Jacob Lauinger (The Johns Hopkins University), and Piotr Michalowski (University of Michigan)

Odette Boivin (University of Toronto), “Institutional Integration in the Sealand I Palace Economy”

The First Dynasty of the Sealand ruled part of southern and middle Babylonia in the mid-second millennium B.C.E. Until recently it was known to us almost exclusively from chronicles and king lists written more or less a millennium later, but in 2009 the publication of archival documents dated to two of its kings has conferred a more definite shape to this polity (Stephanie Dalley, *Babylonian Tablets from the First Sealand Dynasty in the Schøyen Collection*, CUSAS 9). The more than 450 tablets are the product of a palatial administration in which we find, unsurprisingly, the economies of official state functions and of the king’s household intermingled. Less typical of a palace economy is that it assumed functions that one would rather expect in temples, showing that these institutions were partly integrated economically: the palace appears in the documents as producer of resources consumed by the temples. But institutional integration did not occur only between producer and consumers; the administrative documents show that a number of institutions involved in the transformation of agricultural resources were also partly integrated in the palace economy, including a workhouse involved in grain milling and an *Egipar* where beer was brewed. I will discuss the level of economic and administrative integration of these institutions, as it can be inferred from the written record, with a special case study of the malting of grain and the brewing of beer at the Sealand I palace.

Rune Rattenborg (Durham University), “The Scale and Extent of Institutional Household Economies of the Middle Bronze Age Jazīrah and the Bilād al-Šām: Critical Perspectives”

This paper offers a review of the methods, findings, and implications of a doctoral thesis aiming to investigate the economic scale of institutional households of the Middle Bronze Age Jazīrah and the Bilād al-Šām (ca. 1800–1600 B.C.E.). Combining perspectives from landscape history, archaeology, and Assyriology, and drawing on large standardized datasets derived from archaeological survey and administrative cuneiform texts, this study indicates a significant level of consistency in economic scale between a variety of historical examples.

By compiling quantitative data from administrative cuneiform texts and comparing the estimated level of annual consumption of grain within institutional households with the subsistence needs of their hinterland calculated from archaeological survey, the study suggests that early political organizations controlled only a modest transect of the social economy. These results further substantiate and expand upon recent research into the social economics of early political organizations, most notably Paulette’s excellent study of Early Bronze Age storage capacities (Paulette 2015) and Padgham’s innovative modeling of Late Bronze Age economic structures of the Eastern Mediterranean (Padgham 2014).

Here, I present a review of my approach and a critical evaluation of its findings and their general implications. While many historical and archaeological overviews of Bronze Age Mesopotamia tend to emphasize the economic dominance of the early state, a very different impression emerges from formal scalar perspectives. In conclusion, I point out some key perspectives for integrating formal and data driven regional frameworks

with approaches sensitive to historical and localized particularities in future research.

Tate Paulette (North Carolina State University), “Storing Like a State in Mesopotamia (4000–2000 B.C.) or: How Great Were the Great Organizations?”

There can be no doubt that the emergence of the palace and temple institutions in Mesopotamia during the fourth–third millennia B.C. was a historical transformation with far-reaching consequences. Opinions differ, however, as to exactly what these new entities were and how we should envision their role in Mesopotamian society. Whether we refer to them as institutional households, great organizations, or state institutions, it is certain that they were expanding rapidly, acquiring both land and dependent labor. There have been many attempts to gauge the relative scale of the institutional economy, focusing especially on written evidence for the ownership of agricultural land. My own approach has been to focus, instead, on the institutional storage economy and, in particular, on the archaeological evidence for grain storage during the third millennium B.C.

In this paper, I expand on my quantitative study of grain storage practices—pushing backward into the fourth millennium B.C. and drawing more heavily on written sources. I also highlight the importance of considering not just the scale of the institutional economy, but also the diverse ways in which people were drawn into, affiliated with, and impacted by this economy. Institutional dependency was not an all-or-nothing affair, and the conditions of dependency—the specific obligations and entitlements entailed—were many and varied. If we wish to achieve a more accurate assessment of the institutions, we need to develop a more nuanced (and quantitatively grounded) appreciation for the pros/cons of institutional affiliation and for the impacts of institutional expansion.

Susanne Paulus (University of Chicago), “Investment, Debt, and Slavery—The Economy of Nippur in the Kassite Period”

The excavations in Nippur, Babylonia have yielded more than 12,000 texts. During the Kassite period from ca. 1360–1225 B.C., most of these are linked to the household of the *šandabakku*, the governor of Nippur and associated institutions. The texts cover the income of the provincial household(s), the distribution of goods, and the workforce employed. The basic economic system is clearly redistributive.

Following the approach of New Institutional Economics established by North and others, I will explore redistribution from a different point of view. I will argue that this dominant economic system was not, as usually assumed, an autarkic system that satisfied basic demands, but rather an institution that generated knowledge necessary for economic forecasting and investment, thereby limiting transaction costs and facilitating economic growth.

The focus of this paper will be on the investment of resources in the form of credits. Interest rates were high in Babylonia, so lending barley was lucrative. However, the severe consequences, indebtedness and debt slavery, were also widespread. Therefore, it is necessary to explore how risk for both individuals and the whole community was managed.

10A. Archaeology of Arabia I

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

Knut Bretzke (University of Tübingen) and Adrian Parker (Oxford Brookes University), “Exploring Behavioral Strategies in Late Pleistocene Hunter-Gatherers from the Desert Environments of Southeastern Arabia”

A decade of Paleolithic and paleoenvironmental field work in the central region of the Emirate of Sharjah, UAE revealed rich records of Pleistocene archaeology and paleoenvironmental data. Given that the arid region of southeastern Arabia often plays an important role in models of human evolution and dispersal, research on the evolution of humans in desert environments can provide important data for the scientific discourse

and for the refinement of our evolutionary models. A key question would be whether hunter-gatherer groups in southeastern Arabia have locally developed strategies to cope with the increasingly arid conditions during the second half of the Late Pleistocene or if (re-)occupation of the region during this period is related to an influx of human groups equipped with a broad behavioral spectrum, which allows them to cope with a variety of climatic conditions, including desert conditions. We explore these questions by pairing data on behavioral flexibility and paleoenvironmental conditions and assume that a local adaptation to increasingly dry conditions would be expressed by a positive correlation of aridity and diversity of behavioral strategies, while, in contrast, the influx hypothesis would be supported by assemblages featuring evidence for increased behavioral flexibility regardless of the paleoenvironmental context. To test these hypotheses we analyzed two critical behavioral domains in this context: 1) raw material economy; and 2) settlement behavior from the Late Pleistocene archaeological sequence at Jebel Faya located on the northern edge of the Rub’ al-Khali desert and paired the results with paleoenvironmental data from the region.

Rémy Crassard (The French National Center for Scientific Research, CNRS) and Yamandú Hilbert (The French National Center for Scientific Research, CNRS), “Naviform Technology from Saudi Arabia”

Discovered in March 2015, the sites of DAJ-112 and DAJ-125 in the Al-Jawf province of northern Saudi Arabia consist of a large collection of surface lithic artifacts that can be compared to well-known PPNB technology from the Mediterranean Levant. The DAJ sites include naviform technology of core preparation and surface exploitation, as well as burin production at a wide scale. Other surface scatters have been identified during the 2013 and 2015 surveys, showing these two sites are not isolated in Al-Jawf, as rather important occurrences of Early Holocene technology have been identified in various places. Although the artifacts from Al-Jawf region are on surface and not radiometrically dated, the sites have proven to be extremely significant, representing an important incursion southward of classic naviform technology, compared to its usually accepted geographic distribution exclusively in the northward zones. Through other lithic examples across the Arabian Peninsula, the expansion or the influence of PPN populations/cultures in Arabia will be discussed.

Thomas Van de Velde (Ghent University), “The Archaeology of the Petroleum Industry: the Surfacing of an Elamite Bitumen Industry in Southeast Arabia”

Bitumen is a natural resource that is highly related to petroleum and may surface naturally. In the petroleum-active area that is the Near East, there are plenty of bitumen outcrops, especially in Iraq and southwestern Iran. Although already in use very early, bitumen becomes frequently used from the fifth millennium B.C. onwards, especially for gluing or waterproofing items.

Archaeological fieldwork combined with chemical studies (GC-MS & EA-IRMS) is used to analyse bitumen and determine its origin. Consequently, it becomes possible to determine interregional networks and human spheres of influence and trade.

This talk will focus on the close connection and interactions between geochemical sciences and archaeology. We will cover the bituminous evidence on the Arabian littoral of the Persian Gulf, which was almost exclusively imported from either Mesopotamia or southwestern Iran. With a focus on the material, it will become clear that the availability and suppliers of bitumen changed drastically throughout time. The most remarkable feature is the shift towards the usage of Iranian bitumen from the Bronze Age onwards. This type of bitumen becomes widespread in the Gulf, and we may even label it effectively as an industry with over-extraction at the sources and interregional export. Bitumen thus marks the Elamite influence and involvement in Gulf societies and defines an industry in an interregional economy which was unprecedented in history and until recently completely invisible.

Marilisa Buta (University of Bologna), Dennys Frenez (University of Bologna), Eugenio Bortolini (IMF-CSIC, Spanish National Research Council), Vincent Charpentier (Maison de l'Archéologie et de l'Ethnologie – UMR 7041, ARSCAN, Nanterre, France), and Jonathan Mark Kenoyer (University of Wisconsin–Madison), “Bead Production in the Neolithic Coastal Communities of Southeastern Arabia: A Stylistic, Morphometric, and Technological Assessment”

Personal ornaments—and beads in particular—are the first artifacts produced outside the strictly utilitarian sphere in the history of mankind, with the earliest examples manufactured by *Homo neanderthalensis* more than 100,000 years ago. Their detailed study might provide important information for the reconstruction of the socioeconomic organization of ancient populations and contribute to a more precise definition of specific cultural trajectories.

In southeastern Arabia, the archaeological definition of cultural variation during the Neolithic period (ca. 7000–3200 B.C.E.) is based mainly on the reconstruction of subsistence strategies and lithic technologies. The research presented in this paper introduces bead production as a secondary indicator of cultural variability among the Neolithic communities of southeastern Arabia, relying on the comprehensive study of consistent collections (more than 1000 artifacts) of stone and seashell beads from ten coastal sites, including graveyards and seasonal settlements. Analyses are based on a detailed documentation strategy that included the systematic acquisition of a number of stylistic and morphometric data and the selective production of impressions of the perforations using inert silicone resins.

The number, type, and accuracy of the information collected allowed us to define typological variations over the periods and across the different regions and to relate them with specific technical and technological advancements in bead production. This comprehensive approach also allowed a reassessment of comparable evidence from previous publications, considering both the functional and symbolic meaning of these important artifacts as an expression of collective and personal identity and their socioeconomic value.

Olivier Brunet (The French National Center for Scientific Research, CNRS), “Trends of Production of Carnelian Beads during the Bronze Age in the Oman Peninsula”

Beads, and especially carnelian beads, are one of the most numerous artifacts found in sites in the UAE and Oman. Rare at Neolithic sites, they become more common from the second half of the third millennium B.C.E. (Umm an-Nar, Wadi Suq, and Late Bronze Age periods). During those periods, increased interactions between the Oman Peninsula and the Indus Valley Civilization can be observed in the material record.

The origin of these beads has long been subject to debate. It was thought that they originated in the Indus Valley. Through technological approaches and identification of local sources, based on about 70 sites (settlements and graveyards), it has been possible to highlight the existence of a local production at a broader scale than previously thought, though import of carnelian beads continued. The proportion of Indus Valley beads coming into the Oman Peninsula varies according to different periods.

Beads are an important medium through which we can interpret information concerning commercial interactions between the cultures situated in the UAE and Oman and their neighbors. Beads can be a useful tool in elucidating trends and strategies in the procurement of raw materials, impacted by events or political changes.

Jonathan Mark Kenoyer (University of Wisconsin–Madison), Dennys Frenez (University of Bologna), and Randall Law (University of Wisconsin–Madison), “Comparing Arabian and Indus Bead Technology and Trade from the Fourth to First Millennia B.C.E.”

The discovery of carnelian and various types of beads from sites in Oman dating from the fourth to first millennia B.C.E. has shown that communities in this part of the Arabian peninsula were very well connected to long-distance international trade networks. There are some possible local sources of carnelian and agate in Oman and definite sources in nearby UAE, Yemen, and Saudi Arabia. This paper will report on some new discoveries relating to the

technologies used in the production of hard stone beads, primarily carnelian and various types of banded agate from the Arabian Peninsula, and compare these with the types of production from the Indus region. The Indus itself has a wide variety of technologies used to produce hard stone beads, and this brings into question the directionality of trade between the Arabian Peninsula and the Indus region. The only way to differentiate beads made in each region is by increasing the sample size and comparing specific diagnostic aspects of bead form and technology as well as composition. The final part of this paper will present the results of the ongoing analysis of carnelian source areas and selected beads using Laser Ablation Inductively Coupled Mass Spectrometry (LAICP-MS) to better define the nature of early trade networks between the Indus, Arabia, and adjacent regions. This study has been supported by the Sultan Qaboos Cultural Center and the Department of Archaeology, Ministry of Heritage and Culture, Sultanate of Oman as well as other funding agencies.

10B. Approaches to Dress and the Body II

CHAIR: Megan Cifarelli (Manhattanville College)

Emily Anderson (Johns Hopkins University), “Formulating Parallels: The Bodies of Man and Beast in Early Aegean Glyptic and Oral Narrative”

This paper investigates how parallels were drawn between certain varieties of beast and human in Bronze Age Crete, and how this parallelism may have developed concurrently through material culture worn on the human body and oral narrative. Specifically I focus on certain types of seal engraved with representations of animals, and particular qualities that endowed seals with the potential to be powerful venues for framing comparisons between man and other creatures. These qualities, harnessed at times by glyptic artists, included seals' close association with human identity and their position as representational objects worn directly on a person's body. I begin at the end of the Early Bronze Age, with a small group of seals engraved with a novel composition type that represented humans in a direct visual/conceptual parallel with lions. I then trace the re-invention of this parallel through the glyptic of the subsequent palatial periods when, ultimately, the seal's position as a worn object was capitalized on. I investigate how this parallelism was established and emphasized through the objects and compare it to the distinctive narrative device of the animal simile in Homeric epic, which was likely taking root in oral traditions at the same time. Of principal interest will be the ways in which the artist invited a parallel to be drawn, specific similarities between the comparisons created through the imagery of the seals and the poems, how the nature of these juxtapositions was distinct to the Aegean, and how it altered over time.

Josephine Verduci (University of Melbourne) and Brent Davis (University of Melbourne), “Adornment, Ritual and Identity: Inscribed Minoan Jewelry”

Minoan funerary contexts have produced a few items of jewelry bearing Linear A inscriptions. While these objects have been studied, their inscriptions transliterated, and suggestions have been made as to how they may have been used, other questions remain virtually unaddressed. Inscribed jewelry, for example, must have been accessible only to a very narrow segment of Minoan society; so to what sorts of individuals might these objects have belonged? Who might their intended audience have been? And what might these objects have meant to their wearers, and to the wearers' audience? Objects of beauty and rarity, such as inscribed jewelry, not only demonstrated access to limited resources, craftsmanship, and esoteric knowledge, but also symbolised the growing status of Aegean and Cypriot elites. In this paper, we argue for the multi-vocal nature of inscribed Minoan jewelry—that these objects were highly personal artifacts; that their inscriptions were likewise of a personal nature; and that these items were associated with identity construction, as well as with amuletic and ritual behaviour that was linked to gendered and/or age-related asymmetry.

Melissa Eppihimer (University of Pittsburgh), “Tassels, Cultural Identity, and Historical Memory in Royal Statues from Mari and Eshnunna”

One of the most distinguishing features of the statues of the Akkadian king Manishtushu are the knotted tassels that hang from his carved garment. Centuries later, similar tassels appeared on the statues of rulers at Mari and Eshnunna. This paper evaluates the cultural significance of these sculpted textile ornaments. It argues that these hems—a part of one’s garment known to have been tied to personal identity in the ancient Near East—laid claim to the legacy of Akkadian kingship. Among the *shakkanakkus* of Mari, the use of such ‘Akkadian’ tassels signaled a political link to the Akkadian dynasty, which had initiated the line of *shakkanakkus*. The Mari rulers’ tassels may also have claimed a kinship link to the Akkadians, since tassels also appear in the statue of a Mari palace woman. At Eshnunna, no such direct links to the Akkadians were claimed. Rather, the *ensis* of Eshnunna embraced the Akkadians as part of a local cultural heritage derived from Eshnunna’s importance within the historical Akkadian state. Art historians have long recognized the similarities between the tassels on these sculptures, but by considering them in their particular historical and geographical circumstances, this paper deepens our understanding of what they meant to their sculpted wearers and viewers. It also demonstrates how seemingly identical visual responses to the memory of the Akkadian kings could, in fact, be quite variable in their motivations and symbolism.

Trudy Kawami (Independent Researcher), “Sumptuous Garb: Who Wears Fringe in Elamite Iran?”

Garments with fringed or flounced skirts are well documented in southern Mesopotamia in the third millennium B.C.E. They were less common in Elamite Iran, appearing only sporadically in that period. But by the later second millennium elite females in both regions of Elam—lowland Khuzistan and highland Fars—wore elaborate skirts with multiple bands of long fringe or lappets. These garments have no parallels in Mesopotamia and are not worn by men, not even the nominal rulers of the Elamite lands. A consideration of these ornate robes and those worn in the early first millennium B.C.E. suggests an important religious role for elite women, a role that has so far not been seen in the written documents of the periods.

10C. Archaeology of Anatolia I

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

Patrick Willett (University at Buffalo), Ralf Vandam (University of Leuven), Peter Biehl (University at Buffalo), and Jeroen Poblome (University of Leuven), “New Results from the Dereköy Archaeological Survey Project: Exploring the Cultural Past in the Marginal Landscapes of the Western Taurus Mountains, SW Turkey”

This paper presents the results of an ongoing survey project in the Burdur Region (southwestern Turkey) in its second year. The Dereköy Archaeological Survey Project, conducted within the framework of the Sagalassos Project, aims to fill in the gaps left by previous research in the area, which has mainly been focused on the larger fertile lowland areas. Those efforts revealed numerous farming settlements from the Neolithic onwards, and illustrated clear distinctive periods of continuity and collapse in human occupation in these areas. The current project has been established to target the more remote marginal landscapes, such as those at high altitudes that have been the subject of little previous interest, to shed light on how different landscape units were incorporated into the cultural landscape. Investigation of the Dereköy highlands during the 2016 field season revealed a great number of previously unknown archaeological concentrations, many from periods that were poorly known in the area such as the Middle Paleolithic (120000–45000 B.C.), the Late Chalcolithic (4000–3000 B.C.), and also the first discovered Iron Age (1200–600 B.C.) sites. This paper will incorporate new results from the 2017 field season to be further compared with datasets from the lowlands and provide greater insight into the Prehistoric cultural landscape of Anatolia.

Levent Atici (University of Nevada, Las Vegas), “Complex Hunter-Gatherers of Upper Tigris Valley: New Zooarchaeological Data from Körtik Tepe, SE Turkey”

Southeastern Anatolia (present-day Turkey) is now considered part of the archaeological domain in which the “Neolithic Revolution” took place independently. The recent archaeological projects in southeastern Anatolia have greatly contributed to a better understanding of Terminal Pleistocene and Early Holocene archaeology and of a developmental trajectory that led to agricultural economies. Thus, it is crucial to develop a fine-resolution picture of hunter-gatherer behavioral strategies and changes therein during the Terminal Pleistocene and Early Holocene in southeastern Anatolia. Körtik Tepe is one of the relatively new Pre-Pottery Neolithic A (PPNA; 10th millennium B.P.) sites excavated in the region with astonishing findings. The archaeologists have established a clear and well-dated stratigraphy, have excavated hundreds of single and some double burials; have unearthed hundreds of round architectural structures; and have revealed very sophisticated symbolism at Körtik Tepe. Results of the faunal analysis from the ongoing Körtik Tepe excavations are presented to shed new light on the exploitation patterns of complex foragers in the Upper Tigris Valley during a period of rapid cultural and environmental change in the Greater Near East. More specifically, faunal assemblage formation processes, taxonomic composition, species trends, demography of mortality, prey processing intensification, animal resource diversification, and management practices are investigated with the ultimate goal of shedding light on the process of animal domestication.

Benjamin Arbuckle (University of North Carolina at Chapel Hill), “Prehistoric Horse Exploitation on the Central Anatolian Plateau”

The origins of domestic horses in southwestern Asia are an important but poorly understood topic. In this paper, I review new zooarchaeological evidence for the presence of horses (*Equus ferus/caballus*) on the central Anatolian plateau in the Early and Middle Holocene. Presenting new data from the sites Acemhöyük and Çadır Höyük, I argue that an indigenous tradition of human-horse interaction can be documented on the central Anatolian plateau extending from the earliest Neolithic (ca. 8500 B.C.) through the Early Bronze Age (ca. 3000 B.C.). I explore the nature of this relationship and discuss how it articulates with the appearance of domestic horses in the later third millennium B.C.

Sharon R. Steadman (SUNY Cortland), Gregory McMahon (University of New Hampshire), and Jennifer C. Ross (Hood College), “Recent Investigations at Çadır Höyük on the North Central Anatolian Plateau”

The most significant excavations at Çadır Höyük to date have taken place on the Çadır mount summit and on the southern slope. The summit features the Hellenistic and Byzantine occupation. Recent investigations have allowed us to better explore the Hellenistic period at the site, which rests directly under the Byzantine defensive wall and just under the Byzantine architectural phases on the summit proper. There appears to have been a significant Hellenistic occupation that will be reported upon in this paper. In addition, our recent discovery that there may have been post-tenth century occupation of the summit, perhaps by Seljuk arrivals, will also be explored. The southern slope, with the exception of an important second millennium B.C.E. trench, primarily represents our Late Chalcolithic occupation. Our recent work on the earlier fourth millennium B.C.E. residential compounds, and the possible “upper town” area, will be a focus of discussion in the paper. The second millennium period, represented in the single upper southern slope and in the eastern slope Step Trench, will also be discussed. In these trenches major Hittite constructions, including a major wall and a large building, form the basis of excavations. Our western slope project, which primarily features Iron Age occupation, will also be presented if time permits.

Madelynn von Baeyer (University of Connecticut), “Farming at the Frontier: Plant Use during the Late Chalcolithic at Çadır Höyük, Turkey”

This paper presents archaeobotanical data from the Late Chalcolithic archaeobotanical assemblage at Çadır Höyük, a mounded site on the north

central Anatolian plateau with almost continuous occupation from the Middle Chalcolithic through the Byzantine period. Architectural and metallurgical evidence indicate that during the Late Chalcolithic, Çadır was developing as a regional rural center, which makes it an ideal site to study the role that households occupied in emerging systems of social hierarchy and complexity. This paper will present the completed analysis of 80 archaeobotanical samples dated to 3600–3100 B.C.E. from a communal cooking area, a non-domestic area, a specialized building, and an elite courtyard. This analysis will examine how plant remains can inform studies on household subsistence economies, organization of labor, fuel choices, and differences in plant use across the site.

Lolita Nikolova (International Institute of Anthropology), “Anatolia and the Balkans during the Early Bronze Age (ca. 3600–2000 cal B.C.E.)”

This presentation demonstrates the crucial role of cultural interactions in the development of the Early Bronze Age cultures in Northwest Anatolia and the Balkans—in particular, their impact on the accumulation of wealth during EB II–III. The model of “strive for expression” will be proposed as a stimulus for the development of luxury jewelry and parade weapons (Troy-Dubene-Balinov Gorun gold jewelry horizon). Based on comparative regional characteristics of the northwestern Anatolia and the different cultures in the Balkans, a dynamic model of the impact of the Anatolian-Balkan interactions on local development will be proposed. The model infers that, despite the trade and political contacts of the leaders, the communities had strong local ethnography and self-awareness of “we-they,” which resulted in a series of cultural phenomena (e.g. absence of corded ware and burial mounds in northwestern Anatolia, distribution of local specific ceramic forms, and local ethnic cultures in general). For the first time in historiography, the Anatolian-Balkan archaeological records will also be analyzed systematically from the perspective of prehistoric genealogy. The presenter will argue that the family was the steady elementary social unit and an important component in the production and reproduction of social stratification. The development of metallurgy will be considered as a factor for the possible reproduction of handcraft occupations among family members. The conclusion will be drawn that the rich archaeological database needs to be further integrated with innovations in the study of wealth and cultural interactions, and with DNA genealogy for continuing advanced and in-depth research.

10D. Archaeologists Engaging Global Challenges

CHAIRS: Catherine Foster (Ancient Middle East Education and Research Institute) and Erin Darby (University of Tennessee, Knoxville)

Suzi Wilczynski (Dig-It! Games), “Leveraging the Power of Gaming for Cultural Preservation”

Games have a tremendous power to influence societal views and behavior. Organizations such as Games for Change are “catalyzing social impact through digital games.” Multiple federal agencies have made massive investments towards harnessing the power of games for both traditional and non-traditional learning. It is time for archaeologists to enter the fray and leverage the power of games to spread the message of the urgent need for preservation of archaeological material worldwide.

Games that emphasize the importance of humanity’s shared ancient heritage and the value of archaeology as primary tool for cultural exploration have the potential to raise both awareness and funds to prevent looting, site destruction, and more. Through games, players can become heroes of culture, taking on complex challenges presented by those who want to destroy or alter history for their own purposes. High-quality graphics have the potential to expose large numbers of people to archaeological sites and ancient cultures in an in-depth way previously limited to the few lucky enough to travel globally. When players travel virtually to these exotic locations and take ownership of their protection, the ancient culture becomes real and relevant; players become aware that we all bear responsibility for preserving humanity’s history.

By educating players about the need to protect and preserve our past,

the dangers of looting and destruction, and the value of cultural preservation, we create culturally aware global citizens dedicated to conserving our shared heritage in the Middle East and throughout the world.

Louise Hitchcock (University of Melbourne), “Aged Tasmanian Whiskey in Boston Is the New Faience Rhyton in Cyprus: Globalization and Plutocracy, Populism, and Piracy”

The Late Bronze Age in the Mediterranean was arguably the first age of globalization in human history. This is most exemplified by the International Style of portable luxury art objects that were widely circulated and prized by elites. It was also one of the first ages of social acceleration. This acceleration was characterized by a confluence of increasing technological and economic interdependency, the emergence of interconnected networks driven by the quest for raw materials, and by climate change. Thus, the Late Bronze Age was also an economically fragile era with a great concentration of wealth distributed among supra-regional global elite plutocrats unified more by wealth and shared symbolism than by cultural tradition or ideology. Finally, this era became susceptible to populist resistance in the form of piratical activity and banditry.

This paper explores the populist aspects of the economy and social organization of the Sea Peoples as pirates and military entrepreneurs. In doing so, I will draw upon economic theory, pirate economics, comparative history and anthropology, connectivity, social geography, technological acceleration, and material hybridity to suggest a broader range of categories for conceiving globalized elites of the present day. This conception transcends ideology to cross-culturally and cross-temporally focus on aggrandized globalized concentrations of wealth and power (a plutocracy). This plutocracy can be contrasted with the xenophobia, and economic and social erosion, fuelling the populist movements of the working classes.

Mitra Panahipour (University of Arkansas), “Settlement Expansion and Agricultural Intensification: The Case of a Sasanian Hinterland in Upper Diyala/Sirwan River Valley, Kurdistan”

Human and environment interactions, specifically, the study of agricultural landscapes, is one of the main domains in which archaeology can make significant contributions to current global challenges. This paper presents data on settlement expansion and agricultural intensification in the upper reaches of the Diyala/Sirwan River Valley of Kurdistan during the Sasanian period (224–651 C.E.). This period is important as a time during which natural ecosystems were converted into intensive agriculture and, in some areas, during which land use reached an apogee probably never achieved before or since. However, it continues to be one of the least systematically studied periods within Near Eastern archaeology. I apply multispectral image classification and hydrological modeling combined with environmental proxies such as precipitation amounts and ethnohistorical documents to model the potential extent of late antique land use in alluvial plains as well as the foothills of the Zagros Mountains. Next, I compare the results of this modeling to the modern-day amount of land under cultivation and its productivity level. Moreover, I explore how intensification can be viewed as either unsustainable land management strategy or the exercise of innovative and adaptive practices. Finally, by revealing an imperial policy that stretched its power and occupation into this periphery, the results can create a base for modern queries of land and natural resource management and suggest that the modern pattern of increasing pressure on land can be comprehended by outlining its historical sequences.

Jody Michael Gordon (Wentworth Institute of Technology), “Globalizing the Past for Humanity’s Future: Globalization and Cosmopolitan Archaeologies”

Throughout the 21st century world, many people face challenges that threaten their quality of life. Although these problems’ nature often varies, many of them are exacerbated by globalization, which Hodos (2017) has defined as “processes of increasing connectivities that unfold and manifest as social awareness of those connectivities.” Today, people live in a hyperconnected world where decisions in one region can alter conditions in another in both

positive and negative ways. Globalization is a process that affects nearly all of the UN Millennium Project's 15 Global Challenges, and thus may serve as a framework to problematize how to improve humanity's future. Yet how might archaeology contribute to this project? Recently, scholars have recognized that many pre-modern eras exhibit levels of heightened connectivity and social disruption that mimic modern globalization's effects. Because material culture is manipulated within such contexts, archaeological evidence can serve as an indicator of how globalization affected local societies. This paper's goal is to show how the study of past globalization processes can elucidate the ways that global entities and local communities might collaborate to overcome the negative impacts of increased connectivity. For a case study, I show how an archaeological analysis of Roman Cypriot artifacts reveals the diverse ways that local people negotiated their existences and mitigated the possible negative effects of living within a hyperconnected Roman Mediterranean. Finally, by reference to cosmopolitan archaeologies that stress transnational collaboration, I suggest ways that archaeologists might use past globalization episodes to advise modern constituencies facing similar existential challenges.

10E. The Tells of Two Cities: Did Tell es-Sult'an and Tall el-Hammam Interact during the Middle Bronze Age?

CHAIRS: Steven Collins (Trinity Southwest University) and Ch (Sapienza University of Rome)

Steven Collins (Trinity Southwest University), "Tall el-Hammam during the Middle Bronze Age: Data and Insights from 12 Excavation Seasons"

This paper overviews data and interpretations from the Tall el-Hammam Excavation Project, Jordan (2006–2017). The author is Project Director and Chief Field Archaeologist. An occupational footprint of ca. 26 ha surrounded by complex fortifications served as the urban core of a substantial Middle Bronze Age city-state—the final manifestation of a socio-political juggernaut that began during EB II and continued unabated through the Intermediate Bronze and Middle Bronze Ages. The Middle Bronze Age city had three rampart systems surrounding the lower city, upper/inner city, and acropolis, respectively. Its fortifications, built initially during the IB II/MB I transition and used through MB II, were constructed of high-quality, labor-intensive materials, such as ramparts built entirely of mud bricks. The city has thus far revealed a domestic quarter, temple complex, palace complex, and a monumental gateway system featuring a pillared entry hall. The city was sustained by large-scale farming. Water resources were abundant, making it virtually immune to climatic fluctuations, and thus it maintained its city-state status during the Intermediate Bronze Age when most southern Levantine cities failed. In turn, the city's agricultural bounty supported a thriving textile industry. With numerous towns, villages, and hamlets under its hegemony, one must consider the likelihood that Tall el-Hammam maintained a relationship with its city-state neighbor, Tell es-Sultan, as co-guardians of the Jordan fords and the east-west trade route linking the two urban centers.

Carroll Kobs (Trinity Southwest University), "The Middle Bronze Age Fortifications of Tall el-Hammam as Seen in Field LA"

This paper examines the features of Tall el-Hammam's Middle Bronze Age fortifications as observed in the excavations of Field LA, along the city's southern defenses. The author is Assistant Director and a Senior Field Archaeologist of the Tall el-Hammam Excavation Project, Jordan. During the Middle Bronze Age, the primary access to the city was via the main gateway complex, which includes a double-towered gatehouse flanked by two larger defensive towers overlooking an external plaza with traffic-control blocking walls. The interior of the gatehouse, through which residents and visitors passed into and out of the city, was a light-well illuminated, pillared entry hall with right-turn access only, distinct from the traditional multi-chambered, straight-access Middle Bronze Age gatehouses of the southern Levant. It suggests foreign influence, perhaps Minoan. The 4 m thick city wall across this area, with its foundation of medium-to-large boulders, was fronted by a

supplemental rampart constructed of mud bricks and interior stone stabilizer walls. Its 36 degree slope extended outward from the city wall-face up to 30 m. The Middle Bronze Age builders cleverly repurposed the former Early Bronze Age/Intermediate Bronze Age defensive system by deconstructing and incorporating its strongest features as key components of the 'new' Middle Bronze Age fortifications. Tall el-Hammam's separate outer/lower city and inner/upper city defensive ramparts and walls are remarkably similar to those of Tell es-Sultan, almost the same distance from the Jordan River to the west, and compel a comparative analysis.

Gary Byers (Trinity Southwest University), "2,500 Years of Continuous Occupation Ends: Evidences of Tall el-Hammam's Terminal Middle Bronze Age Destruction"

This paper presents data regarding the terminal destruction of the Middle Bronze Age city at Tell el-Hammam, 14 km northeast of the Dead Sea in the Hashemite Kingdom of Jordan. The author is Assistant Director and a Senior Field Archaeologist of the Tall el-Hammam Excavation Project. The 1.5-millennium-long success of Tall el-Hammam as the urban core of a formidable city-state is unprecedented in the region. Thriving from the Chalcolithic through Middle Bronze Age, Tall el-Hammam was likely the largest continuously-occupied city in the southern Levant. It rebounded successfully from a major earthquake toward the end of EB II, rebuilding even stronger defenses and continuing its urban sprawl. It accelerated through the demise of most EB III urban centers in the southern Levant (ca. 2600–2500 B.C.E.), sustaining its city-state status through the Intermediate Bronze Age (EB IV). Near the end of IB II (ca. 2100 B.C.E.), another seismic event rocked the city, but it was rebuilt with even stronger, Middle Bronze Age-style fortifications. There is no evidence of a military-style destruction during the Bronze Age, only that wrought by nature. The MB II demise of Tall el-Hammam left a settlement vacuum at the site for the next 700 years. All of its satellite towns and villages suffered the same fate. Tell es-Sultan across the Jordan River also met its demise toward the end of the Middle Bronze Age. Was there a connection between Tall el-Hammam and Tell es-Sultan in regard to these similarities?

Daria Montanari (Sapienza University of Rome), "Weapons in Middle Bronze Age Tombs at Tell es-Sultan/Jericho: Types, Chronology, and Implications"

The necropolis of Jericho—established during the Early Bronze Age, later enlarged in EB IV, and reused during the Middle Bronze Age—was discovered by J. Garstang in 1931, and thoroughly explored by K. M. Kenyon in 1952–1958. Of the more than 100 Middle Bronze Age tombs, about 20 contain weapons and funerary equipment. This paper focuses on these tombs, exhibiting common characteristics in terms of similar funerary sets and tomb layout. Weapons will be discussed in their contexts, according to typological, functional, and chronological features, in the light of data from Tell el-Daba, key sites such as el-Jib and Gesher, and recent discoveries at Khalet al-Jam'a. Weapons in Jericho's Middle Bronze Age tombs may reflect the role and status of the dead, and provide information regarding the organization of the city-state of Ruha. A major focus of the paper is weaponry, and investigation of the main features of the warrior class that emerged in the southern Levant during the Middle Bronze Age (Philip 1995; Cohen 2012).

Chiara Fiaccavento (Sapienza University of Rome), "The Fortifications of Tell es-Sultan/Jericho in the Middle Bronze Age: Evolution and Comparisons of a Major Levantine Defense System"

The fortifications of Tell es-Sultan/Jericho are among the most outstanding examples of Middle Bronze Age defensive systems in the southern Levant. The fortification system was partly exposed during excavations at the beginning of the 20th century by the Austro-German expedition of E. Sellin and C. Watzinger, which followed the line of the massive MB II rampart, and by the British expedition of K. M. Kenyon in the deep cut of the north-south Trench III. Renewed activity since 1997 on the tell's southern slope has allowed a deeper knowledge of the urban layout and related fortifications constructed

during MB I–III (Sultan IV, 1900–1550 B.C.). Three massive defensive systems were set on this part of the tell during the course of the Middle Bronze Age, each operation adding new elements to the system, regularizing or partially razing the remains of the previous period. The first system (MB I–II) saw the erection of a massive rectangular mud brick tower (Tower A) founded on an orthostatic series of boulders, surrounded on the east by a residential neighbourhood that grew up against it. During MB II the fortifications were doubled with the construction—slightly higher to the north—of a second circuit wall, the Curvilinear Stone Structure (CSS), a supporting wall built up with a series of juxtaposed stretches turning from east to west. During the last Middle Bronze Age phase, the slope was covered by the rubble fill of the huge MB III rampart, and deeply cut by the Cyclopean Wall W4 which sustained it.

Lorenzo Nigro (Sapienza University of Rome), “Tell es-Sultan/Jericho in the Middle and Late Bronze Ages: A City-State of Palestine during the Second Millennium B.C.E.”

The site of Tell es-Sultan, ancient Jericho, has been the object of systematic excavations, surveys, and studies by the Italian-Palestinian Expedition since 1997. Eighteen seasons in the field, matching data collected by four expeditions—Austro-German (1907–1909); two British (Garstang, 1930–1936 and Kenyon, 1952–1958); and Italian-Palestinian (1997–2017)—have drastically changed our knowledge of this extraordinary archaeological site, with an almost continuous human occupation over ten millennia. This paper focuses on the Middle Bronze Age city, with its complex defensive system comprised of a solid wall with huge mud brick towers in MB I (2000–1800 B.C.E.), and a series of ramparts in MB II (1800–1650 B.C.E.) and MB III (1650–1550/1500 B.C.E.). The city acropolis, called ‘Spring Hill,’ with the Palace of the Lords of Jericho in the Middle Bronze Age (called the ‘Hyksos Palace’ by J. Garstang) and the remains of the Middle Bronze Age Temple discovered in 2012, will also be illustrated. The large and well-known Middle Bronze Age necropolis testifies to the wealth and organization of second millennium B.C.E. Jericho, showing strong links with Tell el-Dab’a and the ‘Asiatic’ component in the Egyptian Nile Delta. Moreover, the discovery of tombs on the Spring Hill underneath the ‘Hyksos Palace’ reveal the funerary customs of the ruling elite and, in the meantime, the possible Canaanite name of the ancient city, ‘Ruha’ (not so different from the name transmitted to the present by the local tradition).

10F. Strategies for Cultural Resource Protection in Libya

CHAIRS: Susan Kane (Oberlin College) and Mohamed Hesein (Omar al Mukhtar University)

Susan Kane (Oberlin College), “Capacity Building for Cultural Resource Protection: The Work of the American Mission in Libya”

This paper summarizes the capacity building work of the American Archaeological Mission to Libya between the years 2005–2016. This work was made possible by grants from the U.S. Embassy to Libya and the U.S. State Department Ambassadors Fund for Cultural Preservation and Bureau of Near Eastern Affairs in Washington, D.C. The principles and objectives underlying our capacity building program were inspired by the 2003 UNESCO World Heritage Centre Mission Report by Giovanni Boccardi, in particular his recommendation that the Libyan Department of Antiquities (DoA) obtain training in the best modern cultural heritage management practices via sustained partnerships with external professionals and organizations. The American Mission’s capacity building work has included training both within and outside of Libya in the areas of site documentation, museum inventory, photogrammetry, database development, illicit trafficking and cultural heritage resource protection, human resource development, and community outreach.

Mohamed Hesein (Omar al Mukhtar University), “Initiatives of the Centre for Archaeological Research and Studies, Omar al Mukhtar University in Libya”

This paper will present an overview of the activities of the newly

established Centre for Archaeological Research and Studies (CARS) at the University of Omar Al-Mukhtar in al Bayda, Libya. Founded in the latter part of 2015, CARS is the first academic institution in Libya to specialize in Cultural Heritage Studies. The center’s purpose is to offer research services and training in the best modern methods and techniques to Libyan governmental offices and universities, and to provide outreach programs for local communities. As a top priority, CARS is organizing projects that are intended to measure and to assess risks and threats currently affecting Libyan archaeology and heritage. These projects, offered in cooperation with local, regional, and international institutions, take different forms depending on the target audience.

While only just over one year old, CARS is proving to be an important agent in the fight to protect the cultural heritage of Libya that is threatened by a number of factors in post-revolution Libya. This paper will provide an overview of some of the center’s recent work, including workshops in site documentation, GIS, and the prevention of illicit looting.

Scott Branting (American Schools of Oriental Research; University of Central Florida), Susan Penacho (American Schools of Oriental Research), Angelica Costa (University of Central Florida), Paige Paulsen (University of Central Florida), and Samuel Martin (University of Central Florida), “ASOR CHI Satellite Analysis of Libyan Cultural Heritage”

The American Schools of Oriental Research (ASOR) Cultural Heritage Initiatives (CHI) project has been monitoring cultural heritage destruction within the context of the current conflict in Syria and Iraq since 2014. In 2017 the focus of the project has been expanded to also include Libya. This paper will present the methods used by the project during this first year as well as the results of these initial monitoring efforts in Libya.

Robert Bewley (Oxford University), “Endangered Archaeology in the Middle East and North Africa: Approach, Results, and Next Steps in Libya”

Since the Endangered Archaeology in the Middle East and North Africa (EAMENA) project started in January 2015, the information it has created through the interpretation of satellite imagery has been shared as widely as possible. We also aim to assist those interested in improving the protection of archaeological sites, by offering training in our methodology and the using the EAMENA database. These principles are enshrined in the original project proposal funded by the Arcadia Foundation.

In 2016 the project was awarded a grant from the UK government’s Cultural Protection Fund for a project called Training in Endangered Archaeology Methodology with Middle East and North African Heritage Stakeholders. This project will train local heritage professionals in three locations—Tunis, Amman, and Beirut. Tunis was chosen as being the most accessible place for training those from neighbouring countries, especially Libya.

Apart from the documentation and assessment of threats for ca. 5000 sites in Libya the EAMENA project has undertaken specific case studies to explore in more detail the most damaging causes to archaeology and how we can best respond. Damage caused by conflict such as bombing, shelling, looting, and vandalism attracts more media coverage than the ongoing destruction caused by mundane activities, including agricultural and urban expansion, that are all too often ignored. In one case the cultivated area in an archaeologically sensitive location increased by over 8000 ha from 1975 to 2016. This paper will explore all the threats to archaeological sites, highlight our case studies, and develop possible mitigation strategies.

Will Reynolds (Columbia University), “Islamic Heritage in Libya: Too Sensitive to Protect?”

Since the inception of the Libyan revolution and ensuing civil war, Libyans and foreign partners have made many efforts to safeguard the remarkable cultural heritage of the country. Under the auspices of cooperative agreements with the Libyan Department of Antiquities (DoA), the capacities of DoA staff to document and inventory heritage resources around the country have increased and they have managed to accomplish work on site as well as in the archives, collections, and storerooms around the country.

Sites of Islamic heritage have been largely ignored by these efforts,

stemming from both confusion in administrative responsibility as well as legitimate concern that any effort to protect these resources will result in violent reprisals at the hands of the same extremists who are actively destroying Islamic monuments. The DoA as well as the Historic Cities Authority and the Ministry of Awqaf all have a responsibility towards these monuments, yet none have mounted a comprehensive effort to document the mosques, madrassas, and tombs that have been destroyed in whole or in part in recent years. Some of this destruction, such as the explosion of the memorials of Bani Khattab in Zweilah, is so dramatic that it can be detected by remote sensing, but most of this damage is subtler. Extremists target the interiors of Islamic monuments, destroying or removing any aspect of these spaces that disagrees with their Salafist interpretation of Islam.

This paper highlights recent attempts made by Libyan civil servants and ordinary citizens to protect threatened Islamic heritage in Libya.

10G. The Enigma of the Hyksos II

CHAIRS: Manfred Bietak (Austrian Academy of Sciences) and Hanan Charaf (Lebanese University)

Manfred Bietak (Austrian Academy of Sciences), “Tracing the Origins of the Hyksos Elite of Egypt as Seen from a Comparative Study of Sacred Architecture”

Comparative studies of domestic and sacred architectural remains from Avaris/Tell el-Dab'a may show from where the decision makers in Avaris took their architectural concepts. Parallels cluster in northernmost Syria, and in northern and middle Mesopotamia. Such evidence gives a lot to think about how such building concepts could have been transported to Egypt during the late Middle Kingdom and the Hyksos period. We have to ask ourselves who the decision-makers were and how they respectively chose such architectural archetypes which were tied—of course—to religion.

Silvia Prell (Austrian Academy of Sciences), “Bronze Age Equid Burials in the Fertile Crescent”

Equid burials in funerary contexts are known to appear for the first time in Pre- and Early Dynastic Egypt (ca. 3000 B.C.E.), where they are associated with elite burials at several sites located in the valley of the Nile. Equid burials, though without discernible funerary or ritual background, occur during this period as well in the southern Levant. After EB I a hiatus for this practice can be observed in the region. Equid burials are however known again in association with elite burials dating to the later part of the Early Bronze Age in Iraq and Northern Syria (ca. 2500–2000 B.C.E.), a tradition which is extant as well in the Middle Bronze Age (ca. 1800–1500 B.C.E.). At this time the practice of interring equids in association with “warrior tombs” can be observed again in several sites in Egypt’s Eastern Nile Delta (especially Tell el-Dab'a) as well as in the southern Levant. In turn, in the Late Bronze Age (ca. 1500–1200 B.C.E.) the occurrence of this custom became limited to sites in the southern Levant, before the practice was abandoned. Understanding the function and context of this interment as an ethnic marker and its cultic, ritualistic, and religious associations might, together with a plot of their occurrences through time and space, help understand migration patterns and the ethnicity of the people performing this kind of funerary custom.

Christine Lilyquist (Metropolitan Museum of Art), “The Impact of the Hyksos as Seen at Thebes”

This paper looks at the impact that the West Semitic culture of Lower Egypt had at Thebes, where a large Middle Kingdom court tomb was heavily reused in the Second Intermediate Period (SIP) and the first reigns of the 18th Dynasty, until it was sealed by the construction of Hatshepsut’s valley temple during her joint rule with Thutmose III—most probably in the first decade. The large complex was jointly excavated by Lord Carnarvon and the Metropolitan Museum of Art 100 years ago; but as the web- and print-based publications of these excavations will not appear for some time still, results are shared here that show the strong character of Theban culture in the SIP, and, with the

beginning of the 18th Dynasty, a sudden shift in craftsmanship, materials, and iconography at the same time that new features originating or passing through the Delta polity are adopted. Among items of interest are a spiral-trimmed vessel that indicates Aegean contact earlier than Senenmut; an actual Base-Ring I juglet; pots influenced by Black Lustrous Ware, Bichrome, and Light-and-Red-on-Black; various stone and metal vessel shapes; and a glass pin. The site is also important chronologically. Regionalism makes it difficult to coordinate pottery typologies during the SIP; inscriptional material is scarce; and lack of agreement on king lists all make chronological synchronisms very difficult. However, the sealing of the tomb complex early in the Hatshepsut/Thutmose III joint reign provides benchmarks that should be taken into consideration as absolute chronology is further explored.

Anna-Latifa Mourad (Austrian Academy of Sciences), “Cultural Interference? The Impact of the Hyksos Dynasty on Cultic Beliefs and Activities in Egypt”

Cultural interference has been defined as a “relation(ship) between systems, whereby a certain system A (Source system) may become a source for direct/indirect loans for another system B” (Even-Zohar 1990). Cultural interference studies offer unique insights into the development of cultures and identities, helping ascertain the impact of either intermittent or persistent, direct or indirect, intercultural contacts. The paper offers an overview of cultural interference and its relation to other anthropological theories regarding intercultural relations. It presents observed developments in Second Intermediate Period and New Kingdom cultic beliefs and activities in Egypt, and questions whether these were a result of cultural interference by Levantine elements encountered during the Hyksos Dynasty, a period of intensified commercial, socio-cultural, and political contacts between Egypt and the Levant. Reverence to Baal-Seth is specifically explored, with the paper discussing if and how the deity’s worship in the 19th Dynasty was somehow related to the Eastern Delta’s earlier intercultural contacts with the Middle Bronze Age Levant.

10H. Archaeology of Islamic Society

CHAIR: Beatrice St. Laurent (Bridgewater State University)

Asa Eger (University of North Carolina at Greensboro), “Bronze Surgical Instruments from Tüpraş Field, Turkey and the Islamic-Byzantine Medical Trade”

In 2011, excavations at Tüpraş Field, the Early Islamic and Middle Byzantine settlement north of Kinet Höyük, revealed a set of long, thin bronze tools with a decorated center, each one slightly different than the other. Parallels for these have been found around the Early Islamic world; however, scholars have diverged on how to interpret their function. They have been published either as applicators for kohl or instruments for surgery. This paper will discuss the tools in their site context and examine similar published and unpublished examples elsewhere to first determine their date and geographical distribution. From the archaeological evidence, parallels, and Islamic medical texts, I will argue that their function was primarily surgical. Further, the presence of these tools and other related objects in a small frontier settlement provides evidence for a wider trade in pharmacological and medical supplies that took place across the Islamic-Byzantine frontier

Gideon Avni (The Hebrew University of Jerusalem; Israel Antiquities Authority), “The Spread of Qanats in the Early Islamic World—A Case Study for the Transfer of Agricultural and Water Management Technologies”

The Arab conquests of the seventh and eighth centuries launched profound changes in settlement and local societies in the Near East and beyond. A notable marker of these changes was the opening of the borders between east and west, which enabled the diffusion of ideas and technologies into areas that were hitherto not connected. This paper focuses on a unique technology of water management and transportation, the *qanats*, which were widely spread throughout Eurasia. It evaluates the correlation between changes

in settlement patterns and societies during the Early Islamic period, and the diffusion of agricultural and irrigation technologies into the steppe regions of the Near East and the Mediterranean.

Based on the thorough evaluation of a number of surveyed and excavated *qanat* systems in the steppe areas of the Levant, and particularly at Early Islamic sites in the Arabah and Jordan Valley, I suggest dating the extensive expansion of *qanats* throughout Eurasia to the Early Islamic period, associating it with Andrew Watson's "Arab agricultural revolution," which also involved the introduction of new plant species and the changing of dining habits.

Veronica Morriss (University of Chicago), "Ribats and the Levantine Coastal Support Network"

The Islamic maritime frontier of Palestine was supported by an extensive network of fortified coastal cities, forts, and watchtowers. The fortified outposts that served as nodes in this network are frequently associated with the word *ribat*, a complex term that was applied to a variety of structures through time. The diverse components of this system are often addressed in isolation, and largely in regard to their function for defense. In reality, these sites served a multiplicity of roles, functioning as observation points, signal posts, navigational markers, naval bases, and resupply centers, as well as designated places for prisoner exchange. This paper proposes that the Early Islamic coastal fortifications and *ribat* were part of an attempt to tap into the long-established Levantine maritime trade networks through an integrated support system designed to meet the diverse needs of both merchants and naval fleets.

Ian Jones (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), "An Assemblage without a Slash: Ayyubid Ceramics from Khirbat Nuqayb al-Asaymir, Faynan, Southern Jordan"

The 2011 and 2012 excavations at Khirbat Nuqayb al-Asaymir (KNA), a copper mining village in the Faynan region of southern Jordan, produced a small but diverse assemblage of ceramics dating to the late 12th and early 13th centuries A.D. This paper is a brief report of the final analysis of these ceramics, as well as a discussion of the implications this has for archaeological research on the Middle Islamic periods in southern Jordan. In particular, the presence of well-known glazed and mold-made ceramics allows for more precise dating of the KNA assemblage than is usually possible for Middle Islamic period sites in southern Jordan. Because of this, KNA provides useful data concerning the dating of some more common hand-made ceramic forms and a test case for recent proposals concerning the dating of hand-made ceramic fabrics in southern Jordan.

Benjamin Sidel (East Carolina University), "Ethnoarchaeological Insights on the Sedentarization of the Terabin Bedouin during the British Mandate Period: A Case Study from the Tze'elim Survey Map (129) in the Western Negev"

Dr. Dan Gazit's archaeological survey of the Tze'elim Map (129) identified four mud brick buildings that were assembled by the Terabin Bedouin during the British Mandate period. These structures were built in the 1930s and today two of the four buildings are still well preserved. The layout of these buildings, combined with their location, provides important insights on the timing and nature of the Bedouin sedentarization during the British Mandate period. This study is also important as it generates archaeological data on a period and population that are seldom the subjects of academic research.

10I. Gender in the Ancient Near East

CHAIR: Stephanie M. Langin-Hooper (Southern Methodist University)

Becky Martin (Boston University), "Representations of the Goddess Tanit"

Tanit (*tnt*) was a word used in Phoenician as a divine title and as the name of one or more goddesses. The epithet *tnt pn b'l*, "Tanit face of Ba'al," may mean that *tnt* was Ba'al's mouthpiece, face, or some other manifestation of his body. The epithet indicates that these gods formed a *paredros*, or divine

pair. It has been suggested that Tanit was represented in art aniconically, anthropomorphically, and perhaps also in the form of the so-called sign of Tanit. Scholarly agreement on the origins of Tanit, the meaning of *tnt pn b'l*, and the function of the "sign of Tanit" is wanting. This paper surveys images traditionally associated with the goddess in an effort to expose the challenges of interpreting her representations. It focuses on the methodological problems of interpreting the "sign of Tanit" and its relationship to Tanit's role as a part of the god Ba'al. By far the most popular interpretation of the sign assumes that it is to some extent mimetic, an abstraction of a female body with a rounded "head," cross-bar "arms," and a triangular "body" or "dress." I argue that it is not possible to determine if the motif was originally meant to suggest Tanit's body, yet it seems that the sign, like *tnt pn b'l*, was deliberately fragmented in a way that underscored the extra-human qualities of Tanit and her partner Ba'al.

Agnes Garcia-Ventura (IPOA, Universitat de Barcelona), "Amazons in Ancient Hattuša? On the Construction of Gender Roles and Stereotypes in the Early 20th Century C.E."

In 1910, *The National Geographic Magazine* published a paper entitled "An Ancient Capital," by Isabel F. Dodd, professor at the American College for Girls in Istanbul (then Constantinople). The paper, devoted to Hattuša, presented the main "treasures" found in the settlement. Among them was a relief whose human figure was identified by the author as an "Amazon."

In this communication, I take this presumed "Amazon" as my starting point to reflect on the way a woman working in an all-girls college reconstructed one of the possible worlds of women in Antiquity. I focus on both the author of the paper and the presumed woman in the relief, considering the two as interrelated case studies. In doing so I aim to reflect on the way certain gender roles and stereotypes linked to women and to femininity were constructed at the beginning of the 20th century. Moreover, as on this occasion I work mainly with archival materials such as photographs, drawings and letters, I hope to highlight the value of these documents as primary sources when carrying out particular kinds of research.

Delanie Linden (Southern Methodist University), "Confronting the Status Quo: Cross-cultural Gender in the Portraits of the Ptolemies"

This paper contemplates the use of cross-cultural iconography in the royal portraits of the Ptolemies (306–30 B.C.E.). It interprets these portraits' representations of both Hellenistic and Egyptian styles as a strategy crucial to the assimilation of foreign rule over Egypt. Previous scholarship has focused on Ptolemaic sculptures as *either* "Greek" or "Egyptian," with little reciprocal borrowing of styles between the two categories. In this framework, the Hellenistic capital city of Alexandria is seen exclusively as a center for the production of Greek-style sculpture.

In contrast, this paper will argue that the portraits of the Ptolemies, both on coins and in sculptures, employ calculated combinations of both cultural traditions, re-presenting gender in a new cross-cultural environment. Unlike in previous Egyptian periods, statues of queens in Ptolemaic Egypt were produced in unusually high numbers and on a monumental scale. The cult of Arsinoe II inspired new gender iconographies, wherein Ptolemaic queens appear more divine and goddess-like. Throughout the 300-year period, shifts in "masculine" or "feminine" iconographies appear and disappear, often interchanging between sexes as queens and kings took on the opposite sex's gendered attributes. Using gender theory applied to the royal portraits of the Ptolemies, this paper explores how cross-cultural interaction challenged what it meant to be a male or female. It examines the shifts in male and female power against the backdrop of a new foreign kingship, evaluating how gender traditions acquiesced for the greater interests of assimilation.

Amy Gansell (St. John's University), "Enthroning the Neo-Assyrian Queen"

As a result of scholarly focus on the king and his ceremonial activities and spaces, the throne room has come to epitomize the Neo-Assyrian palace, and the throne itself has become emblematic of the ruler. However, employing a combination of visual, textual, and archaeological evidence, this paper turns attention to the queen's throne. Sculptures portray the Neo-Assyrian queen

Liballi-sharrat in high-backed chairs similar in design to images of thrones occupied by gods, goddesses, and the king. The identification of the queen's chair as a throne is further supported by a Neo-Assyrian mortuary text that threatens anyone who dares to sit upon the dead queen's "throne." Indeed, at least within her household, the Neo-Assyrian queen had many responsibilities and reasons to receive audiences from a ceremonial seat of power. At Nimrud's Northwest Palace, parallels among the layouts of the main throne room, the king's private throne room, and the antechamber of the queen's presumed private suite suggest the exact location of the queen's throne. Building upon this, I investigate the locations of additional queenly throne rooms at other Neo-Assyrian palaces. Generally, this paper contributes to recent scholarly efforts to recuperate queenly power in the Neo-Assyrian palace. Specifically, I aim to re-envision the palace as a space in which both royal men and royal women, like gods and goddesses, represented and performed imperial ideals through the ceremonial act of enthronement.

Celia Bergoffen (Fashion Institute of Technology), "A New Interpretation of Philistine Ashdoda Figurines as Anthropomorphized Chairs"

Considered uniquely Philistine for their fusion of the female form with a chair, the Ashdodas are nevertheless compared to Mycenaean and Cypriot seated female figurines, although the latter's bodies are always fully depicted, however schematically. The fact that the Ashdoda's minimal sexual characteristics, when included at all, consist merely of two unobtrusive bumps on the chair back, surely argues against their interpretation as fertility figures. If instead, as proposed in this paper, we view the Ashdodas as representing anthropomorphized chairs rather than human figures, they may be related to Cypriot anthropomorphized objects as well as to Canaanite and Mycenaean offering tables or chair models. In many traditions, including contemporary cultures, the empty chair is a potent symbol for an absent individual, often a family member. That the Ashdodas' meaning was somehow bound up with household or folk cult agrees with their distribution, which was primarily confined to domestic contexts. Perhaps the discontinuity between the Ashdoda's disparate origins and its characteristically Philistine form echoes the cultural and sentimental distance between these people and their immigrant forebears.

Jillianne Laceste (Southern Methodist University), "Antiochus I and Ideal Masculinity at Nemrud Dag"

This paper will consider the construction of ideal masculinity as seen in the portraits of Antiochus I at Nemrud Dag. At this site, I will focus on two major parts of the nearly mirrored eastern and western terraces at the *hierothesion*: firstly, the colossal statues of five seated figures, Antiochus and the four syncretistic gods Commagene-Tyche, Zeus-Oromasdes, Apollo-Mithras, and Herakles-Artagnes; and secondly, the hand-shaking scenes of the *dexiosis* stelae which depict Antiochus shaking hands with the same four gods from the colossal statues in moments of formal greeting, divine approval, and alliance. By analyzing Antiochus's depictions with close attention to his poses, his physical proximities, and symbolic relationships with the gods, I will discuss how masculine ideals are constructed and embedded into the imagery at Nemrud Dag. Antiochus is not only depicted as the dominating ruler of Commagene, he is also depicted as the representative of ideal masculinity. With these two accomplishments, his divine approval and ascendancy are reflective of his masculine authority as king.

10J. Mesopotamian Civilizations: The Economic Scope of Institutional Households II

CHAIRS: Claudia Glatz (University of Glasgow), Jacob Lauinger (The Johns Hopkins University), and Piotr Michalowski (University of Michigan)

Noemi Borrelli (L'Orientale University of Naples) and Palmiro Notizia (CCHS-CSIC, Madrid), "No Man's Land: Searching What Lies beyond Temple and Palace in the Ur III Period"

As regards reconstructing the economic landscape of Ur III southern

Mesopotamia, the vast bulk of the evidence favouring the idea of a leading role for both palace and temple cannot easily be dismissed as either merely fortuitous or as overrated. However, in recent years, a more flexible analysis of the available data has revealed the existence of several other agents that had a role in the same economic endeavours of palace and temples, and whose nature simply does not fit into either of the two blocks.

The mention of these households in the provincial archives clearly suggests a degree of institutionalization, but the extent of their economic scope, the relationship they had with the two major institutions, and their role in the overall strategies regarding the economic exploitation of the land are still far from being completely outlined.

The purpose of this paper is, therefore, to collect all the data related to these households in the Girsu/Lagash archives, and to show how they were involved, especially in those economic sectors like husbandry and trade that have been proved to be less rigidly tied to the central administration. More specifically, it will be shown if and how these households fit into the palace/temple dichotomy, who managed them, and how they developed. Above all, an attempt will be made to describe these mixed economic partnerships, involving institutional and non-institutional households, and to ascertain the degree of autonomy/dependence in this mutual relationship.

Jesse Casana (Dartmouth College), "Counting Sheep: Wool, Wealth, and Institutionally-Managed Pastoralism in Bronze Age Mesopotamia"

Because of the critical economic role of textile production and trade in Bronze Age Mesopotamia, a growing number of scholars have begun to emphasize the importance of sheep husbandry as a key source of wealth and social power. While the cuneiform documentary record offers abundant evidence for pastoral management practices, it reflects almost exclusively the perspective of powerful institutional households and thus has led to a range of potentially erroneous assumptions regarding the scale, scope, and organization of pastoralism in Mesopotamia more broadly. This paper explores a variety of archaeological datasets in order to shed light on regional and temporal differences in pastoral practices in northern and southern Mesopotamia during the later third and second millennia B.C. In particular, remote sensing-based mapping of radial route systems that formed droveways for animal herds, alongside analysis of excavated ovicaprid faunal assemblages, illustrate key differences in community-based, institutional, or household management of animals. Results suggest that centralized, institutionally-organized, large-scale pastoralism, known for example from the Ur III and Eblaite states, was probably exceptional as archaeological evidence points to substantial variance in the number of animals, where they were grazed, and the degree to which they were integrated into regional palatial economies.

Eloisa Casadei (Sapienza University of Rome), "Temple Agencies and Temple Economy in Fourth and Third Millennium B.C. Southern Mesopotamia: An Archaeological Perspective"

During the late fourth and third millennia B.C., the socio-economic organization of Southern Mesopotamia was characterized by a multifaceted picture. Residential quarters were located side by side with huge multifunctional structures interpreted as temples and palaces. Nowadays, the "household economy" theory is gaining momentum, so that the different buildings are interpreted as self-sufficient economic institutions able to manage their own properties and workers. On the contrary, according to textual data, temples seem to represent the ideological keystone of Sumerian life, and this fact has been taken as the centerpiece for the reconstruction of the socio-economic life of the Sumerian city-states. Nevertheless, the actual relevance of the temples has never been properly investigated from an archaeological perspective. The present research intends to clarify the socio-economic impact of the temple institutions on the organization of city-states in Southern Mesopotamia during the Jemdet Nasr/Early Dynastic Periods (3100–2350 B.C.). The first aim will be a functional analysis of the spaces inside temple precincts, through a re-examination of the old excavations and a pointed re-contextualization of materials, administrative tools, installations, and technical devices. Building on these insights it will be possible to subdivide different areas within

individual temples according to four basic functional categories, i.e., cult, ritual, production, and residence. Furthermore, moving from the observation that these categories are not homogeneously attested, their presence/absence and spatial distribution within individual temple complexes will be used to define a variety of temple types, reflecting a possible hierarchy of temple administrations, well defined in the urban compound.

Melanie Groß (Leiden University), “It Is All about the People: The Workforce of the Palace and Temple Institutions in the Neo-Assyrian Empire”

This paper aims at discussing the lower-ranking personnel of the Neo-Assyrian palace and temple households as the economic driving force of their institutions and beyond. While the Neo-Assyrian Empire is well known for its powerful kings, effective state officials, and strong army, the lower strata of Assyrian society have been taken into account to a much lesser extent in Assyriological research. Although the focus of the preserved written sources lies on the royal sphere and state matters, there is nevertheless sufficient information available from the archival documentation (letters, administrative records, and legal documents) for studying those who did not manage and delegate work but actually did the work. In the scope of this paper I will limit myself to the skilled workforce—that is, craftsmen (weavers, smiths, stoneworkers, etc.)—and examine their tasks and functions but especially the type of connection they maintained to the said institutional households. I will examine the different modes of employment, ranging from cases where the workforce formed an integrative part of a household to cases where the household employed the workforce on contractual basis. In doing so, I will also compare the households of the temple and the palace and discuss their interaction relating to the organization of the workforce. My aim is to show that outsourcing of work was a central issue especially for the palace institution and that the close connection between temple and palace formed a central socio-economic aspect of the two institutions and, moreover, of the Neo-Assyrian Empire in its entirety.

10K. Maritime Archaeology

CHAIR: Caroline Sauvage (Loyola Marymount University)

Miroslav Bárta (Czech Institute of Egyptology, Charles University) and Douglas Inglis (Institute of Nautical Archaeology, Texas A&M University), “The Discovery of an Old Kingdom Boat at Abusir”

During the course of the 2015 field campaign in Abusir, the Czech Institute of Egyptology discovered the remains of a 17 m long funerary barque. It was located in a non-royal cemetery in the southern part of the concession where many high officials of the Third–Sixth Dynasty Egyptian Old Kingdom were buried (2670–2150 B.C.). The vessel appears to be associated with Tomb AS54, a 53 m long Third Dynasty mastaba dating to the reign of Huni.

The Abusir boat bridges the gap between Khufu’s royal ship and the Early Dynastic boat burials discovered at Abydos, Saqqara, Helwan, and Abu Rawash. While the erratic preservation environment had reduced the majority of the hull to frass and fragments, painstaking excavation revealed spectacular examples of the complex lacing system used to bind the planks together, as well as other delicate construction elements seen nowhere else. The construction methodology is significantly different than that of Khufu’s royal ship, and provides critical insights into ancient Egyptian shipbuilding techniques. Given the technological features and the position of the boat in the non-royal environment, this artifact challenges several traditional opinions about the society, burial customs, and modes of interaction between the royal and non-royal spheres of the period.

Caroline Sauvage (Loyola Marymount University) and Marie-Louise Nosch (Centre for Textile Research, Copenhagen), “The Fabric of the Sea—Sail Manufacture in the Late Bronze Age Eastern Mediterranean”

Sails were one of the most important fittings of Late Bronze Age ships, and yet they are understudied because of the lack of archaeological remains. Although iconography has been largely scrutinized to gain knowledge

concerning the shape of sails, their use, and their riggings, sail manufacture has not yet been investigated properly. Tools for the production of textiles attest to their diverse forms and places of production, as well as to the types and dimensions of fabrics being produced, and the types of fibers being used. This talk proposes to address the question of sail manufacture throughout the eastern Mediterranean by studying textile tools within their archaeological coastal contexts, by exploring the necessary resources, skills, and labor time, as well as by looking at ancient texts from the Aegean, the Levant, and Egypt. We will include data from experimental archaeology used in maritime archaeology and in textile research in order to assess the logistics of sail production in the Late Bronze Mediterranean.

Amani Abu Hmid (University of Haifa; Israel Antiquities Authority) and Michal Artzy (University of Haifa), “Aegean Mercenaries in Akko during the Persian Period”

Salvage excavations ca. 450 m north of Tel Akko revealed an unusual construction consisting of complete and fragmented ceramic vessels combined with stones as building material in Area R. The largest percentage of the ceramics belonged to maritime transport containers such as straight-shouldered Phoenician/Persian jars and Greek and Cypriote amphorae originating in northern and/or western Asia Minor. These remains are dated the late fifth to the first half of the fourth century B.C.E.

Archaeological and geo-archaeological evidence gathered indicate that in this period an active land-locked anchorage or proto harbor was located southwest of the tell, where an active coast was found under the tell in a salvage excavation (Area T, directed by Abu Hmid and Artzy).

Combining our results with historical data, we propose that Area R was utilized for the residence of Aegean and Phoenician mercenaries of the Persians, possibly to deal with the Egyptian revolts.

Stella Demesticha (University of Cyprus), “The Cargo of the Mazotos Shipwreck, Cyprus”

Since 2010, the University of Cyprus, in collaboration with the Department of Antiquities of Cyprus, has conducted excavations on a fourth century B.C. shipwreck located off the south coast, near Mazotos village. Before excavation, the shipwreck was almost undisturbed: at a depth of 45 m lay a dense amphora concentration in the shape of a ship. During five excavation seasons, only part of the ship’s cargo has been investigated but many details have already come to light, notably concerning the cargo amphorae, mainly from Chios. Wine jugs and olives seem to be secondary cargo, carefully arranged among the Chian amphorae.

As the Mazotos shipwreck is one of the most coherent ancient shipwreck sites currently under excavation in the Mediterranean, its significance is multiple. Apart from the preserved parts of the hull, the study of the ship’s internal stratigraphy provides unique insights into its size and the spatial arrangement of its different compartments. The purpose of the paper is to present an overview of the parts of the shipwreck assemblage excavated thus far, with an emphasis on the amphora stowage systems, and the information they provide for ships and trade mechanisms in Antiquity.

Zaraza Friedman (University of Haifa), “Ancient Navigation and Seaborne Trade in the Dead Sea, Israel”

This paper will bring into discussion evidence of ancient navigation and seaborne trade in the Dead Sea, as very little is known about it. The Dead Sea was formed within the East African-Syrian rift system and it is the lowest continental depression on the globe (420 m below MSL).

Because of its geographical location the Dead Sea served for centuries as an inland bridge for the land and sea transport of products from the Arabian Peninsula (frankincense, myrrh, perfumes) to the harbors of Gaza and Alexandria from which they then reached other Mediterranean sites. Since very early periods in antiquity the natural products of the Dead Sea (bitumen, salt, wheat, dates, pomegranate oils) were prized products and luxuries in Egypt and the Mediterranean world. The only pictographic evidence of ancient navigation and seaborne trade in the Dead Sea consists of two sailing ships

(sailing to the south, true geographical orientation) transporting salt and bitumen that are depicted in the Madaba Map mosaic (550–560 C.E.).

Due to the extended lowering of the sea level in the past decades of the 20th century, evidence for the maritime activity of the Dead Sea in antiquity has been augmented by several stone and wooden anchors, dated from the eighth–seventh century B.C.E to the Fatimid–Crusader periods (tenth–12th centuries C.E.) that were found on what once was the sea bottom. Several ports or landings that were found along the northern and western shores of the Dead Sea also reflect these intensive maritime activities in antiquity.

11A. Archaeology of Arabia II

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

Jennifer Swerida (Johns Hopkins University), “Reading the Umm an-Nar Settlement”

The settlement tradition of the Umm an-Nar Period (ca. 2700–2000 B.C.E) of the southeastern Arabian Peninsula is so far an under-explored aspect of the cultural tradition. As the earliest phase of widespread sedentary occupation in the region, the nature and organization of Umm an-Nar settlements are crucial to our developing understanding of this formative period. General knowledge holds that such settlements are composed of rectilinear structures clustered in the vicinity of the period’s iconic monumental towers and collective tombs. However, in the rare instances when settlement architecture has been excavated, the explored buildings have been found to contain limited cultural material. This is especially true when compared to the rich domestic contexts known from Mesoamerican studies in household archaeology. Yet a largely untapped and easily accessible source of Umm an-Nar social and domestic information exists in the architectural layouts of the settlements. The often deflated landscape of the Oman Peninsula’s inner piedmont zone offers archaeologists settlement plans often at least partially visible from the modern ground surface. When coupled with even the most limited of excavation results, these plans become an interpretive resource that should not be overlooked. The settlement landscape at the UNESCO World Heritage Site of Bat offers an array of such contexts. In this paper, I explore various ways in which Bat’s architectural plans, in combination with their situation on the dynamic piedmont landscape, can be utilized to investigate Umm an-Nar social organization and complexity.

Eli Dollarhide (New York University), “Mapping Magan: Investigating the Bronze Age Bat-Amlah Region in Oman”

Mesopotamian texts identify Magan (the Omani Peninsula during the third millennium B.C.) as a player in international affairs and a resource-rich area worthy of conquest. Interpretations of Oman’s archaeological evidence, however, often contradict this description, describing the region’s political situation as dominated by tribal groups. By examining spatial, architectural, and material connections between settlements around the UNESCO World Heritage Site of Bat, this research seeks a broader view of the ancient Omani Peninsula’s social structure during a pivotal moment of development.

This paper presents the preliminary results of systematic archaeological survey between the Bronze Age settlements of Bat and ‘Amlah, Oman, conducted during the Winter/Spring 2017 field season. This area, when combined with earlier surveys of the Bat region, presents a unique opportunity to examine relationships between Bronze Age settlements. Spatial and ceramic analyses of sites and sherds identified in the survey allow for disparate archaeological contexts to be linked together. The resulting picture offers new ways for considering the social organization of a region in the Omani interior.

Charlotte Cable (University of New England), Kristina Franke (University of New England), Hélène David-Cuny (Independent Scholar), Claire Newton (Université du Québec à Rimouski), Steven Karacic (Florida State University), James Roberts (University of New England), Ivan Stepanov (University of New England), Yaaqoub Yousif Al Ali (Dubai Municipality), Mansour Boraik Radwan (Dubai Municipality), and Lloyd Weeks (University of New England), “Saruq al-Hadid: New Insights from Three Years of Field and Laboratory Research”

Content and Approach: In November 2014, the University of New England commenced a program of excavation and post-excavation analyses focused on the site of Saruq al-Hadid in Dubai, UAE, in collaboration with Dubai Municipality. This paper presents a summary and review of the results of this research, focusing on new understandings of the stratigraphy and chronology of the site, the subsistence base of its occupants, the human activities that were undertaken there, and the changing site environment. The talk will place the results of the research in the broader context of Bronze Age and especially early Iron Age society in the region, and will sketch the economic and social connections that can be demonstrated between Saruq al-Hadid and other sites in southeastern Arabia and the wider Near East.

Significance: Saruq al-Hadid, discovered accidentally in 2002 in the mobile dune fields of southern Dubai, is one of the most important but enigmatic late prehistoric sites in Arabia. It displays a super-abundance of material remains (including items of copper, iron, gold, bone, wood, stone, and shell, and metal production residues) in contexts characterized by pervasive ‘ritual’ snake imagery.

James Roberts (University of New England), Lloyd Weeks (University of New England), Melanie Fillios (University of New England), Charlotte Cable (University of New England), Yaaqoub Yousif Al Ali (Dubai Municipality), Mansour Boraik Radwan (Dubai Municipality), and Hussein Qandil (Dubai Municipality), “The Faunal Remains from Saruq al-Hadid: a New Insight into Human-Animal Interactions in Prehistoric Southeastern Arabia.”

This paper will focus on the animal bone assemblage from the desert site of Saruq al-Hadid, a prehistoric archaeological site located in the emirate of Dubai, UAE. The methods of analysis used to study the animal bone will be outlined, before the results of the analysis are presented within the context of the site and the wider region. Current hypotheses regarding the nature of these remains shall then be discussed.

The material raises questions about the nature in which the local, desert environment of the site was exploited by humans and how this changed over time; extensive consumption of predominantly wild animals is evidenced in the remains from the Bronze Age layers (2000–1300 B.C.E.), contrasting greatly with the assemblage from the Iron Age depositions (1300–600 B.C.E.), which predominantly appear to be waste from hide processing. An abundance of fish bone in the assemblage suggests considerable contact between the site and the coast (approximately 40 km to the northwest of Saruq al-Hadid), which has prompted exploration into the nature of this contact and how the coastal resource was utilized to provision inland settlements. Animal bone is also evidenced to have been an important raw material in the manufacture of objects, with decorative and functional bone artefacts recovered from the site.

Ultimately this paper highlights the importance of this faunal assemblage and demonstrates its potential to cast new light on the nature of human-animal interactions in prehistoric southeastern Arabia.

Steven Karacic (Florida State University) and Peter Magee (Bryn Mawr College), “The Production of Common Wares in Iron Age II (1100–600 B.C.E.) Southeastern Arabia”

Sandy buff ware and orange ware with grits are two common ceramic wares found at Iron Age II sites in the United Arab Emirates. These wares occurred in the same range of vessel shapes, and, while there is clear regional variation in their distributions, they were consumed alongside one another at sites like Muweilah and Tell Abraq. The current study presents the results of geochemical analysis conducted on these two wares. Our results point to a complex pattern of movement for potters, raw materials, or both through the

productive landscape, the implications of which shed new light on the social and economic organization of Iron Age II southeastern Arabia.

11B. Material Culture and Identities in the Eastern Mediterranean I

CHAIRS: Helen Malko (Fashion Institute of Technology) and Serdar Yalcin (Macalester College)

Anas Al Khabour (University of Gothenburg), “The Red-Black Burnished Ware (RBBW) People in Kura Araxes”

The fourth and third millennia B.C. experienced a surprising cultural unity in the Eastern Mediterranean known as the Kura-Araxes Culture, represented in a wide distribution and transmission of a distinctive pottery style and associated artifacts from Transcaucasia to the Levant. The present paper attempts to focus on correlating the distribution of pottery and metallurgical objects with burials in order to trace the movement of RBBW people and study the relationship between their material culture and their identities. The occurrence of organized tombs and mortuary practices in the sites of the Kura-Araxes Culture and the diversity of tomb type, grave goods, body treatment, and spatial disposition represent the differences within the society. A variety of questions arise in this context: How we can identify these populations? To what ethnicity/ethnicities did these people belong and how can we visualize it in archaeology? How did they conceive themselves or how did others conceive of them? How can the material culture shape their identity and affiliations?

Jonathan White (University at Buffalo), “Prosthetics for Osiris: Disability and Accommodation in New Kingdom Egypt”

Although the archaeology of marginalized groups has been increasingly discussed in recent scholarship, people with disabilities remain largely unstudied. The handful of works that deal with this topic include Jane Hubert’s *Madness, Disability, and Social Exclusion* (2000), Timothy Insoll’s *The Archaeology of Identities: A Reader* (2007), and Lorna Tilley’s *Theory and Practice in the Bioarchaeology of Care* (2015). All of these touch on the archaeology of disability as a component of a different theoretical or practical lens—exclusion and other (Hubert), identity (Insoll), and care (Tilley)—but none have paved the way for a dedicated examination of people with disabilities in the archaeological record. An in-depth study of persons with disabilities in the ancient world must begin in Egypt, which has a rich material culture and a wealth of bioarchaeological samples, in both cases better preserved and better attested than in many other areas of the world. For this reason, the land of the pharaohs is the perfect place to begin an in-depth cross-cultural study of people with disabilities in the ancient world. This paper reviews published material to critically examine physical evidence for disability and accommodation amongst New Kingdom elites. Mummies that display pathologies diagnostic of disabilities in life, artifacts and material culture made to accommodate individuals with disabilities, and even artistic depictions offer a revealing glimpse into what life was like for people with disabilities on the banks of the Nile.

Catherine Steidl (Brown University), “Community Identities in Ionian Sanctuaries”

Two characteristics of Ionia have long been considered fact: that it was a place ‘between,’ squeezed onto a strip of coastline by the Aegean and the rest of Anatolia; and that it was Greek. There can be no doubt that Ionia contributed much to the Greek cultural imagination, but the importance of those developments has been used to justify a retroactive cultural identification of the region itself. The diversity of populations in Anatolia and the degree of interaction on the coast—demonstrated by material and linguistic evidence—suggests that, in reality, Ionia was populated by an array of communities speaking different languages, and engaging in a variety of practices. However, who the Ionians were, how they thought of themselves, and what it meant to inhabit that ostensibly Greek sliver of a much larger landmass remain important questions.

In this paper, I argue that communities in Archaic Ionia were in part

constructing their identities through explicit ties to Bronze Age cult sites. Furthermore, the presence of cult material and installations that are not clearly demonstrably ‘Greek’ at key Ionian sanctuaries like Phokaia, Miletos, and Ephesos, suggests that multiple communities of practice may have been simultaneously present in the same physical spaces at these sites. The visibility of such communities at these sanctuaries has important implications for our understanding of Ionian identity: I suggest that instead of being ‘between’ or oriented in opposite directions, Archaic Ionian communities were inherently ‘both’ and ‘neither,’ perhaps not distinguishing between beliefs or practices at all.

Leanna Kolonauski (Temple University), “A New Twist on an Old Tradition: Orientalizing Votive Offerings in the Shrine of Eileithyia on Crete”

The Shrine of Eileithyia in the Inatos Cave, located near the southern coast of Crete, has yielded many finds spanning the Middle Minoan I to Roman periods dedicated to the goddess of childbirth. Among the hoard of artifacts are nine Daedalic figurines and plaques in various states of preservation dated to the seventh century B.C.E. The figurines and plaques range in quality from hand-modeled features with painted detailing to rough forms framed by untrimmed excess clay. These inconsistencies in craftsmanship attest to the variety of donors visiting the cave, and the desire of the patrons to donate anything within their means. The Daedalic sculptures feature women wearing the polos headdress, indicating an elite status of the figure, whether she represented the goddess herself, the donor, or an anonymous worshipper. The questions of identity and indications of status raised by the sculptures run throughout the history of the material culture at the cave shrine, demonstrating that although the figural style may have changed in the seventh century, the worship of Eileithyia had not. These Orientalizing figurines further attest to the preference for the Near Eastern figural style on Crete at this time, pervading even long-established religious shrines. Although the cave had a deep-rooted figural tradition, neither the worshippers nor the goddess placed stylistic constraints on the offerings. Therefore, as other artwork in the Mediterranean appropriated Near Eastern styles, Cretan religious offerings to Eileithyia followed suit.

11C. Archaeology of Anatolia II

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

Cheryl Anderson (Boise State University), Levent Atici (University of Nevada, Las Vegas), Andrew Fairbairn (University of Queensland), and Sachihito Omura (Japanese Institute of Anatolian Archaeology), “Written in Bone? Testing a Multifaceted Approach to Studying Human Health in the Past”

Recent archaeological research at the urban site of Kültepe-Kanesh has amassed a wealth of information about life during the Middle Bronze Age (ca. 2000–1750 B.C.E.) in central Anatolia (present-day Turkey). In particular, the large corpus of textual records in the form of cuneiform tablets sheds light on how social, political, and economic institutions present during this time period may have intersected with human health in a variety of ways. For example, according to some of the texts, access to certain resources may have been linked to socioeconomic status with wealthy individuals having greater access to higher quality foods. This raises the question of whether or not differential access to these resources, such as meat and certain plants, led to differential health outcomes. Also, even if differences in health profiles between socioeconomic groups are suspected, how can we detect them? Using historical data from the Middle Bronze Age as a starting point, this paper explores a potential model for reconstructing health through the integration of data from human osteology, zooarchaeology, archaeobotany, and archaeology. These independent and complimentary datasets, collected from the contemporaneous strata at the urban Kültepe-Kanesh and the rural Kaman-Kalehöyük, offer us an opportunity to bring human health to a sharper focus within a larger explanatory framework during this period. The integrative approach adopted in the present research aims to demonstrate the utility of

combining multiple independent lines of evidence in a cohesive way and to increase the methodological resolution in order to examine questions about human behavior and health.

Lorenzo d'Alfonso (Institute for the Study of the Ancient World, New York University), "The Iron Age in Central Anatolia: New Insights from the Excavations at Niğde-Kınık Höyük"

While during the first five years the extensive excavations of the citadel of Kınık Höyük (Niğde) were devoted to the Hellenistic levels, by 2016 the exploration reached the levels of the Late Iron Age in both operations A and B on the citadel, and in operation D, in the lower town. Previous soundings outside the walls in operations A and C provided information on the Early and Middle Iron Age occupation, and in Operation A sector 2 architecture of the Middle Iron Age was exposed. During the campaign 2017 all operations will concentrate on excavating Iron Age levels, and we expect them to provide us with substantial information on the urban organization of the site in that period. In the meanwhile, morphological, technological, and material studies of the Iron Age pottery have been completed and provide new insights particularly on the relation of south central Anatolia with the other regions of the plateau during the tenth and ninth centuries B.C.E.

Rachel Starry (Bryn Mawr College), "Arch Monuments in Roman Lycia: A Reconsideration of Architectural Form and Function within the Urban Landscape"

As both liminal markers of communal space and powerful media for the expression of civic identity, arch monuments served a variety of important functions within a Roman city. Although the majority of arches found in Lycia (in southwestern Anatolia) were dedicated by cities to Roman emperors and provincial officials, these monuments are far from straightforward symbols of Roman imperial authority. Rather, they participate in a uniquely eastern tradition of gateways and honorific monuments, and deliver powerful statements about local urban identity through both their architectural form and their careful placement within the urban fabric. Two types of arches are discussed in this paper: both city gates and agora propyla can be found at Xanthos and Patara, cities located in the lower Xanthos river valley, and agora propyla are known from Oinoanda and Balbura, two sites in the mountainous Kibyrtis region to the north. I conclude that these four sites in western Lycia utilized arches in very different ways depending on their architectural form and their urban spatial context. In particular, the city gates of the coastal southern cities capitalized on a steady influx of visitors from around the Mediterranean, targeting their diverse audience using a specific set of architectural features that loosely references typical Roman triumphal monuments. Where audiences were primarily local for the remote cities of the Kibyrtis, however, arches exclusively appear at entrances to agoras and lack the same overtly Roman architectural references, carrying rather different messages about their urban identity to visitors from other nearby cities.

Michael Hoff (University of Nebraska), Rhys Townsend (Clark University), Ece Erdoğan (University of Nebraska), Birol Can (Uşak University), and Timothy Howe (St. Olaf College), "Antiochia ad Cragum Excavations: 2015–2017 Seasons"

At the 2014 ASOR Annual Meeting, we reported on our first decade of excavation (2005–2014). In this paper, we report on the last three seasons of activity, taking stock in the continued research at earlier material and the new discoveries made. Beginning with the imperial temple (Northeast Temple) we are now able to determine its dimensions and the reconstruction of its architectural features progresses. Anastylosis of the structure remains an eventual conclusion. One of the major discoveries in the previous decade was the Large Bath Courtyard that was completely paved with a mosaic filled with geometric decorative panels. We have now begun to explore the Great Bath itself, focusing first on the frigidarium, in which we uncovered traces of the original late first century C.E. mosaic floor. Equally interesting, we also discovered evidence of late antique industrial activity within the frigidarium, including pottery kilns and a glass workshop, that were installed after the

original bath function ceased. Another major recent discovery is the civic bouleuterion. Its excavation (80% completed following the 2016 season) has revealed the seating arrangements that involved both VIP seating on marble benches, as well as wooden grandstand seating. The find spots of roof tiles and nails indicate that the cavea was covered with a tiled roof but the pulpitum was left uncovered. Finally, we will report on the discovery of a possible monastic Byzantine complex.

Peter Cobb (University of Pennsylvania) and Elvan Cobb (Cornell University), "Investigating Routes among the Upper River Valleys of Western Anatolia"

The river valleys of western Anatolia have always served as east-west transportation routes between the Aegean and the central Anatolian plateau. The upper, eastern ends of three of the valleys, the Alaşehir (a tributary to the Gediz), the Küçük Menderes, and the Büyük Menderes, converge in a hilly region north of the city of Denizli, between the towns of Sarıgöl and Buldan. This area has always been considered a boundary zone, and remains so today at the junction of five Turkish provinces. This intersection, therefore, provides an opportunity to study multiple transportation routes for passage among these important valleys. We investigate this region both diachronically and from a variety of research perspectives, starting from a landscape archaeology approach using computational methods on remote sensing datasets. We continue our investigation with historical accounts through the Ottoman period that provide glimpses into the experience of traveling along these routes up to the advent of the railroads. This paper, therefore, investigates how this convergence of geographical features impacted travel, communication, and the way people have perceived this landscape. Lastly, this paper will touch upon the pedagogical experience of commencing this research within a classroom setting, and our experimentations with the visualization and online presentation of our spatial research and results.

Daniel C. Browning Jr. (University of Southern Mississippi) and David Maltzberger (Wayland Baptist University), "Memes, Moons, or Menorahs? Analysis of Claimed Syncretistic Jewish-Pagan Relief Symbols in Rough Cilicia"

Symbolism expressed in rock reliefs and architectural elements is a curiously common feature of Hellenistic through late Roman remains of eastern Rough Cilicia. A variety of symbols are especially abundant in the region of Olba-Diocaesarea, where they have been interpreted as badges of demes, representations of deities, or cultic identification. Christian crosses abound in the late Antique period and a few clear Jewish menorahs are known. Some scholars identify a particular class of symbols as menorahs and, owing to their juxtaposition with pagan elements, cite them as evidence for Judaizing influence or Jewish-Pagan syncretism. This paper challenges the identification of these symbols as menorahs or menorah-hybrids. Alternate identifications are suggested by considering potential significant astral phenomena, long-standing lunar iconographic conventions in Syria and Cilicia, and regional traditions of elevating revered icons on columns—the latter possibly relating to the odd Christian phenomenon of Stylites.

11D. Altered States: Alternative Trajectories to Complexity in the Ancient Middle East I

CHAIR: Geoff Emberling (University of Michigan)

Yael Rotem (University of Pennsylvania), "The Transformation from Complex Village Society to Local Urbanism in the Southern Levant: New Observations in Light of the Evidence from the Central Jordan Valley in the Early Bronze Age I-II"

The Early Bronze Age southern Levant experienced a dramatic pathway to complexity, creating a small-scale urban society. The transition from EB I to EB II periods was characterized by urbanization processes, in which sweeping changes in social structure, political landscape, and economic networks occurred. While the majority of research has centered on the nature of the fully

urban society in the region, there is no consensus for the specific mechanisms and causes of the emergence of these early towns, and the reasons for the demise of the complex village society that preceded them. None of the existing explanatory models capture the regional variability and cultural diversity that differentiated this period in the southern Levant, nor have they been able to identify the different paths that led to the development of urban system in this region, within the existing chronological framework. The study presented here seeks to tackle this gap, and focus on the critical period leading up to life in these urban centers in a specific geographic region: the Central Jordan Valley. A new model of social change will be suggested, based on comparative analysis of archaeological data from five sites in the region. I will argue that in absence of leveling mechanisms to maintain egalitarianism, EB I village society slowly transformed into a large, densely settled and non-egalitarian village system, which failed to sustain within the existing social and economic order. The collapse of this system at the end of EB I set the stage for urbanism in the EB II period, which reflects new order for old components.

Meredith S. Chesson (University of Notre Dame), “Urbanism without Cities and Complexity without Elites? Social, Economic and Political Differentiation in the Early Bronze Age Southern Levant”

Traditionally, researchers have characterized the southern Levantine Early Bronze Age as the region’s first urban society. I argue, however, that comparison with other ancient urban societies in Mesoamerica, North America, Europe, East Asia, and Mesopotamia demonstrates that Early Bronze Age society does not pass the ‘urban litmus test.’ I argue that the southern Levantine Early Bronze Age lacks three key elements of urbanism: scale of differentiation, coherence of identity, and a pronounced rural and urban dichotomy in lifeways. Instead, I suggest that the Early Bronze Age peoples worked towards a loosely collective regional endeavor that involved population aggregation into new fortified communities, intensification of agricultural and pastoral production, innovative water management and irrigation technologies, and increasingly regionalized expression of Early Bronze Age material culture and heritage.

Aaron Burke (University of California, Los Angeles), “Trajectories in Amorite Hegemony during the Early Middle Bronze Age”

The early Middle Bronze Age (ca. 2000–1800 B.C.) saw the rise of territorial states in the wake of the collapse and balkanization of the Ur III Empire. During a relatively short period of time these states came to be ruled by many individuals identified among textual sources as Amorites. These sources reveal that some of the earliest rulers had served as military leaders within the collapsed Ur III state. However, the emergence of Amorite rule among states in northern Mesopotamia and the Levant suggests that various other avenues to Amorite political hegemony existed, whether through the usurpation of power within existing polities or during the foundation of entirely new dynasties. This paper compares and contrasts these avenues and the role that Amorite identity played within and among these nascent states.

Raphael Greenberg (Tel Aviv University), “Rethinking the Fortified Centers of Second Millennium Canaan”

Ever since Yadin’s excavations at Hazor, it has been a truism that the second millennium in the southern Levant begins with urban ‘regeneration’ and is subsequently dominated by populous city-states. Thus, what began as a necessary corrective to romanticized concepts of a Levant overrun by Amorite nomads and Hyksos charioteer-kings, has become a largely unexamined assumption about the size and complexity of Canaanite social and political structures. Recent work on the nature of third millennium ‘urban collapse’ in the Levant, on third and second millennium tribal polities in Syria, and on tangled patterns of continuity and discontinuity in MB I–II settlement and mortuary landscapes, points to other possible interpretations of large, fortified enclosures with dominant elite structures. These places might dominate the countryside, appropriate its resources, and mediate its interactions with the gods, without being densely populated urban centers. In fact, a close look suggests that there was no single, strong urban program at work, and that the key to survival may not have been size or economic balance, but the

institutionalization of cult and the negotiation of relations with neighboring non-urban groups.

Elizabeth Minor (Wellesley College), “Invisible Kings: The Development of Royal Nubian Programs of Legitimization in the Classic Kerma Period”

The role of the Nubian Classic Kerma rulers in the interregional relations of the Second Intermediate Period is obfuscated by the nature of their socio-political formation. Based on over a millennium of indigenous Nubian cultural developments, the Kerma kings eschewed pharaonic forms of rulership despite their significant contacts with the Egyptian and Hyksos political systems. The absence of human images and texts produced by Kerma kings previously impeded direct comparison between Nubia and northern polities.

No images of the Kerma rulers were employed in their mortuary monuments. Kermans did not have a codified representational tradition of kingship; instead, rulers chose to negotiate their legitimization through alternate iconography that held local significance. Traditional Nubian schemes of decoration—lions, hippopotami, and scorpions—were used on a new scale of magnitude.

In support of this negotiation of power, Kerma kings curated the material record of spoils of war and trade, documenting changing relationships with Egyptian and Hyksos territories. No texts were created by the non-literate Kermans; instead they incorporated ‘exotic’ Egyptian material culture as a physical representation of their political acts. Figural Egyptian sculpture was interred with mass inhumations of Kerma subjects, symbolically demonstrating the power of the Nubian king on local and regional scales.

As Kerma rulers became more entangled in interregional politics, they actively defined their political power in contra-distinction to their northern rivals. Aspects of the Kerma political system are echoed in later Nubian kingdoms, whose rulers balanced representation as pharaohs with indigenous programs of legitimization.

11E. Talking about Gender-Related “Situations” in Our Workplaces (Workshop)

CHAIR: Beth Alpert Nakhai (University of Arizona)

Emily Miller Bonney (California State University, Fullerton), “Situations in the Academy”

This presentation explores the kinds of situations that women encounter in the Academy at all levels, from graduate school through administrative work.

Jennie Ebeling (University of Evansville), “Thoughts from a Woman in the Field Working with Women in the Field”

In this presentation, I will reflect on some of the situations I have encountered as a female co-director of an excavation in Israel working with a diverse team of mostly female team members.

Laura Mazow (East Carolina University), “Teaching, Research and Service in the University Hallway”

In this presentation, I will discuss some of the informal situations that women encounter in the academy that have impacts on job performance and advancement.

Megan Cifarelli (Manhattanville College), “Mommy Tracks and the Mommy Tax”

This presentation focuses on the ways that women manage to be extraordinarily resilient and innovative as we patch together lives and work, despite obstacles that are baked into masculinist institutions.

Stefanie Elkins-Bates (Andrews University), “A Professional Woman Working in Jordan”

For this presentation, I will share some of my experiences and challenges as a woman working in the field in Jordan.

11F. Papers in Honor of S. Thomas Parker in Celebration of the Publication of a Festschrift

CHAIR: Walter Ward (University of Alabama at Birmingham)

John Oleson (University of Victoria), “The Trajanic Auxiliary Fort at Haurra (Modern Humayma) in the Context of Recent Frontier Studies”

Tom Parker’s research on the Roman eastern frontier since 1976 has provided an enormous corpus of archaeological data, along with innovative and challenging historical interpretations. His important publications have been of great importance to my own excavation at Humayma and study of the Trajanic auxiliary fort there. The results of my research reinforce some of Parker’s interpretations and challenge others, but the process of decipherment of the archaeological and historical record from Roman Haurra has always benefitted from his scholarship and advice. This paper presents some of the latest analysis of the history, development, and purpose of the Roman auxiliary fort at Haurra, with reference to Parker’s archaeological work at Lejjun and Aila, and his relevant historical studies.

Andrew Smith II (George Washington University), “Nabataeans in the Hinterland of Petra”

A recently discovered, fragmentary Nabataean inscription from Bir Madhkur, Wadi Araba, in the hinterland of Petra, gives us a slight glimpse on the nature of Nabataean settlement activity in the region, particularly at Bir Madhkur itself. The significance of the inscription is elaborated in the Festschrift for Tom Parker. In this paper, rather than repeat what has been said about the inscription specifically in the context of its provenience, I will examine its wider context more fully. My intent is to give an overview of the archaeological evidence of Nabataean settlement activity in the hinterland of Petra, drawn largely from the survey data of the Bir Madhkur Project.

Sarah Wenner (University of Cincinnati), “Wadi Rumm in Arabia Felix: An Analysis of the Ceramic Vessels from the Villa and Bathhouse”

While Ptolemy includes Wadi Ramm (Aramaua) in his list of cities for Arabia Felix, implying its position within the regional trade network, archaeologists have largely considered the isolated site as only tangentially connected to the Nabataean economic centers at Petra and Aila. In the 1990s, the Wadi Ramm Recovery Project, directed by Dennine Dudley and Barbara Reeves, documented a Nabataean villa and bathhouse complex (the Eastern Complex), located on a small hillock abutting the eastern flank of Jebel Ramm and situated just east of a Nabataean Temple to Lāt (a water-providing deity). Dudley and Reeves postulated that this elaborate villa complex built in an arid environment had been constructed to impress travelers who passed through the region.

This paper explores the Wadi Ramm settlement’s evolving trade relationships with major Nabataean economic centers from the first–fourth centuries A.D. through the study of the complex’s ceramic vessels, analyzed by the present author. While the majority (ca. 75%) of sherds recovered from the complex were produced in Petra, the amount of ceramics imported from Aila increased as the port city’s pottery industry grew exponentially in the second and especially third centuries. The appearance of fourth century sherds from central Jordan suggest that, although Wadi Ramm was a small desert community, it was closely tied to dynamic trade-networks, first exclusively in southern Jordan and then eventually including central Jordan, until the site was abandoned in the late fourth or early fifth century.

Kenneth Holum* (University of Maryland), “The Economy of Caesarea Palaestinae: Demographics”

My article in the Festschrift for S. Thomas Parker, recently published, addresses the economy of ancient Caesarea Palaestinae from the perspective of structure and scale. In this new paper I intend to bring our dialogue on the ancient Roman economy forward another step by investigating the demography of Caesarea, with a focus on the productive activities of discernible individuals and groups within the population. The timeframe is the Late Antique or Byzantine period, and the evidence is partly literary and partly archaeological,

but consists mostly of the Greek inscriptions published in two large collections by Lehmann and Holum in 2000 and by Ameling, Cotton, Eck et al. in 2011. Needless to say, we lack meaningful statistics, but significant conclusions may be suggested nonetheless. Although industrial and craft production may be detected in both city and countryside, the data for the built-up urban center indicates a service economy driven by the demands of the church in attending to the needs of the poor, of the state in administering law and order, and of the elite of wealthy landowners in maintaining a spectacular lifestyle. Hence, from the microeconomic perspective of a single polis or city-state, it appears that the ancient economy can rightly be designated as “primitive,” in the sense of Sir Moses Finley, and that the classical polis was indeed much more a consumer city than a center of production

**Paper to be read in memory of Kenneth Holum*

11G. Israel’s Exodus in Transdisciplinary Perspective

CHAIRS: Lawrence Geraty (La Sierra University), Thomas E. Levy (University of California, San Diego), Thomas Schneider (University of British Columbia), and Brad C. Sparks (Archaeological Research Group)

Brad C. Sparks (Archaeological Research Group), “Scientific Chronology of the Exodus: Problems in Astronomy – Invalid Eclipse”

Date of the Exodus has been anchored by Egyptian king-list data and a solitary solar eclipse allegedly in Nineveh in 763 B.C. Sothic dates have been progressively eliminated, now all but entirely rejected in Egyptology. Claims the Assyrian eponym list recorded an eclipse in 763 were first made in 1867, by ANE scholars, not astronomers, in a literary not scientific or astronomical journal. The 763 eclipse could not have been accurately retrocalculated in 1867 – before electronic computers and the 1939 discovery earth’s rotation slows erratically and unpredictably. Accuracy has been improved (Stephenson 2017) but still inconclusive if even relevant.

Relevancy of the 763 B.C. eclipse is questionable given the original 1867 non-astronomer publication considered alternate dates over a 200-year range before settling on the preconceived 763 date – factors never mentioned subsequently. Alternate dates are ignored. The 763 eclipse has been quietly set aside by astronomers (e.g., unmentioned by Stephenson 2017). NASA has posted contradictory website claims differing by 1,000 km in location, now currently denying totality at Nineveh.

Astronomers never validated a 763 B.C. Nineveh eclipse in full peer-reviewed investigation, but it has been criticized or rejected by leading astronomer eclipse experts such as Newcomb, who called it the “supposed eclipse” and suggested the darkness was not an eclipse – analyses unmentioned in ANE literature.

The 763 B.C. eclipse is an outdated product of 19th century non-astronomer Biblical minimalists who used it in acrimonious debate to lower accepted Biblical-ANE chronology by 42 years. Radiocarbon dating, invented in 1947, is not involved.

Alison Gruseke (Yale University; General Theological Seminary), “Throw Him in the River! A Childist Interpretation of Exodus 2 in the Context of Exodus, the Moses Story, and Modern Exodus Studies”

The book of Exodus has served as the site of multiple lines of interpretive engagement since the beginning of critical scholarship, from ongoing discussions regarding proto-Israelite origins in Egypt, as reported in the Bible and newly supported by archaeology, to debates among American, European, and Israeli scholars, whose competing models for Pentateuchal development and Israelite history have all but demolished the notion of ‘assured results.’ Depending on one’s allegiances, this diversity of method and opinion is either a destructive or a salutary development.

This paper views old ground through new glasses, interpreting the story of Moses’s and Miriam’s childhoods via childist interpretation (Parker 2013). Such a move involves Geertzian ‘thick description’: it analyzes the text of Exodus 2 by lacing children and concepts of childhood into the ‘webs of significance’ in which we encounter them in biblical narratives. The term ‘childist,’ while new

to biblical scholarship, offers promising avenues for understanding by, on the one hand, acknowledging the central and long-recognized value of procreation to the Bible's structure and ideology while, on the other hand, probing the heretofore lightly examined role of children in Israelite society and biblical narrative. The paper explores the contribution of childhood specifically to the Exodus and Moses stories—extending from Exodus through Deuteronomy (Schmid 2014)—and to its role in the Bible's construction of ancient Israelite identity.

John Gee (Brigham Young University), “The Canaanite Gods El and Yah in Egypt”

A number of Canaanite deities were brought into Egypt during the 18th Dynasty, notably Reshef, Ba'al, Anat, Astarte, and Qudshu. I will discuss new evidence for the importation and attestations of both El and Yah into Egypt in the 18th Dynasty and the implications of their presence for the Exodus.

Caterina Moro (Sapienza University of Rome), “Power and Disasters: The Plague of Earthquake in Artapanus's Narrative of Exodus”

This paper discusses the Exodus story as narrated by the Jewish Hellenistic historian Artapanus, in particular his manner of dealing with the “signs and wonders” performed by Moses in Egypt. His narrative includes an earthquake at night, otherwise almost unattested in Jewish tradition, that substitutes for the plague of the firstborn as the final and indiscriminate catastrophe. In biblical tradition earthquakes are a sign of the power of God or his manifestation in the Temple. In Egyptian religion the earthquake is connected with the ascent to heaven of a deceased king (as in the Pyramid Texts), with the god Seth, with the power of the enthroned king (as in the First Hittite Marriage Stele by Ramesses II), or with the menace of the chaos that can overwhelm Egypt in the first days of the year (as in Brooklyn Papyrus). The story by Flavius Josephus (*Ant* 9.223–225) where King Uzziah tried to offer incense and became leprous while the Temple was riven by an earthquake, and the Passion according to Matthew (chapter 27) when Jesus dies after an earthquake, hint to the existence of a connection between earthquake and sacred kingship also in Jewish tradition. In Artapanus's story, which combines Jewish, Greek, and Egyptian lore, the final earthquake is a token of legitimization of Moses as king of Egypt (see *Ant* 2.232–233; Eusebius *Praep. Ev.* 9.27.19) and, as a representative of the divine law, as ruler of the cosmos (*Exagoge* 68–88).

11H. Antioch—A Legacy Excavation and Its Aftermath

CHAIR: Alan Stahl (Princeton University)

Andrea U. De Giorgi (Florida State University), “Antioch on the Orontes: the Expedition Records”

Antioch on the Orontes hardly needs an introduction: it was one of the sixteen Antiochs founded by Seleukos Nikator, virtual capital of the Roman empire in the third century, host to a vibrant intellectual community, locus of countless fierce Christological debates, seat of the count of the east, and hub of the Islamic frontier. For all of its fame and glory, however, the city's topography remains conjectural. Indeed, this lacuna was the main impetus for the 1932–1939 American excavations of Antioch. Through the lenses of the official correspondence, my paper will highlight the aims, achievements, and shortcomings of a remarkable constellation of scholars and institutions—namely Princeton, les Musées de France, Worcester Art Museum, Baltimore Art Museum, and the Fogg Art Museum—as they grappled with one of the most complex and indeed elusive cities of antiquity. Filed under “fiasco” by some and extolled by others, these seminal excavations indeed invite re-consideration; how the angle of the project's records can be harnessed to offer novel interpretative frameworks is, in particular, the thrust of my presentation.

Agnès Vokaer (Université Libre de Bruxelles), “The Late Roman Pottery from Sector 17-O in Antioch”

This contribution will present the Late Roman pottery excavated in sector 17-O and preserved at the Princeton University Art Museum. Although the

material was sorted in the field at the time and only a selection was brought back to the United States after the excavations ended, the corpus nevertheless provides a good insight into the main categories of ceramic used at Antioch between the fourth and the seventh centuries A.D.

Fine wares consist in Phocaeen Red Slip, Cypriot Red Slip, and African Red Slip, while cooking ware is represented by the typical northern Syrian “Brittle Ware.” The few amphorae preserved are the LRA 1, LRA 4, several types of bag-shaped amphorae, and the Sinope amphora. This corpus is of importance as, besides the publication of the Red Slip Wares by F. Waagé in 1948, nothing was known of the material culture of the ancient capital of *Syria Prima*. It corresponds to what one would expect in a major capital at the center of an economic crossroad and shows strong similarities with the material of Apamea-on-the-Orontes, capital of *Syria Secunda*.

Katherine Eremin (Harvard University, Art Museums), Elizabeth LaDuc (University College London), Elizabeth Molacek (Harvard University, Art Museums), Patrick Degryse (KU Leuven-University), “New Research on a Tethys Pavement at Harvard University”

Harvard University is in possession of a large-scale mosaic pavement depicting the sea goddess Tethys. Excavated during the 1938 season, the pavement was originally located in sector 13-R in what is said to be a bathing pool once covered by water (Bath F). Although rare in Greek and Roman art, Tethys is a popular motif at Antioch due to her watery connotations and appears surrounded by fish in various sea-like settings. Now located at the Harvard Business School, the pavement is one of the largest to survive from the site, but has received little scholarly attention. Previous art historical research has focused on the pavement's iconography and stylistic qualities with no close examination of materials and their relationship to other Antiochene mosaics.

This paper presents current research on the Tethys pavement, focusing on a technical analysis of the glass and stone tesserae. Tethys is just one of the many motifs at Antioch that signifies the importance of water in this city whose wealth and prosperity relied on its site near rivers and the sea. While much has been made of the recurrence of marine motifs in Antiochene pavements, less study has been devoted to *how* these marine themes are depicted in the mosaics themselves, using specific materials or colors. This study examines how the optical effects of water are represented using stone and glass tesserae. With special attention to the glass tesserae, the project constructs a fuller history of the mosaic's history, both ancient and modern.

Kristina Neumann (University of Houston), “Counting Change at Antioch-on-the-Orontes with Digital Numismatics”

Ancient and modern sources have long characterized Antioch-on-the-Orontes as a capital under the Seleucid and Roman empires. Understanding the evolution of the Syrian city in this role—especially in its regional and global contexts—has been more difficult due to perceived limitations within archaeological and textual evidence. This paper discusses a study that capitalizes on methods and tools offered by the rise of big data and digital humanities to measure change at Antioch through one of the most quantifiable resources available: coins. Where, when, and in what quantities Antioch's coins appear in the archaeological record can speak to regional and empire-wide limits in their circulation and movement, as well as to the activity and policies of the different authorities issuing them.

Over 100,000 coin finds dating from the Hellenistic Age through Late Antiquity have been gathered from the original 1930s excavation of Antioch, 80 other excavations, and 100+ hoards and uploaded to the programs Google Earth, Tableau, Circos, and Omeka. These digital platforms provide interactive and intuitive spaces to map and analyze the evolving distribution patterns of civic, provincial, and imperial coins minted at Antioch. Such visualizations reveal significant fluctuations in Antiochene coin movements over space and time, which can be attributed to the different authorities and people making use of the city. Having this standard by which to measure change provides a better contextualization of other evidence for Antioch and leads to more nuanced interpretations about its role in the ancient world.

Ayse Henry, (Bilkent University), “An Antiochene Site through New Antiochene Perspectives: The Site of St. Symeon the Younger”

The last decade has been underlined with a renewed interest on the archaeology of Antioch and its immediate territory. In addition to the active fieldwork in and around the city, the review of the textual sources and Princeton excavation archives has enabled a fresh perspective on the transformations of the city throughout the Late Antique period and beyond. As the perspectives concerning Antioch change, it has also become necessary to contextualize the studies related to Antioch through fresh eyes.

On top of the Wondrous Mountain, located to the south of Antioch-on-the-Orontes (Hatay/Turkey), rises a spectacular architectural complex built in the mid-sixth century for Symeon the Younger. The site remained active as a monastery at least until the fourteenth century. The building complex was not included in the Princeton excavation program but was first excavated around the same period (1932–1938) under the direction of J. Mécérian. Throughout its research history, however, the regional context of the site and the role of Antioch for its foundation were ignored. Additionally, large sections of medieval phases and structures were removed right from the beginning as the recently published photos from Mécérian excavations indicate. In sum, the present paper will discuss the significance of the site for Antioch during the sixth century and follow the developments on the site parallel to the postclassical history of the city as much as the evidence permits.

111. Encoding Data for Digital Discovery I

CHAIRS: Amy Gansell (St. John's University) and Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University)

David Falk (University of British Columbia), “Evaluating Chronological Hypotheses by Computer Analysis in Light of Low and Middle Chronological Frameworks”

At the poster presentations of the 2016 ASOR Annual Meeting, Groundhog was introduced as a digital humanities project designed to validate specific questions regarding chronology. This work establishes a new methodological baseline by showing that chronological theories are indeed falsifiable when placed in a broad historical context. Groundhog has the ability to take king lists and synchronisms from across the ancient Near East and apply pattern-fitting algorithms to show whether such hypotheses could be valid. Chronological hypotheses can finally be tested in accordance with the interdependent nature of the known data.

Prior to the Groundhog project, the formulating of new chronologies had escaped scientific scrutiny because of the difficulties inherent to negating chronologies on the basis of internal consistency. The consistency checking method used with Groundhog has greatly benefited from the addition of new data which has increased the accuracy of this method so that the method now shows great promise in determining whether a set of theoretical frameworks is possible as well as determining simpler chronological questions that could decide between two proposed dates. This paper will give a brief overview of the technology behind Groundhog, then it will announce the results from several validity tests. Finally, this paper will also suggest the long-term viability of the Low and Middle Chronologies in terms of each framework's merit to produce internally consistent results.

Susanne Rutishauser (University of Bern), Sergio Alivernini (Academy of Science of the Czech Republic), and Edoardo Zanetti (Ludwig-Maximilians-Universität München), “The Rivers of Mesopotamia—Reconstruction of the Hydrology of Sumer”

The dense canal system in southern Mesopotamia is well visible on remote sensing data. However, not only modern canals but also relict canals and palaeochannels can be detected based on satellite imagery data.

The aim of this project is to bundle all available information for a reconstruction of the hydrology of Sumer. The results of previous studies about this topic will be digitized and integrated into a geographic information system (GIS). In collaboration with Sergio Alivernini (Prague) and Edoardo Zanetti

(Rome/Munich) information about ancient canals and former river beds from written sources will be analyzed and integrated into a database. Additional information about the hydrology of Sumer will be provided by the distribution of settlements. The analysis of historic and modern satellite imagery data will give further evidence for a reconstruction of the hydrology of Sumer.

The results of this project will be published online as freely available interactive web maps. The database and basic GIS data will be made available under a Creative Commons License.

Adam Anderson (University of California, Berkeley), “Network Analysis for Ancient Archival Reconstruction”

Archival studies have a proven track record of providing the necessary organizational framework ideal for large bodies of texts found in situ under controlled excavations. The question I pursue here is how best to integrate the ca. 5,000 unprovenanced Old Assyrian texts into an archival frame of reference. Because the majority of these tablets come from illicit excavations, they pose greater difficulties when one attempts to situate a text or group of texts into the existing archival framework.

In this paper I introduce new methods, including supervised and unsupervised disambiguation using network analysis, designed to re-establish contextual relations between the unprovenanced tablets and the known archives. Following the discussion of my methods, I then examine the role that network analysis can play in analyzing known archives and in the ongoing process of reconstructing partial or incomplete archives and dossiers from unprovenanced texts. By employing a combination of methods, including textual analysis and network analysis, I retrace the interrelated family networks, linked via kinship, marriage, occupation, and social distance. In doing so I am able to exploit observable variables (i.e. chronological, geographical, and social) for the purpose of entity disambiguation and archival reconstruction. Once the textual boundaries of the archives and dossiers are delineated, we are able to see how these groups of texts are interrelated, allowing us to move beyond a single archive's confines to follow individuals chronologically and geographically, as attestations of these entities appear across multiple archives and dossiers. Lastly I will explain how the combination of these approaches allows us to improve transparency and accessibility for greater interaction in archival reconstructions.

Katrien De Graef (Ghent University), “eSippar: Possibilities and Limitations of Prosopography in the Study of Old Babylonian Society”

This paper investigates the possibilities as well as limitations of prosopography within the study of Old Babylonian economy and society. Being incredibly abundant with day-to-day administrative, legal, and economic sources mentioning all sorts of agents, the prosopographical research approach is preeminently suitable to study the Old Babylonian period in general and gain insight into its social structures and processes. The set-up, aim, functioning and possible future applications of SiProsOB (Prosopography of Old Babylonian Sippar), a relational database developed in 4D at the Assyriological research unit of Ghent University, will be presented as an example.

By collecting all persons mentioned in our sources (more than 8,500 texts), defined chronologically (Old Babylonian period) and geographically (Sippar area), in a relational database, we were able to 1) identify various persons mentioned as one and the same actual (historical) person, 2) reconstruct their genealogy, and 3) define their roles within the society.

Of particular interest is the connection between prosopography and microhistory, viz. the minute analysis of apparently insignificant events, objects, and/or persons in order to understand the complex relationships tying individuals into the fabric of a society. The ultimate objective of our prosopographical database is to gain insight into the social structures and processes determining everyday social life.

Andrea Berlin (Boston University), “The Levantine Ceramics Project”

The Levantine Ceramics Project (LCP; www.levantineceramics.org) is an open access, crowd-sourced web application for archiving, using, and communicating archaeological data. The LCP is focused on ceramics

produced anywhere in the Levant, meaning the modern countries of Turkey, Syria, Cyprus, Lebanon, Israel, Jordan, and Egypt, dating from the Neolithic era (ca. 5500 B.C.E.) through the end of Ottoman rule (ca. 1920 C.E.). On the LCP, anybody may submit, search, and compare data on ceramic wares, petro-fabrics, shapes, types, and petrographic analyses. All data is linked to contributor(s) and original publication(s). Information can be edited, removed, or re-arranged, making the LCP an archive as well as a research tool.

The LCP is intended to be one solution to a baked-in archaeological Catch-22: the need to integrate new data with older material, and the concomitant need to re-evaluate that older material in light of new data. It is also very purposefully designed to be as open, accessible, and simple as possible. Most digital initiatives constructed to date are static repositories with individual gatekeepers. They enshrine what is known but do not function as active agents for scholarly work. By putting diverse data and specialists side by side, the LCP is designed to grow and change along with the field and its practitioners, and to continue connecting scholars to scholarship.

Marine Beranger (École Pratique des Hautes Études, Paris Sciences et Lettres Research University; Collège de France), “A New Glance at the Old Babylonian Letter-Writing Practice through Digital Technologies”

Letter sending was invented at the end of the third millennium B.C. in Mesopotamia, but the practice became much more widespread during the Old Babylonian Period (2022 B.C.–1595 B.C.), when letters were written for new communicative purposes by an increasingly literate population. This intensification of the use of writing after the collapse of the last Sumerian empire (2022 B.C.) is also revealed by the emergence of private (or “family”) archives found in residential areas, and by the diversification of the types of documents written. The collapse of the Sumerian central administration also allowed regionalisms to fully express themselves, so that differences in the manner of writing can be seen from one city to another.

Today, a corpus of nearly 7,000 letters written in Mesopotamia during the Old Babylonian period, coming from around 30 archaeological sites, has been edited. These documents, written in the Akkadian language, were produced during four centuries in a wide variety of geographical and socio-linguistic contexts. During this talk, I will show how current technologies (D. Charpin’s ARCHIBAB database and website, TEI/XML, and the French software TXM) can help us handle this large amount of data, in order to compare the scriptural standards used in the different Old Babylonian cities and estimate the level of literacy required to write a letter at that time.

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

CHAIR: Andrew J. Koh (Brandeis University)

Sahar al Khasawneh (Yarmouk University), Andrew Murray (Aarhus University), Kristina Thomsen (Technical University of Denmark), Dominik Bonatz (Freie Universität Berlin), Wael Abu-Azizeh (Maison de l’Orient et de la Méditerranée), and Mohammad Tarawneh (Al-Hussein Bin Talal University), “Dating a Near Eastern Desert Hunting Trap (Kite) Using Luminescence Rock Surface Dating”

This study reports on the first radiometric dating applied to a kite stone structure in Jordan. The study applies the luminescence rock surface dating technique to three rock samples collected from the Jibal al-Gadiwiyt kite structure in the southeast of Jordan. The sampling location, part of the kite enclosure, is in the form of a 125 cm deep hole lined with long slabs at the base and with stacked cobbles above. The pit had been back-filled by natural sediment deposition after abandonment. Three rock samples were collected from the site, and two sediment samples were taken in close association with two of the rocks. A further 18 sediment samples were collected from the stratified infill. Using quartz fast-component dominated optically-stimulated luminescence (OSL) signals, it proved possible to define a rock burial age of ca.10 ka by examining the profile of luminescence with depth into the rock surfaces. Various light exposure events (including the most recent following

archaeological excavation) could also be identified. The direct radiometric dating of this kite argues for a construction ca.10 ka ago, with no evidence for use beyond ca.1 ka after building.

Shawn Bubel (University of Lethbridge), “Phytolith Analysis of Sediment Samples from Tel Beth-Shemesh”

Excavations at Tel Beth-Shemesh have yielded rich assemblages of cultural remains reflecting the past lifeways of the people that lived there from MB IIB through to its final destruction and abandonment in 635 B.C.E. Among these remains are silica phytoliths of plants, which were often found in significant quantities in the site matrix and showed little diagenesis because of preservation conditions. Bulk samples were used to experiment with wet, dry, and non-ashing laboratory procedures. Modern plant samples of olive (*Olea*) and grape (*Vitis*) were prepared in order to expand comparative resources. Cereal grasses were the most prevalent phytolith forms identified at Tel Beth-Shemesh, their contexts denoting areas of processing and use of particular crops. Animal penning also occurred on site, evidenced by superimposed sediment laminations containing grass phytoliths and dung spherulites. These results increase our spatial and temporal understanding of the people that lived at Tel Beth-Shemesh.

David Ben-Shlomo (Ariel University), “The Production of Cooking Pots in Iron Age II Judah”

Recent petrographic and chemical studies of Iron Age pottery from Jerusalem and other sites in Judah indicate a specific clay selection and potters’ technology in the production of cooking ware. The potters during this period seem to avoid the use of Moza clay with dolomite sand, a clay common in the Judean hills, for the production of cooking pots. The cooking pots were usually made from non-calcareous clay (mostly derived from terra rossa soil) and were tempered with calcareous sand and/or quartz. Cooking wares imported from outside the region of Judah also occur. Several aspects of this production will be examined: Were there specialized production centers for the cooking pots in Judah and its surroundings (one possibly at Jerusalem)? Can we see a major technological shift towards quartz tempered cooking pots in the Iron Age IIB–C? Quartz tempered cooking pots dominate the cooking ware assemblage in the southern Levant from the Hellenistic period onwards. Compositional analysis and technological aspects of pottery and cooking ware from several sites will be examined, in particular at Jerusalem (the City of David, Ophel, and Jewish Quarter excavations), Tel Moza, Tel Hebron, Khirbet Yatir, Khirbet Qeiyafa, and Sochoh, as well as Tel Malhata, Horvat Uza, and Horvat Qitmit. The different phases of the Iron Age II will also be compared as far as possible through to the sixth century B.C.E.

Ortal Harosh (The Hebrew University of Jerusalem), “Pots and Potters—Mimicking Ceramic Production in Antiquity”

Artifacts reflect the manufacturing organization which is found within the social, political, and economic systems of society. Specialization is an important component in this process—it is a regular, constant, distinct, and sometimes institutionalized system. One of the most common aspects of specialization is the identification of a large amount of standardized products that are interpreted as part of single or limited manufacturing units. Attempts to define standardization in ceramic production are limited and primarily based on typological comparison. This paper examines new parameters for ceramic typology, together with the variability of the learning processes in ceramic production, as part of an integrated experimental archaeological study.

Students in ceramics produced the neck of a storage jar repeatedly for several days following a strict protocol. All items produced were 3D scanned in order to extract accurate shape parameters for classifying the items based on their morphology. This classification relies on morphological parameters measured from the model as the degree of curvature in a segmented area. A cluster tree is generated and provides a hierarchical method to investigate the groupings of the data over various scales. Different statistical methods, such as cluster analysis, enable statistical comparison between the archaeological (storage jar assemblages from the Late Bronze Age and Iron Age) and other

experimental data (water storage jars from India). The paper will focus on standardization from three directions: the variability within a ceramic 'type,' the individual potter's style, and the potters' learning curve.

Adam Prins (Durham University), "Recombinant Archaeology: Retroactive Digital Replacement of Removed or Destroyed Archaeological Remains"

The destructive and non-repeatable nature of archaeological fieldwork necessitates creative ways of visualizing and presenting archaeological remains. Previously this was accomplished using speculative artistic reconstructions, but these are often based loosely on archaeological evidence and data. With the development of accurate and comprehensive spatially-controlled 3D documentation, we now have the capacity to automatically generate millimeter-accurate photorealistic models and plans that incorporate archaeological features from different seasons and stages of excavation. Good archaeological fieldwork comes down to producing accurate and usable documentation, but it is often a struggle to recombine and analyze elements that were excavated separately. Effectively eliminating the practical challenges of spatially collating and presenting archaeological data, recombinant archaeology enables us to visualize removed elements alongside existing features and more naturally study, measure, and associate stratigraphic relationships between architectural features, in situ finds, and non-contemporaneously excavated layers.

Bradley Erickson (University of North Carolina at Chapel Hill), "Seeing Is Believing: Experiencing Ancient Light through the Reproduction and Digitalization of Byzantine Glass Oil Lamps"

With the rise of dedicated makerspaces on campuses throughout the United States, students and professors alike are being provided with workspaces to study and collaborate in hands-on research. This paper will explore one such project involving the modeling, machining, testing, and digitization of the light output of a Byzantine bronze polycandelon and a series of six Byzantine glass oil lamps. The goal of this paper is twofold: first, to recreate possible lighting environments within ancient basilica-style synagogues and churches; and second, to develop a methodology for experimentation through the fabrication of ancient artifacts.

Concerning the specific methodology of this project, the bronze polycandelon fabrication was based on an intact polycandelon recovered from a basilica-style synagogue at Sepphoris in the Galilee of Israel. The reproduced polycandelon was designed in Adobe Illustrator, laser-cut from ¼ in acrylic, and spray-painted with a bronze finish to imitate the material of the original. The glass oil lamp reproductions were based on an intact oil lamp recovered from a basilica-style Byzantine church in the Decapolis city of Hippos-Sussita. The reproduced lamps were designed in Blender 3D, printed with a resin-based 3D printer, and blown from glass in a scientific laboratory. The lamps were then placed in the polycandelon, filled with oil, set with wicks, and lit. A lux meter was then used to test the light output of the light fixture. The light data were placed into a series of 3D models to demonstrate the extent to which light would travel and affect an individual's sight.

12A. Archaeology of Arabia III

CHAIR: Jonathan Mark Kenoyer (University of Wisconsin–Madison) and Steven Karacic (Florida State University)

Björn Anderson (University of Iowa), "Achaemenid Arabia: the Persian Perspective"

Herodotus's account of Achaemenid satrapies and tax structures is the most comprehensive source of information about the organization of the Persian *dahyāva* (subject lands). However, scholars are very skeptical about the reliability of Herodotus in relation to the Persian Empire, and rightly question the quality of his sources. This is especially true for Arabia, a region inaccessible to outsiders and poorly known in antiquity. Herodotus is a problem for the entire Persian Empire, but he seems especially unreliable in regard to Arabia.

This paper explores Achaemenid Persian Arabia from the Persian perspective, seeking to balance the narrative of Herodotus with textual and

visual evidence from the Persian heartland: inscriptions, administrative documents (especially the Persepolis Fortification Tablets), and imperial reliefs that depict personifications of the subject lands. Additionally, the paper examines the few scraps of archaeological evidence from Arabia that may speak to Achaemenid involvement there.

Persian and Greek sources give very different accounts of Arabia. Images of a remote, separate, or somehow specially treated Arabia are only seen in the Greek sources, and are likely the product of an intermingling of report, rumor, and imagination. From the Persian perspective, Arabia, like all the subject lands, is essential and thematically central; there is no indication that it has any special status (positive or negative). It is simply part of the empire, a critical element of the King's narrative of harmonious order and divinely-appointed legitimacy.

Alexander Nagel (Smithsonian Institution), "The Afterlife of a Qataban: Recent Research on South Arabian Archives and Material Culture from Yemen in Washington, D.C."

A corpus of alabaster sculptures, inscriptions, and archival documentation related to the modern exploration of sites in the Wadi Beihan in Yemen is housed today in the Smithsonian Institution and in other research archives and institutions in Washington, D.C. In recent years, a team has begun revisiting and studying this corpus with the aim to understand the implications of removing materials from the Wadi Beihan, and to improve our knowledge of the Qataban cultures of the late first millennium B.C.E. and the first centuries of the first millennium C.E. This paper will introduce the first results of a series of ongoing projects that involve multidisciplinary approaches and collaborative international research initiatives. The aim of the paper is to introduce (1) new technical work on the role of polychromies in ancient South Arabia, (2) to outline current challenges and research trajectories when working on the preservation of Yemeni heritage from Washington, D.C., and (3) to find ways to contextualize the current narratives of preservation efforts in Yemen in the wider Middle Eastern region and beyond.

Julian Jansen van Rensburg (Freie Universität), "Ancient Agricultural and Water Management Systems on the Island of Socotra"

Situated at the entrance to the Red Sea, the island of Socotra features prominently in historical texts as an important source of aloes, dragon's blood, and incense. The intensive cultivation of these products, particularly during the first centuries B.C./A.D., has been suggested as the reason for an extensive set of walls and enclosures found across the island. However, little has been done in terms of understanding how these potential water management and agricultural systems would have functioned. In this paper, I demonstrate how recent work using remote sensing of satellite imagery together with the evidence from archaeological survey and excavation, paleo-climatic and environmental studies, and historical accounts has allowed us to model the layout and potential phases of development of these wall systems and their associated settlements. The results of this work are revealing how the walls are concentrated within those paleo-climatic and environmental zones in which aloes, dragon's blood, and incense thrive. Additionally, the presence of ancient water control systems, found throughout the island, suggests that water management played an important role in agricultural intensification and in sustaining a large population of what were presumably seasonal workers visiting the island. The significance of this research is twofold. Firstly, it allows us to shed light on Socotra's role within the ancient incense trade, a role that has until now been mainly based on historical accounts. Secondly, the mapping and analysis of these walls is allowing us to untangle the complex palimpsest of activities that have occurred in this landscape over time.

Karol Juchniewicz (Polish Centre of Mediterranean Archaeology of the University of Warsaw), "Aynuna Archaeological Project – Some Considerations on the Pre-Islamic Coastal Settlement in Northwestern Arabia"

Since 2014 a Saudi-Polish archaeological mission in Saudi Arabia has been carrying on excavations in Wadi Aynuna, in northwestern Arabia on the

coast of the Red Sea. The site was a Nabataean port linked by a caravan road with Petra, and was most likely identical to Leuke Kome of the Periplus and other ancient sources. Whatever its name was, however, the significance of Aynuna as major settlement and trade facility both regional and international is of great importance.

The site consists of two major units. One is a small town on top of a fossil coral reef, the other a complex of storehouses on a terrace above the wadi. The Saudi-Polish excavations have focused on the latter, provisionally called Lower Aynuna. In its main phase of occupation, it served as a trade station where goods brought by ships were loaded on camels and transported by caravans to markets in Petra and other cities of the region.

Excavations have so far confirmed at least two main phases of occupation. The first one can be preliminary dated between first and fourth centuries A.D., while the second ends probably in the end of seventh century A.D. This period is less known throughout Arabia, and is usually described as a “dark age.” Archaeological data from Aynuna provide some new information on what happened in this particular region during the long Late Antiquity as well as shed some light on an even lesser-known issue, the archaeology of pre-Islamic coastal settlements in western Arabia.

Ruth Young (University of Leicester), “Memory and Belonging in the Bat Oasis, Oman”

The mud brick buildings that make up the oasis (village) of Bat are tangible reminders of ways of life that characterised rural, interior Oman for centuries up until Sultan Qaboos acceded to the throne in 1970. Key aims in his early reign included the modernization, westernization, and unification of his country. Carrying out building analysis, excavation, and interviews as part of a field project in Bat (2014–2016) has allowed the development of understandings of life in rural villages prior to the 1970s, and shown how important the extant mud brick remains are in terms of memory and belonging. Using place as an analytical framework, this paper will explore the ways in which abandoned, derelict structures provide a strong anchor (and prompt) for individual and social memory, as well as contributing to a sense of belonging for those who formerly lived in them.

12B. Material Culture and Identities in Eastern Mediterranean II

CHAIRS: Helen Malko (Fashion Institute of Technology) and Serdar Yalcin (Macalester College)

Courtney Innes (University of British Columbia), “The Syncretic Synagogical Syntax: The Hammat Tiberias Synagogue”

The tumultuous aftermath of the Second Temple’s destruction gave rise to the development of synagogues. Likewise, Tiberias became the epicenter for third to fourth-century Jewish culture and politics in Palestine. An assessment of the Hammat Tiberias synagogue is a case study of Jews constructing material culture to reinforce their self-identity whilst adapting to a dominant Greco-Roman influence.

By employing spatial syntax analysis, this paper will examine space usage, access points, visual culture, and the location of architectural features to elucidate the nuances of the messages embedded in the synagogue’s archaeological remains. The analysis will demonstrate that the building’s layout and appearance syncretize subtle and traditional architectural elements, which convey Jewish liturgy and identity, with novel architectural features and “outlandish” Hellenistic imagery. The synergy of the binary themes operates to express monumentality, focus on memory, and strategic allegiance to Roman authority while fostering a Jewish theology and identity in society. The evolution in synagogical architectural design, physical structure, and the incorporation of inscriptions, material culture, and various fixed elements, directly corresponded to the liturgical development of Judaism.

The synagogue’s built environment engendered a strong devotion to Jewish doctrinal tenets, whilst prominently integrating seemingly antithetical influences from Greco-Roman culture. This progression accentuated the desire of the resident population to perpetuate both their cultural and religious

identity as they tightly bound it to the memory of the Jerusalem temple. Between ardent theological and blatant secular Hellenistic displays, the Hammat Tiberias synagogue is monumental in its distinctiveness and embodiment of a non-monolithic Jewish community.

Nicholas Al-Jeloo (University of Melbourne), “Shifting Identities: Conceptualizing Assyria and Assyrian Identity between Antiquity and Late Antiquity”

Whereas the traditional scholarly consensus has come to rule out the persistence of Assyrian identity beyond the fall of their empire in 609 B.C., evidence suggesting the contrary has been surfacing in the last two decades, gaining popularity among researchers. Depictions in reliefs of people identified as Assyrians, as well as textual mentions of a satrapy of Assyria, are found throughout the Achaemenid period in both Persian and Greek sources. This continues through the Hellenistic period and, by the Parthian period, we begin to observe the emergence of client kingdoms where the ancient Mesopotamian gods including Ashur, the head of the Assyrian pantheon, are still worshiped. With the ascendance of Christianity in Mesopotamia during Sassanian rule, there are a number of shifts that occur in regards to the Assyrian identity.

This paper will briefly discuss the evidence for a survival of Assyrian identity in the textual and archaeological record leading to the late antique period, as well as the shifting of this identity to Syriac Christianity, as also illustrated in contemporaneous Syriac texts. It will also deal with the survival of an Assyrian territorial identity, both within the context of a Syriac Christian archdiocese, as well as that of the provincial administration of the Sassanian Empire. Significantly, the paper will draw upon evidence from a variety of late antique and early Islamic sources that support a continued sense of Assyrian cultural and territorial identity among inhabitants of northern Mesopotamia, thereby contributing to scholarship supportive of notions of Assyrian survival and continuity.

Federica Gigante (Warburg Institute, SOAS University of London), “Cultural Appropriation in the Shaping of Ottoman Identity”

My paper will examine the deployment in the Ottoman world of the artistic and material output of pre-existing and conquered civilizations in the fashioning of an ‘Ottoman’ identity. Focusing on a period spanning the 15th to the 17th centuries, my paper will analyze the Ottomans’ relationship with the objects that surrounded them in order to illustrate their assimilation and reinterpretation of the visual and material culture of other civilizations—whether Mamluk, Seljuk, or Byzantine—in formulating and promoting their own cultural identity. It will both explore the ways in which the Ottomans incorporated objects of divergent provenances into their surroundings and demonstrate how such objects were used alongside more properly ‘Ottoman’ artifacts in shaping an emergent narrative of Ottoman identity.

Drawing on a variety of sources ranging from written inventories to extant objects, this paper will present for the first time the findings of a research fellowship at the Research Centre for Anatolian Civilizations (RCAC) of Koç University in Istanbul. It will demonstrate how these items were exhibited in prominent spaces in private houses, were used in mosques and religious foundations during public ceremonies, were brought on campaign to battlefields, and were even sold as ‘Turkish’ on the European market. In its innovative analysis, my paper will call into question the very concept of ‘Ottoman’ art, as the term is understood in modern scholarship, and will bring to light the fluidity of the material culture of the Eastern Mediterranean in the late medieval and early modern period.

Ebru Fatma Findik (Mustafa Kemal University), “Daily and Luxury Items among Turks and Greeks in Lycia during the Ottoman Period”

Demre is located within Antalya Province in the Mediterranean region on a plain surrounded by mountains to the north and the Myros River to the northeast. Myra, as it was called in ancient times, was the metropolis of the region of Lycia in the Byzantine period (between the fifth and 15th centuries). The city owes its importance and fame to St. Nicholas, who was a bishop in Myra in the fourth century. After the area was conquered by the Ottomans,

it remained a Christian village and migrant settler Turks lived in the villages within walking distance to the settlement in 19th century. The settlement had religious, commercial, and cultural relationships with the Turkish villages in the area, Antalya, Finike, Kaş, and Castellorizo, during the Ottoman period.

In this paper, archaeological findings from the excavations in the St. Nicholas Church (Santa Claus Museum) in the center of Demre, which have been carried out since 1989, and the results we have obtained from examinations in the area and Castellorizo Island will be discussed. There were socioeconomic and cultural relations between the Turks and the Greeks who lived in the area until the population exchange in 1923. Archaeological finds from the excavations enlighten the history of the settlement as well as provide important data in relation to the daily lives of both communities. This research is an interdisciplinary study in the social sciences, using many fields such as archaeology, art history, ethnoarchaeology, history, and anthropology.

12C. Archaeology of Egypt

CHAIR: Krystal V. L. Pierce (Brigham Young University)

Karolina Rosińska-Balik (Jagiellonian University in Krakow) and Joanna Dębowska-Ludwin (Jagiellonian University in Krakow), “Reconstructing Early Egyptian Mortuary Architecture”

The last decades of research—especially in the Egyptian Deltaic region—have significantly enriched our knowledge of ordinary people’s life and death. After years of focusing on Pharaonic times new field projects have shed more light on the early period of Egyptian civilization, when crucial social changes leading to state formation took place. In this presentation we will focus on the Delta and its early mortuary practices with special interest on their three-dimensional aspect—architecture. Our basis for the project consists of original materials from Tell el-Farkha, which preserved a series of burials dated from the late Predynastic to the Old Kingdom. Data collected at the site comprise of a variety of mud brick tombs and simple pit burials, which form a nearly complete overview of an early Deltaic society. Thanks to characteristic local earth conditions much of the organic material used for construction of the graves was preserved, which proves that ancient building strategies of the early period were much more sophisticated than has usually been accepted. This gives us the opportunity to more fully reconstruct customs and applied techniques. As the region of the Delta represents a wide range of different groups of people, their sepulchral rituals differ as well. We will discuss some examples from selected cemetery sites together with the latest data excavated at Tell el-Farkha. Based on this strong material we will make an attempt to reconstruct ancient building techniques in terms of procedures and digital modeling, and some rituals as well.

George A. Pierce (Brigham Young University) and Krystal V. L. Pierce (Brigham Young University), “An Inscribed Stela from the Stone Monument at Seila in Egypt”

The large stone monument at Seila in the Fayum region of Egypt was first mentioned in 1891 by W.M.F. Petrie, who identified the structure as a 12th Dynasty mastaba. Other scholars have suggested that the monument was a benben, step-pyramid, or true pyramid. The monument was excavated briefly in the 1980s and 1990s, when a limestone stela inscribed with the names and titles of the 4th Dynasty king Snefru was discovered on the eastern side of the structure. Neither the excavation results nor stela have been fully published, which has led to confusion regarding the date, owner, form, and function of the monument. This paper will examine published and unpublished data on the structure, especially focusing on the inscribed stela, which the authors of this paper have been tasked with fully publishing. The placement and context of the stela will be described and analyzed in relation to the monument, as well as other stelae found in funerary and religious complexes of the Old Kingdom. The names and titles of Snefru inscribed on the stela will also be compared to other known attestations, in order to see what role the inscription plays in the development of royal titulary in the Egyptian Old Kingdom.

Nicholas Picardo (Harvard University), “Where Did THAT Come From?! The Giza Project’s Development of Citation and Referencing Standards for 3D Archaeological Visualizations”

Digital 3D modeling techniques have increasingly become vehicles not only for documenting archaeological information but also for communicating it to academic and popular audiences alike. Whether intended as visualizations of selected data or as detailed visions of ancient milieus, 3D digital models—and derivative media that make use of them—often include elements of reconstruction. However, once released, these products tend to take on lives of their own, disassociated from the often substantial source materials (e.g. primary documents; empirical data; excavated artifacts) and intellectual processes (e.g., decisions made; theories applied; extrapolation from parallels; informed speculation; artistic necessity) that factored into their creation. As such, they are effectively born-digital academic works that often lack the full spectrum of appropriate citation. Although ideal in concept, in practice the thorough, step-by-step summary of every aspect of model (re)construction is cumbersome for both creators and consumers. As a result, development of documentation standards has been slow to go beyond minimal annotation or caption, traditional bibliography, and/or a basic slate of “movie credit” attributions, even for scholarly applications. Within its broader mission to comprehensively integrate archival data for the site of Giza, Egypt, the Giza Project at Harvard University has employed archival sources to build 3D models of the Giza Plateau and its major monuments. Giza Project models and media will be used to introduce protocols and reference standards (developed as part of efforts funded by an NEH-HCRR grant) that accommodate a reasonable, necessary level of transparency and citation for 3D archaeological visualizations.

Pearce Paul Creasman (University of Arizona), “The 19th Dynasty Temple of Setepenra (Western Thebes, Egypt)”

In 2013, at the request of representatives from Egypt’s Ministry of Antiquities, a peripheral area of the Tausret temple archaeological concession in Western Thebes began to be cleared of modern overburden. The overburden collected over a series of decades as refuse from an adjacent village, and over the centuries as floods washed debris down from the Theban hills to the west. Clearing the natural debris deposited in antiquity continued in 2014 and 2015, ultimately revealing a small but significant mud brick structure: a 19th Dynasty temple that belonged to a person named Setepenre (*stp-n-r*) or, possibly, Setepenra urmes (*Stp-n- R’ wr-ms*). This paper describes the work, the structure, and the person for whom it was intended, and places it in its geographic and historical contexts.

Yigal Sitry (Zinman Institute of Archaeology, University of Haifa), “Two Pivots of the 7th Century B.C. from Thebes, Egypt and the Beginning of Woodturning”

Two small metal items unearthed by W.M.F. Petrie at the end of the 19th century in Thebes (Luxor, Egypt) were identified and published by him as braces. They were found together with a group of metal objects that were dated by Petrie to the Assyrian occupation of Thebes in the first half of the seventh century B.C. The current author suggests these items to be pivots of a lathe. This discovery enables us to date the beginning of turning for the first time, and to describe the development of woodturning in ancient times. The author has used a wide range of methods to study the items and come to the correct conclusion: a) use ware analysis (microscopic examination of the active edge of the items); b) study of ancient representations (iconography in the tomb of Petrosiris, in Tuna el Gebel, Egypt); c) ethno-archaeology (comparison to tools, accessories and technology used by craftsman in traditional societies); and d) experimental archaeology (working a replica of an ancient lathe that using two similar pivots). The paper describes the discovery and its significance to the study of ancient woodturning.

12D. Altered States: Alternative Trajectories to Complexity in the Ancient Middle East II

CHAIR: Geoff Emberling (University of Michigan)

Geoff Emberling (University of Michigan), “Mobility and Political Authority in the Kingdom of Kush”

Despite the involvement of processual archaeologists like Bruce Trigger and William Adams in the archaeology of Nubia, it has largely remained beyond the orbit of comparative studies of early states and empires. This paper represents a step toward a comparative archaeology of ancient Nubia.

Of all the cultures of ancient Nubia, Kush was the largest, most powerful, and longest-lived. First mentioned in Egyptian texts of about 2000 B.C.E., it controlled the Middle Nile region continuously from 800 B.C.E. until its collapse around 300 C.E.

In a number of significant ways, Kush was structurally different from its northern neighbor, the highly administered state of Egypt. Its successive capital cities of Kerma, Napata, and Meroe—moving progressively southward over the centuries—were relatively small compared with the territory they apparently controlled. And there is evidence that the court itself may have been highly mobile, in what Laszlo Török has termed “ambulatory kingship.” Certainly the coronation of a new king required him to travel over 400 km to be crowned in three traditional centers of Kushite kingship.

Mobility is also reflected in integration of nomadic communities into the Kushite state and, more locally, in the importance of cattle as symbols of wealth and power.

Adam T. Smith (Cornell University), “Trajectory and Refusal: Societies against the State in the Bronze Age Caucasus”

In his classic ethnography, *Society against the State*, Pierre Clastres argues that the radical break in human history came not with an economic transformation but a political one, namely, the invention of a state “machine.” Archaeology has defined a number of different variations on this machine—regional state, city state, fortress state, feudal state, nation state, etc.—as well as a series of unique pathways toward and between them. But Clastres’s most vital contribution to political anthropology was his contention that the assembling of the state machine not only stimulated awe and imitation but also premonitions of “socio-economic catastrophe” and hence widespread refusal of the machinery of “complexity.” The Bronze Age in the South Caucasus provides one such model of refusal and hence the case serves as an important check on the tendency to impute a teleology to historical trajectories.

Lauren Ristvet (University of Pennsylvania), “A State without Cities: Alternate Paths of Complexity in the Caucasus”

V. Gordon Childe called the process of the emergence of the state in Mesopotamia “the urban revolution,” highlighting the critical role that cities played in the rise of political complexity. Yet in the neighboring region of the South Caucasus, political complexity rarely involved cities or settled populations. Large settlements seem to have only appeared late in Urartian history, about 700 years after the first experiments in complexity during the Late Bronze Age. Indeed, the consolidation of political power and economic differentiation appeared in the absence of much evidence for settlement, when the majority of the population was probably semi-sedentary, with a pastoralist base. This residential mobility meant that political integration had a character decidedly different from the rest of the Near East, resulting in polities without a monopoly on violence, where coalition building was essential to the creation of authority. Widespread material culture traditions hint at the emergence of a regional koine, while sovereignty tended to be defined in a highly restricted manner. In this light, I will consider these dynamics in the highlands from the late Middle Bronze Age to the rise of Urartu in the Van Basin, Armenia, and Naxçivan.

Abbas Alizadeh (University of Chicago) and Atefeh Razmjoo (Mazandaran University), “Formation of an Early Territorial State: An Alternative Model of the Formation of the Early State in Southwestern Iran”

Archaeological and historical reconstructions and interpretations of the origins and development of early state organizations and nomadic-sedentary relations have been viewed primarily from the perspective of sedentary farmers and urban centers. Implicit in such models are assumptions of asymmetric power relationships in which nomads are viewed as not only dependent on settled farmers but also encapsulated within the sphere of urban civilizations. This unidirectional view of political economy also derives from an overdependence on the skewed and biased ancient literature and some 20th century ethnographic views of nomads in relation to powerful nation-states.

This paper offers a series of alternative inferences that are based on well-known archaeological data, as well as a few recent lines of evidence, and a review of relevant archaeological evidence for the existence of social hierarchy and stratification in prehistoric pastoral nomadism in southwestern Iran. In addition, we discuss how vertical mobile pastoralism in the region could have developed independent of settled farmers and how the events that developed in highland Iran resulted in the peculiar characters and features of what we know as Elamite civilization.

Joshua Wright (University of Aberdeen), Cheryl Makarewicz (University of Kiel), William Honeychurch (Yale University), and Amartuvshin Chunag (Mongolian Academy of Sciences), “Local Authority and Regional Gravity in the Formation of Pastoralist States”

Pastoral nomadic polities have been part of the political calculus of sedentary states since their earliest days. Nomadic societies are often presented as dark shadows of the immobile farming-based polities that interacted with them. More recent and nuanced studies of Eurasian societies present models of a ‘headless state’ different in both structure and the constitution of political authority. Archaeology in the Eurasian steppe offers insights into how nomadic polities there emerged, were structured, and reproduced themselves. Almost two decades of survey and excavation have provided a range of data that covers both large established Eurasian states and their antecedents. This paper will focus on the local political processes that brought about the rise of the Xiongnu empire in Mongolia during the late first millennium B.C. This process follows a trajectory and timeline that illustrates the importance of local political agendas and systems of subsistence but also the ways in which common elite culture independent of economic foundation was a key factor in the rise of altered states.

12E. Bioarchaeology of the Near East

CHAIR: Lesley Gregoricka (University of South Alabama)

Lesley Gregoricka (University of South Alabama), “Temporal Trends in Mobility and Subsistence Economy among the Tomb Builders of Umm an-Nar Island”

The Umm an-Nar period (2700–2000 B.C.) is notable for the appearance of oasis agriculture as well as monumental towers and tombs accompanying large settlements, reflective of an increasingly sedentary lifestyle and growing social differentiation. With the earliest recorded tombs of the Umm an-Nar period, Umm an-Nar Island (Abu Dhabi, United Arab Emirates) offers a unique glimpse into early strategies of human social organization in southeastern Arabia using a bioarchaeological approach. Strontium ($^{87}\text{Sr}/^{86}\text{Sr}$), oxygen ($\delta^{18}\text{O}$), and carbon ($\delta^{13}\text{C}$) isotope ratios from the dental enamel ($n=33$) of those interred within three tombs on Umm an-Nar Island were used to test the hypothesis that these populations became increasingly sedentary and more reliant on coastal resources over time.

Human $^{87}\text{Sr}/^{86}\text{Sr}$ ratios from the earlier tombs (2700–2500 B.C.; 0.70894 ± 0.00005 , 1σ ; $n=14$) were significantly different ($U=67$, $z=2.39$, $p=0.02$) than those of later individuals (2500–2300 B.C.; 0.70888 ± 0.00009 ; $n=19$), although $\delta^{18}\text{O}$ ($-2.3 \pm 0.5\%$) and $\delta^{13}\text{C}$ ($-5.9 \pm 2.4\%$) isotope values did not differ between periods. Increasingly variable strontium isotope ratios over

time allude to a transition towards a more mobile lifestyle or a more diverse diet. Corresponding oxygen and carbon isotope values suggest that residents of the island did not become more mobile in the latter period; instead, dietary variability became more pronounced. This shift in subsistence economy may be explained by differential access to certain food resources, possibly a result of growing social hierarchies and disparate access to power, or because of dissimilar regional geographic origins of those interred on the island.

Maryann Calleja (University of Nevada, Las Vegas), “Commingle Tombs and GIS: Analyzing the Mortuary Context and Taphonomy at Bronze Age Tell Abraq”

Excavations of Umm an-Nar period tombs have provided ample information regarding the extensive variation between these structures, yet little is understood about mortuary treatment. These multi-chambered Bronze Age tombs have largely been found looted or disturbed to varying degrees. Moreover, commingled human skeletal remains—the majority recovered before the common use of global positioning systems (GPS)—have typically been documented without the benefit of precise individual proveniences. Further complicating contextual analyses, taphonomic processes have left skeletal remains highly fragmented. The tomb at Tell Abraq (ca. 2200–2000 B.C.) represents a relatively undisturbed Umm an-Nar tomb with the remains of over 400 individuals in the form of more than 27,000 bone fragments. This study uses modern geographic information systems (GIS) to process previously existing excavation data. It utilizes the original handwritten field notes from the 1993–1998 field seasons at Tell Abraq to create a three-dimensional digital model capable of spatial analysis. Initial models based upon skeletal indicators of health and locations within the tomb suggest differential use of the tomb’s two burial chambers. Despite the limitations of gross proveniences, this method has proven useful in providing new insights into mortuary treatment at Tell Abraq. In addition, it demonstrates a viable method for analyzing pre-GPS data in commingled contexts.

Kathryn Marklein (The Ohio State University), “Life on the Limes of the Roman Empire: Biological Health in the Rural Town of Oymaağaç, Turkey (Second–Fourth Centuries C.E.)”

Roman expansion and imperial consolidation have been evolving issues in social and political history. Recent bioarchaeological work contributes novel perspectives to understanding the regional processes of and transformations associated with “Romanization” by contextualizing biocultural changes within populations through the study of human skeletal remains. However, this bioarchaeological approach to questions of Roman imperialism is infrequently applied to eastern provincial research. This study addresses a lacuna in eastern Roman bioarchaeology, building upon preliminary osteological work from the village of Oymaağaç in northern Turkey, to evaluate potential sociocultural and sociopolitical changes to this local community following its regional assumption into the Roman Empire. Skeletal and dental biomarkers associated with growth stress (linear enamel hypoplasia, LEH), degenerative joint wear (osteoarthritis, intervertebral disc disease, and rotator cuff disorder), trauma (fracture), non-specific infection (periosteal new bone, PNB), and oral health (caries and antemortem tooth loss) are examined both between earlier (multigenerational graves) and later Roman (mass graves) periods and between sexes. Results show significant differences in LEH and PNB overall between earlier multigenerational and later mass grave samples. Males exhibit significant period differences between osteoarthritis and PNB, while females exhibit no temporal differences. More males manifested signs of trauma than females in the multigenerational sample, but intersexual differences did not exist with the mass grave sample. Although previous bioarchaeological work has demonstrated consistent declines in skeletal health among indigenous populations following imperial incorporation, these findings from Oymaağaç suggest that the effects of Romanization were not universally negative but varied across and within liminal communities.

Jaime Ullinger (Quinnipiac University), “Health and Stress at Jericho”

Tomb excavations in the 1950s at ancient Jericho uncovered a large number

of skeletons, but have not been subject to systematic data collection. Earlier research conducted on bones and teeth now housed in Australia suggested that some of the Middle Bronze Age inhabitants of Jericho experienced a number of health issues, including degenerative joint disease, non-specific infection, and malnutrition. The current project contributes to our understanding of health at Jericho by identifying linear enamel hypoplasia (LEH), an indicator of generalized stress, in individuals from other tombs that are housed currently at Cambridge University. Because skeletal material from the EB IV and Middle Bronze Age Jericho tombs was fragmentary and occasionally commingled, dental defect data were analyzed by tooth type. LEH were observed on casts coated with chromium under a digital microscope. Defects were identified macroscopically as horizontally depressed grooves on the enamel surface, and microscopically by sequences of wider perikymata spacing followed by a cervical wall of normally spaced perikymata. Of 81 anterior teeth examined, 34 exhibited linear enamel hypoplasias (42.0%). Of those, 23 had single defects and 11 had multiple episodes of physiological stress. Anterior teeth from Jericho were compared with other sites from the region, including Middle Bronze Age Pella, Jordan (n=112). Anterior teeth from Jericho had similar high levels of LEH as their contemporaries from Pella (55/112; 49.1%). Overall, the inhabitants of Jericho likely experienced a significant amount of physiological stress as children.

Megan Perry (East Carolina University) and Emily Edwards (East Carolina University), “Fragility of Life at Late Ottoman Period Hesban”

During the late 19th century, the Ottomans began encouraging agricultural development of the environmentally marginal region of the Madaba Plain in Jordan. Many small settlements were established within the region; however, the environs of Tell Hesban continued to support semi-nomadic farmers, who seasonally resided in caves or ruined structures, or entirely nomadic tribes. The main argument for the lack of a permanent settlement at Hesban during the 19th century has been the economic and political benefits of fluid residential patterns to avoid taxation and other administrative hassles. Paleopathological analysis of a communal burial from the late 19th century Hesban, recovered from the ruins of a 14th century building on the tell, has revealed that the population suffered from high rates of physiological stress such as infection and malnutrition. Almost half of the sample included fetuses, perinates, or infants up to 18 months, and of these, 88% show evidence of infectious disease or metabolic conditions. This small sample has demonstrated that, at least for this segment of the population, a semi- or completely nomadic residential strategy was not more successful than settlement in small agricultural communities during the same time period. Thus, while political and economic marginalization may have helped this community avoid Ottoman interference, it did not result in better diet or health for this small group.

Amanda Wissler (Arizona State University), “Absence of Evidence: Bioarchaeology of Mesopotamia”

Vast quantities of textual, art historical, and archaeological sources inform the political, economic, and social structures of Mesopotamia. Despite this diversity of evidence, there are very few studies of Mesopotamian bioarchaeology. This deficit is partly due to excavation biases of the early 20th century and poor levels of skeletal preservation in many areas of the Middle East. The purpose of this research is to present a summary of extant studies on bioarchaeology of Mesopotamia, describe research trends, and pose future areas of inquiry that can contribute to the knowledge of this region.

Results demonstrate that most of the literature on Mesopotamian skeletal remains consists of site reports or purely descriptive compilations of measurements; only a handful of studies employ bioarchaeological data in combination with hypothesis-driven research. The most common research topics included cranial morphology, race, and diet. One of the fundamental areas to which bioarchaeology can contribute is elucidation of the lives of commoner classes. The few human remains that have been recovered largely represent the average inhabitants of Mesopotamia and thus are ideal for investigating the non-elite. By combining textual analyses, theory, and biology, bioarchaeology can generate more comprehensive and accurate understandings

of the ancient Near East at individual and regional scales, widening the scope of bioarchaeology and enhancing both Near Eastern studies and the humanities.

12F. The Soft Power of Place—Cultural Diplomacy, Archaeology, and the Overseas Research Centers

CHAIR: Morag M. Kersel (DePaul University)

Morag M. Kersel (DePaul University), “The Soft Power of Place—Cultural Diplomacy, Archaeology, and the ORCs (Overseas Research Centers)”

In her formative work *The Power of Place: Urban Landscapes as Public History*, Dolores Hayden argued convincingly for the inevitable connection between the natural environment of a location and the culture which occupies it. The Overseas Research Centers (ORCs) are the very embodiment of Hayden’s power of place—people, foreigners, and locals connecting in a location. For over a century the ORCs have been the primary place where American scholars in the humanities and social sciences carry out research critical to a greater understanding of, and intersection with, other cultures. Not for academic purposes alone, these centers constitute one of the U.S.’s best foreign policy investments providing neutral spaces for active, dynamic, and positive exchanges and enabling rigorous, on-the-ground research and educational opportunities. Centers put scholars in the thick of things, exemplifying the people-to-people aspect of U.S. government cultural diplomacy and the *soft power* approach of Joseph Nye—the use of cultural exchange to effect mutually beneficial outcomes. The Council of American Overseas Research Centers (CAORC) provides much needed funding for the ORCs, but U.S. government support for the program is insecure in the annual budgeting process. A potential decrease or cessation of financial support impedes local interaction and may reinforce perceptions that the U.S. does not care about culture. I will introduce the session showcasing the important role that the ORCs have played and continue to play in supporting research, providing educational opportunities, fostering local engagement, and creating collaborative projects and programs in various countries.

Gerry Scott (American Research Center in Egypt), “People Connecting People: Cultural Diplomacy and the Work of the American Research Center in Egypt”

The American Research Center in Egypt (ARCE) was founded in 1948 to assist American universities, museums, and scholars in obtaining their permissions to conduct research, primarily archaeology, from the Egyptian government. Thus ARCE assumed the role of representing American scholars to the Egyptian government and the Egyptian government to American scholars. By the 1960s ARCE expanded its mission to include a fellowship program funded by the U.S. Department of State’s Bureau of Educational and Cultural Affairs. Additionally, as a result of a devastating earthquake that struck Cairo in 1992 and damaged many historic monuments, several U.S. senators wished to extend a gesture of assistance to Egypt by providing funds to the United States Agency for International Development (USAID) that enabled ARCE to undertake an ambitious program of monument conservation and personnel training.

Since 1955 ARCE’s efforts, in continued collaboration with USAID and Egypt’s Ministry of Antiquities (MoA), have resulted in some 70 successful projects. This innovative collaboration has been responsible for the conservation of objects and monuments from Coptic wall paintings to the iconic temples of Karnak and Luxor. In date, the subjects of these programs have spanned a range from the Predynastic period to the Ottoman era. This paper demonstrates how each of these programs—sponsored archaeology, fellowships, and conservation and personnel training—connects people and presents a positive presence for the United States in Egypt. ARCE’s recent programs in community outreach around monuments and sites will also be discussed.

Jennifer Thum (Brown University), “In Between and Beyond: Working in the Borderlands of ARCE and the Egyptian Empire”

Things are often different in the borderlands, aren’t they? Over the past

year, the Council of American Overseas Research Centers’ (CAORC) Mellon Mediterranean Regional Research Fellowship has allowed me to spend a total of four months abroad for my dissertation research in four countries: Egypt, Sudan, Lebanon, and Saudi Arabia. Working with monuments that were made mainly on the frontiers of the Egyptian empire means that a lot of my fieldwork sites are located outside of modern Egypt, the only one of the above countries with an ORC. The American Research Center in Egypt (ARCE) played a major role in facilitating my research within Egypt, especially in light of recent changes within the Ministry of State for Antiquities. As a result, my experience there was quite different from those I had in the countries without American research centers. In all cases, however, being “in the thick of things” made it possible for me to form meaningful professional relationships with local heritage professionals, government and military representatives, and guides, without whom my work would not have been successful. In this paper I explain how my experiences as a CAORC fellow gave me first-hand knowledge of each country’s fieldwork permissions process, insight into the relationships between their governments and heritage sectors, and the opportunity to collaborate with local researchers, fostering just the sort of cultural exchange we need in today’s uncertain political climate.

Kathryn Franklin (Oriental Institute, University of Chicago) and Astghik Babajanyan (Institute of Archaeology and Ethnography, Republic of Armenia), “The Power of Making Places: Collaborative Heritage and Working with the ARISC in Armenia”

If archaeology focuses in part on the study of meaningful places, then through the perspective of heritage we can view the process of making places meaningful as both an object and a responsibility of research. This paper presents the ongoing research of the Vayots Dzor Silk Road Survey (VDSRS), a collaborative archaeological project that for the last 3 years has focused on the recording, research, and management of the medieval landscape in Vayots Dzor, Armenia. The VDSRS was created in a space opened by the commitment and support of the Armenian Research Institute of the South Caucasus (ARISC), an AORC supporting research in and about Armenia, Azerbaijan, and Georgia. We discuss the ways in which the support structure of ARISC has shaped both the potential for and the nature of research in Armenia, with an emphasis on collaborative work and on stewardship of archaeological heritage. As we will explore, in the case of Vayots Dzor and the VDSRS the ‘soft power’ of institutional support has enabled a critical shift in the demographics of who leads research, as well as an opening of possibilities for questions asked about the past and the accessibility of archaeological data.

Sarah Fairman (W. F. Albright Institute of Archaeological Research), Melissa Cradic (University of California, Berkeley), Issa Sarie (Al-Quds University), and Matthew J. Adams (W. F. Albright Institute of Archaeological Research), “Engaging American and Palestinian Cultural Heritage (EAPCH): A Collaborative Cultural Diplomacy Initiative at AIAR”

In 2016–2017, a grant from the U.S. Consulate General in Jerusalem funded a new exchange initiative between the W. F. Albright Institute of Archaeological Research (AIAR) and the Institute of Archaeology of Al-Quds University to enrich relationships between the American archaeological community and their Palestinian counterparts. The joint program, Engaging American and Palestinian Cultural Heritage (EAPCH), supported a year-long series of field trips, lectures, symposia, and other vehicles of person-to-person exchange.

Due to the relative isolation of Palestinian scholars, American scholarship has remained largely unaware of the archaeological research being conducted in the Palestinian territories. Likewise, due to this low visibility, Palestinian scholars and students have had few opportunities to engage with American fieldwork in the region. With this program, AIAR has raised awareness of archaeological fieldwork being carried out within Palestinian autonomous Area A; fostered dialogue between Americans and the growing community of cultural heritage scholarship in Palestine; and provided supplemental educational opportunities to the next generation of students. Together, these

forms of person-to-person engagement promoted the AIAR's role as an ORC that can serve all its constituents.

AIAR's location in East Jerusalem suggests neutrality: a *corpus separatum* for Palestinians, Israelis, and international fellows. The interplay of borders, physical barriers, and the residency statuses of different local populations presented unique logistical challenges to the implementation of the program on the ground. Program coordinators and participants from AIAR and Al-Quds will present the goals, outcomes, and future direction of EAPCH and its role in engaging the soft powers of place and of person-to-person exchange at AIAR.

Matthew J. Adams (W. F. Albright Institute of Archaeological Research), "The Albright Institute of Archaeological Research in East Jerusalem: The Challenges and Opportunities of an Overseas Research Center in Israel and Palestine"

The W. F. Albright Institute of Archaeological Research (AIAR) in Jerusalem is the oldest American research center for ancient Near Eastern studies in the Middle East. Located in today's East Jerusalem, AIAR has weathered numerous shifts in political boundaries. The property on which the institute was built was acquired in 1919, in the aftermath of the Ottoman defeat in World War I, during the Occupied Enemy Territory Administration. By the time the institute was built, in 1925, governance of the region had passed to the British Mandate of Palestine. For the last 92 years, the institute has carried on its mission through a series of wars and unrest under British, Jordanian, and Israeli rule. Throughout these turbulent years, the institute has been a uniquely American cultural presence in the region. While it has maintained apolitical policies toward its neighbors and governors, AIAR has been and continues to be viewed as "the American School." This presentation comments on the challenges and opportunities of AIAR in its current setting, as well as its sometimes willing and sometimes unwitting roles in cultural diplomacy.

12G. The Iron Age I in the Levant: A View from the North

CHAIR: Lynn Welton (University of Toronto)

Eric Jean (Hitit University), "Between Late Bronze Age and Iron Age in Cilicia: The Painted Local Wares from a Regional Perspective"

The appearance of a local painted ware in Cilicia has often been understood as transitional between the Late Bronze Age and Iron Age. It seems justified for Tarsus, where a Transitional Period Local Painted Pottery, differing from earlier traditions, was found alongside Mycenaean pottery. Population movements, from western Anatolia and/or the Levant, were suggested to explain its appearance. In the eastern part of Cilicia, at Kinet Höyük, the most numerous amounts of painted pottery belong to Early Iron Age contexts, whose population may have come from the east. In the western sites of Cilicia, local painted ware appears in Late Bronze Age contexts at Soli Höyük, Kilise Tepe and Yumuktepe, and consists especially of medium-sized jars with squared rims, bearing cross-hatched decoration on the exterior and slashes around the rim. That production suggests micro-regional interactions in which Kilise seems to share a cultural or trade space with Soli and Yumuktepe during the Late Bronze Age. Otherwise, however, this painted ware cannot clearly be used to define a transitional period between the Late Bronze Age and Iron Age. In this context and by questioning the available data, we will try to see how far we may define and explain the Late Bronze Age and Early Iron Age Cilician painted ware traditions.

Brita Lorentzen (Cornell University), "A Diachronic Analysis of Wood Use in the Orontes Watershed during the Early Bronze–Iron Ages"

The plains and valleys of the Orontes Watershed provided fertile ground for settlement and intensive cultivation in the northern Levant during antiquity, while the forested uplands flanking the Orontes contained a variety of potential timber resources from multiple vegetation zones. Archaeological wood charcoal analysis is a valuable—yet often under-utilized—tool for reconstructing both environmental context and long-term changes in human

use of, and impacts on, regional vegetation in areas like the Orontes Watershed, where human modification of the landscape was substantial.

I present the results from anthracological analysis of wood charcoal from three sites—Tell Tayinat, Tell Nebi Mend, and Tell Qarqur—whose locations span the length of the Orontes and which were investigated as part of the Computational Research on the Ancient Near East (CRANE) initiative. In particular, I concentrate on the wood charcoal assemblage of Tell Tayinat (lower Orontes), which yielded considerable quantities of well-preserved charcoal from Early Bronze Age and Iron Age I–III contexts. Comparison of the three site assemblages, and additional anthracological data from previous work in and adjacent to the Orontes watershed, demonstrates that there is noticeable spatial variation in wood usage, particularly in procurement of high-altitude montane forest taxa. At Tell Tayinat, the charcoal assemblage largely consists of cultivated fruit trees and low to mid-altitude evergreen and deciduous forest taxa. Conversely, multiple long-lived juniper (*Juniperus*) and cedar (*Cedrus libani*) charcoal samples from Tell Nebi Mend attest to montane forest use, and offer potential for further information on regional paleoenvironmental history through dendrochronological analysis.

12H. Archaeology of the Byzantine Near East

CHAIR: Melissa Bailey Kutner (University of Maryland, Baltimore County)

Walter Ward (University of Alabama at Birmingham), "Amphorae Distribution as Evidence of Trade Routes in Third Palestine"

The distribution of amphorae and fine wares has often been used to determine the nature of long-distance economic exchange throughout the Roman Empire. Despite the fact that amphorae were produced largely for long-distance trade and specifically seaborne commerce, they were also commonly transported overland, and their distribution along land routes must be an indicator of local traffic. Looking at the region of Third Palestine (a province formed in the late fourth century comprising southern Israel, the Sinai, and southern Jordan) there is ample evidence of amphorae in published reports that can be used to investigate trade routes.

By tracing the distribution pattern of four common amphorae types (the Gaza amphora, the Palestinian Bag Jar, Egyptian amphora, and the Aila Amphora) throughout Third Palestine, trade routes in the province can be suggested and compared to other extant evidence, such as the Peutinger Table and the Nessana Papyri. This paper argues that the shipment of goods to and from the Red Sea port of Aila must have attracted the local trade routes. Palestinian Bag Jars and Gaza amphorae were transported to Aila, not only for sale and consumption there, but also for export to the Red Sea. The markets along the route siphoned off some of the imported products. This pattern helps to explain the distribution of imported amphorae in the province of Third Palestine.

Michael Zimmerman (Bridgewater State University), Martha Risser (Trinity College), and Elizabeth Hestand (Independent Scholar), "The Phasing and Stratigraphy of the Northern End of Field C at Caesarea Maritima"

In the Roman period, Field C at Caesarea Maritima in Israel was the location of a series of horrea, or vaulted warehouses, facing west towards the sea. In the Byzantine period, a series of superstructures was built over these horrea, consisting mostly of public buildings—a praetorium, or palace of the Byzantine governor; a skrinion, or the tax revenue office; and an apsidal tabularium, or an archive for legal or financial records, at its northern end. The use of the northern end of Field C as a public structure is supported by mosaic and opus sectile floors, as well as a series of rectangular niches, possibly used to hold documents associated with the nearby praetorium or skrinion. However, in the late fourth to early fifth centuries C.E., there is evidence that the mosaic was covered over with a plaster floor, and that the area was used for the storage of lamps, juglets, and amphorae. Additionally, an east-west chalk "street" was connected to this storage area, over which the skrinion was built. Does this change indicate an interruption in the use of the northern part of Field C? If so, does this indicate that the structure may not have been used as a tabularium,

either before or after its use as a storage area? What does the ceramic evidence reveal? And what are the implications for the distinctions between public and commercial building use in the early Byzantine period?

Alan Stahl (Princeton University), “Byzantine Coinage Circulation in the Northeastern Mediterranean”

The circulation of low-denomination coinage in Anatolia and adjacent regions in the period 500 to 1500 C.E. will be discussed on the basis of numismatic finds from the Princeton-led expeditions in Antakya, Hatay, Turkey (ancient Antioch-on-the Orontes); Avkat, Çorum, Mecitözü, Turkey (ancient Euchaita); and Polis Chrysochou, Paphos, Cyprus (ancient Marion-Arsinoe). While the coins from the Antioch excavations of the 1930s were published decades ago, they have recently become the subject of much new analysis and updated attributions. The coin finds from the surveys carried out in Avkat and the excavations in Polis have not yet been published. Coins from the three complexes will be compared with those of other regional excavations to discuss variations in the circulation of Byzantine coinage and the introduction and interaction of Islamic and Crusader issues.

Melissa Bailey Kutner (University of Maryland, Baltimore County), “Byzantine Economic Networks at Dhiban, Jordan”

Previous excavations at Dhiban, a multi-period site in Jordan, have revealed a substantial Byzantine presence. Most recently, in 2012–2013 the current project explored the upper floor of a large Byzantine building where a fire preserved rich botanical remains along with pottery and coins. In this paper, I will present the results of the 2017 excavation of the lower floor of this building. The building contributes strongly to an understanding of economic forces at the site. Evidence from storage jars on the upper floor suggests agricultural ties to a wider imperial economy, especially through the presence of wine and wheat. However, olives, another familiar component of the imperial economy, are absent. The 2017 excavation aims to clarify the nature of these economic networks, asking whether they were local or governed by larger political, cultural, or religious forces. Excavation of the lower floors will contribute to these questions by revealing additional agricultural and processing evidence, as well as a range of other possible finds. For example, while coinage during this period was prolifically minted and certainly very frequent on urban sites, coin use on village sites remains understudied. At Dhiban, a number of very worn tiny coins called *minimi* suggest local, everyday exchange of the type often in the past thought to be uncharacteristic of villages, but increasingly evident in Late Antique contexts. Decorative objects (lamps, flasks, glass vessels, metal containers, tools) or decorative architectural elements might also indicate connection to economic, cultural, or religious networks.

Charles Anthony Stewart (University of St. Thomas), “The Alexander-Heraclius Stele: a Byzantine Sculpture Discovered in Cyprus”

Since 2010, systematic excavations have revealed a major pilgrimage complex at Akrotiri-Katalymata ton Plakoton on the island of Cyprus. According to the excavators’ preliminary report, the site was built in the first decade of the seventh century and commissioned by the famous patriarch of Alexandria, St. John the Almsgiver. At that time, the Byzantine Empire was engaged in a global war with Persia, forcing refugees from Palestine and Egypt to flee to Cyprus.

Archaeologists were puzzled by the discovery of a marble sculpture of a horned human near the sanctuary, and I was invited to analyze it. Using the method of “contextualism” (the relationship between the object and the architectural space) along with historical analysis, I concluded that the sculpture manifested literary concepts current in apocalyptic literature. Several seventh-century texts describe a Christian “Alexander the Great” who would arise and defeat the armies of Persia; for example, the poetry of George Pisida, the prophetic Apocalypse of Pseudo-Methodius, and the historical Chronicon Paschale, among others. In these writings, this “New Alexander” was none other than the Emperor Heraclius, who would fulfill these expectations in the year 627 when he defeated the Persians near Nineveh and recaptured the True Cross; therefore, I suggest that the sculpture be titled the Alexander-

Heraclius Stele. Because the sculpture was found in its original context, the audience and iconography can be reconstructed with some certainty. It is a rare and significant monument that commemorates a period when antiquity was transitioning into the Middle Ages.

Stephen Humphreys (Durham University), “Crosses as Water Purification Devices in the Byzantine Near East”

This paper will attempt to interpret the significance of 41 cross decorations painted, incised, or molded onto the walls of 24 water storage installations (cisterns and reservoirs) located across modern Cyprus, Israel, and Jordan. All have been previously published, but their geographic extent and the implications of the phenomenon have not previously been explored. It is a certainty that this represents an incomplete catalogue, as cisterns are seldom examined in detail, let alone excavated. The crosses examined within this dataset were applied between the fifth and seventh centuries and are linked by their remarkably uniform placement within each installation. Furthermore, similar inscriptions found within eight of the 24 installations demonstrate clear ties to the water blessing of the Epiphany rite, one function of which was the distribution of ritually purified water among the laity. Byzantine Christians believed the physical sign of the cross could drive demons from statues, buildings, and entire landscapes; bring good fortune or guard against bad; or simply indicate Christian presence or identity. Despite the complexity inherent in narrowly defining the function of cross images, this paper will put forward the argument that these 41 crosses should be viewed as apotropaic devices intended to protect the contents of water storage installations against demonic influence and the resulting physical corruption.

12I. Encoding Data for Digital Discovery II

CHAIRS: Amy Gansell (St. John’s University) and Vanessa Juloux (École Pratique des Hautes Études, Paris Sciences et Lettres Research University)

Miller Prosser (University of Chicago), “Modeling Textual Data and Complex Writing Systems to Address Philological Research Questions in OCHRE”

In a corpus of 10,000 logosyllabic texts, how do we find all texts that attest a given sequence of words when any of these words may occur in various grammatical forms, each with multiple orthographic variants, many with differing levels of damage and certainty? And how do we make this same query extensible to texts in any language and in any writing system? Even more critically, how do we package this query in such a way as to make it accessible and customizable by non-technical, content area specialists? Only a research database environment with properly encoded and modeled textual data makes this possible. OCHRE (the Online Cultural and Historical Research Environment) serves as the database environment for a number of large text corpora such as the Persepolis Fortification Archive (PFA), the Old Assyrian Research Environment (OARE), and the Ras Shamra Tablet Inventory (RSTI). For these philology projects, OCHRE serves as more than a repository, as more than a platform for collecting and displaying texts and commentary. OCHRE is a research environment that provides powerful tools to facilitate the pursuit of various avenues of research, from complex querying and data mining tools, to prosopography networking and common statistical analytics. This presentation will feature some of the interesting research outcomes made possible by these tools and will review the underlying data structures on which these tools are predicated.

Alessandro di Ludovico (Sapienza University of Rome), “Strategies, Reflections, Suggestions for an Optimized Digital Publication of Western Asiatic Cylinder Seals and Epigraphic Documents”

The long tradition of studies in Assyriology and Western Asiatic art history has led to approaches in the publication of new materials that have outlined a number of generally accepted basic standards. However, those standards remain badly defined, since a large part of the parameters and criteria adopted to publish new materials has almost always been left unstated and remains

outside the reach of self-criticism. This means that the scholars who want to carry out experimental researches are not always sure that they will be able to find homogeneous quantity of information in all the works they will consult. Artifacts are usually represented in the form of pictures or, in more recent times, in digital reproduction, which gives new opportunities of integrating new data and metadata, but complicates the issue of the standardization in procedures.

This contribution will address the optimization of standards in the publication of cylinder seals and epigraphic documents, especially in the perspective of helping or inspiring archaeological researches that deal with materials related to these categories. The use of new technologies must be taken into account because of their remarkable potential, but never taken to extreme levels, since it could involve a number of new parameters and issues that would complicate, rather than help in facing, the current situation. This paper aims thus to propose integrated procedures in structuring catalogues and publications of new finds that would give the scholars more archaeological information on products that are usually observed from a non-archaeological point of view.

Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute), Eric Kansa (Open Context, Alexandria Archive Institute), William Caraher (University of North Dakota), Kevin McGeough (University of Lethbridge), and Charles E. Jones (Pennsylvania State University), “Integrating Narrative and Data: Synergistic Publishing in the 21st Century”

The publication of detailed excavation and survey results is a fundamental need for archaeology. However, our discipline has long recognized the uphill battle in motivating and financing completion of such works. Changes in the economics of publishing, as well as the rapid proliferation of digital documentation, create new challenges for publishing primary field research in archaeology. Currently, the majority of the evidence (now digital) collected in field research is left behind in the publication process. Rather than consider digital data as a residue of our work that, if lucky, may end up in a repository, we should explore new publication models that richly integrate digital data with narrative syntheses. This paper highlights how this can be cost-effective, improve the reproducibility of archaeological interpretation, reach broader audiences, and have wider impacts. To accomplish these goals, we discuss key aspects of information architecture and the challenge of developing publication workflows that support both narrative and data editorial processes.

Émilie Pagé-Perron (University of Toronto) and Terhi Nurmikko-Fuller (Australian National University), “Getting LOADED: Practical Considerations, Tools, and Workflows for producing Linked Open Assyriological Data”

Investigations on materials from the ancient Near East, be they archaeological, philological, or curatorial, have in recent years begun to increasingly prove their relevance and significance to the ongoing development of semantic Web technologies, especially through the need for the promotion of common data formats, vocabularies and schemas, and exchange protocols. The rich philological material of the Mesopotamian literary canon can be used, in turn, to evaluate the robustness of existing structural frameworks (referred to as ontological models in the spheres of computer science and knowledge representation) and schemas designed from the perspective of other disciplines, but with the aim of upper-level, and thus universal, applicability.

This paper will outline the practicalities and the benefits of using the Linked Data publication paradigm in the context of Assyriological data in general, and on philological material in particular. The considerations and planning inherent in ontological modeling will be outlined, and recommendations will be made in terms of existing tools, methodologies, and workflows for representing information as RDF (Resource Description Framework), a flexible data model which captures not only the entities in a dataset, but also the relationships between them.

Gaia Lembi (Brown University) and Michael Satlow (Brown University) “Inscriptions of Israel/Palestine”

The Inscriptions of Israel/Palestine project (IIP) aims to build an internet accessible database of the inscriptions found in Israel/Palestine that date roughly between the sixth century B.C.E. and the seventh century C.E. There are about 15,000 of these inscriptions, written in Hebrew, Aramaic, Greek, and Latin, by Jews, Christians, Greeks, and Romans. They range from imperial declarations on monumental architecture to notices of donations in synagogues to humble names scratched on ossuaries, and include everything in between, providing a fascinating window into the ancient world.

While so far we have focused on encoding the published transcriptions, using the EpiDoc standards, as we begin to think about the second phase of the project we are turning our attention to linked data. In this paper, we will discuss various challenges we face in both respects: from dealing with inscriptions in three different alphabets and their extensive mark-up, to the harmonization of choices made by each editor, to the inclusion of images and geographical data.

Doğu Kaan Eraslan (École Pratique des Hautes Études, Paris Sciences et Lettres Research University), “Notes on Encoding the Achaemenid Elamite Language with EpiDoc-TEI Based on an Encoding of DBa, Its Implications for the Study of the Elamite Language, and Some Guidelines on the Tag Usage for Similar Encoding Projects”

Achaemenid Elamite (the administrative language of the Achaemenid Empire) is still at the middle stages of its decipherment. The current body of evidence is mainly divided into two parts: royal texts and administrative texts. The first group is relatively well known because royal texts tend to be written in multiple languages, thus making it easier to comprehend the Elamite versions by comparing them to the other versions. The semantics of the administrative texts, though, remain less accessible; however, due to their administrative nature, the content is mostly repetitive. This work is a revised version of our notes while working on an encoding project for the DBa, a royal inscription consisting of ten lines. The encoding itself will be shared in an online repository. As for the encoder, the challenge we try to address with our work is to know how and to what extent one should attempt to encode what one does not and cannot fully understand. For someone who studies the Elamite language, the challenge would be to understand how and to what extent one can incorporate encoded/annotated texts into the actual work-flow of deciphering and study of the language.

12J. Material Interconnections in the Levant during the Second Millennium B.C.E.

CHAIR: David Schloen (University of Chicago)

David Schloen (University of Chicago) and Virginia Herrmann (University of Tübingen), “The Destruction of Zincirli at the End of the Middle Bronze Age”

In 2015, a thick destruction layer dating to the end of the Middle Bronze Age and clearly the result of a violent destruction was found on the acropolis of Zincirli. This site, which was later the capital of the Iron Age Aramean kingdom of Sam'al, is located south of the Taurus Mountains and east of the Amanus Mountains in the northernmost part of the northern Levant, in what is today the western edge of the Gaziantep province of Turkey. The Middle Bronze Age remains found by the Chicago-Tübingen team in 2015 and in a planned excavation in 2017 will be presented, with a focus on the pottery and parallels to other sites in the Levant. The political context of this destruction will also be discussed in light of its radiocarbon and ceramic dating and the textual sources for the period.

Hanan Charaf (Lebanese University), “The Pottery of the LB I at Tell Arqa, Lebanon: A Marked Case of Continuity”

Excavations at Tell Arqa (ancient Irgata) in northern Lebanon have uncovered human occupation levels spanning the entire Bronze Age. Two architectural and cultural levels (Levels 12 and 11) are attributed to the

Late Bronze Age. Level 12 belongs to the LB I and is the main focus of this presentation. Level 12 is the last stage in a process of a regular development of the site beginning in Level 13 (MB II), but the structures and the material culture are culturally and architecturally distinct from the previous MB II period. However, the Level 12 ceramic corpus displays shapes (piriform and cylindrical juglets), techniques (vertical burnishing and incisions on shoulders and rims), and fabrics (metallic fine wares) traditionally attributed to Level 13 together with new vase types generally considered to be typical of LB I repertoires (ring-burnished straight-sided platters, flaring carinated bowls, cooking pots with everted triangular or casserole rims). Shapes are noticeably less diverse during Level 12, which seems to indicate a strict conservatism in pottery production at the site during this period. Regional comparisons of this pottery showed striking similarities with LB I ceramics from Hazor. One common feature is the so-called Hazor pithos that first occurs in Level 12 at Tell Arqa and continues throughout the Late Bronze Age. This pithos is already attested during the MB II at Tell el-Ghassil and Kamed el-Loz, raising the possibility of an origin in the Bekaa Valley. Since this pithos is absent from Middle Bronze Age and Late Bronze Age sites south of the Galilee mountain ridge it is certainly of northern origin.

Elisabeth Wagner-Durand (Albert-Ludwigs-Universität Freiburg), “Ups and Downs: The Transition from Middle to Late Bronze Age at Kamid el-Loz”

The transition from the Middle to the Late Bronze Age at Kamid el-Loz, ancient Kumidi, challenged both the urban landscape and the established political system of the city. The architectural as well as functional history of iconic places inside the urban layout of the largest known town in the southern Bekaa Valley suggest political changes that, eventually, were overcome or even led into the transformation that we call Late Bronze Age. In this vein, the archaeological findings of palace and temple shed light on the assumed intersection between Middle and Late Bronze Age. The tight chronostratigraphic sequence allows us to closely monitor the lifespan of distinct pottery types and findings. This, in turn, enables us to establish and discuss possible relations between changes in material culture and political establishment. Therefore, and in search of the integration of Kamid el-Loz into the economic and political interrelations of both the southern and northern Levant, the paper takes a diachronic view focusing on the chronostratigraphic presentation of the pottery findings and their architectural contexts during this important transitional period.

Shlomit Bechar (The Hebrew University of Jerusalem), “The Transition from Middle to Late Bronze Age at Hazor: A Ceramic Point of View”

Hazor is one of the most important sites in the southern Levant during the second millennium B.C.E. The inhabitants of the site, particularly its ruling elite, had strong connections with their contemporary neighbors in sites to the north, as far as Mari in northern Mesopotamia. These connections are apparent first and foremost in the textual evidence, namely, in the references to Hazor found in the Mari and el-Amarna archives, as well as in some of the tablets found at Hazor itself. They are also reflected in the material remains and especially the ceramic assemblages of the Middle and Late Bronze Ages at Hazor. First, a brief presentation of the site’s layout and city plan at the end of the Middle Bronze Age and the beginning of the Late Bronze Age will be given. This will be followed by a concise description of the ceramic assemblages. This presentation will concentrate on types of pottery that began in the Middle Bronze Age and continued into the Late Bronze Age at Hazor and will also focus on types that appear in assemblages found in northern sites. It will therefore be suggested that Hazor and the Hula Valley were part of one geographic-cultural unit together with the Lebanese Bekaa and coastal region, beginning in the Intermediate Bronze Age and continuing to the Late Bronze Age.

Projects on Parade Poster Abstracts

CHAIR: Jennifer Ramsay (The College at Brockport, State University of New York)

Dawn Acevedo (La Sierra University), “Tholos Architecture from the Early Bronze Age to the Umayyad Period”

The *tholos* represents a form of circular architecture that originated in Greece. A *tholos* is best defined as “a circular building with a conical or vaulted roof and with or without a peristyle, or surrounding colonnade” (*Encyclopaedia Britannica*). Throughout the Bronze Age, the *tholos* denoted a tomb type among the Minoans and Mycenaeans but later evolved into an ornate architectural style that was associated with an assortment of round structures serving various functions. These functions included city halls, temple sanctuaries, mausoleums, and reception halls.

My research utilizes a variety of sources to establish the deliberate cognitive flow of *tholos* architectural elements. An examination of Greece (from the Bronze Age to the Hellenistic period), the early Roman Empire (limited to Rome and Palestine), the Byzantine Empire, and the Umayyad Caliphate establishes the influence, acceptance, use, and adaptation of *tholos* architecture in the ancient Near East. This research also examines various examples of *tholoi* according to form, function, and features.

Because *tholos* architecture became a noteworthy part of the Neoclassical movement in the 18th and 19th centuries C.E., this particular study is pertinent to our understanding of the development of architectural trends throughout both the ancient and the modern world. By examining the timeline of the *tholos* from its use in the Bronze Age to that in the Umayyad period, its cross-cultural influence, and its change or adaptation, the study will illuminate why this form is such an important part of architectural history and how neighboring cultures influenced one another throughout a significant period of time and space.

Nizar Al Adarbeh (American Center of Oriental Research), Jihad Haron (American Center of Oriental Research), Zaid Kashour (American Center of Oriental Research), Shatha Abu Aballi (American Center of Oriental Research), Sofia Smith (American Center of Oriental Research), Fareed Al Shishani (American Center of Oriental Research), Raneen Naimi (American Center of Oriental Research), Hussein Khirfan (American Center of Oriental Research), and Yusuf Ahmad (American Center of Oriental Research), “Youth and Women Engagement for Sustainable Cultural Heritage in Jordan: ACOR’s USAID SCHEP Initiative”

In its third year of implementation, the USAID Sustainable Cultural Heritage Through Engagement of Local Communities Project (SCHEP), implemented by the American Center of Oriental Research (ACOR), is active in engaging different communities across Jordan in cultural heritage preservation and interpretation. SCHEP is supporting nine cultural heritage sites including Ghawr as-Safi (Karak), Busayra (Tafila), Umm al-Jimal (Mafraq), Bir Madhkur (Wadi Araba), the Temple of the Winged Lions (Petra), Bayt Ra’s (Irbid), Wadi Ramm, Ayla (Aqaba), and Madaba.

SCHEP is focusing on empowering youth and women in heritage preservation through awareness and capacity building programs. SCHEP has conducted a series of interactive awareness workshops for schools using different hands-on learning activities, including visiting SCHEP archaeological sites and museums, mending broken pottery, making mosaics, and identifying and reading ancient inscriptions.

This poster will highlight SCHEP accomplishments in empowering youth and women through mainstreaming their important role in preserving cultural heritage and in fostering their creative and intellectual engagement with Jordan’s past. The poster will present different case studies and the stories of youth and women whose lives have been impacted by SCHEP.

Carolina Aznar (Saint Louis University), “The Iron Age Pottery from The Southern Plain of Akko Project”

The Southern Plain of Akko Project aims at improving our knowledge of the relations between coastal and inland Canaanites in the Late Bronze Age and between the Phoenicians and the Israelites in the Iron Age. It is co-directed by Carolina A. Aznar (Saint Louis University, Madrid Campus), Shalom Yanklevitz (University of Haifa), and Michal Artzy (University of Haifa). It includes a survey of the most important sites in the region and an archaeological excavation at the site of Tel Regev. For the survey, 14 sites around the Kishon River and its subsidiaries were surveyed: Tel Hanan, Tel Me’amer, Tel Regev, Tel Nahal, Tell el-Idham, Tel Zavot, Horvat Gedora, Tel Zivda, Khirbet esh-Sharati, Tel Par, Horvat Govit, Tel Hali Ha-Ma’aravi, Tel ‘Alil and ‘En Yivka. This poster synthesizes the most significant Iron Age pottery types found in the survey and explains what this typology contributes to our knowledge of the region at the time.

Narges Bayani (Institute for the Study of the Ancient World), “Iron Age Weaponry in Western Asia: Diffusion of ‘Maka’ Short Swords”

This project examines the evidence for appearance of the so-called “Maka” short swords at sites along the southern coast of the Persian Gulf during the Iron Age, tracing the diffusion of this type of weaponry from western Iran and the greater Fertile Crescent to southeastern Arabia (now encompassing modern-day United Arab Emirates, Bahrain, and Oman). These short swords with flanged hilts and crescent-shaped pommels were often made of bronze, but occasional iron examples have also been found. The entire sword was cast in one piece, which represented a structural advantage in terms of strength, and allowed for use in combat modes that put a substantial pressure on the weapon, such as thrusting or slashing. As such, the marked rise in popularity of this type of short sword in southeastern Arabia during the Iron Age points to a shift in modes of combat and the predominance of close combat situations. This poster aims to showcase the wide distribution of this particular type of short sword across Iran, greater Mesopotamia, and the southern coast of the Persian Gulf, as a marker of cultural interactions between various competing entities in Iron Age Western Asia.

Erin Beatty (Tandy Institute for Archaeology) and Laura Swantek (Arizona State University), “Evolving Architectural Function in the ‘Earthquake House’ at Kourion, Cyprus”

The Late Roman city of Kourion, Cyprus was a product of the political, economic, religious, and social upheaval of the Late Roman world. This dynamic change is most evident in the construction and evolution of public space in the city during the first to fourth centuries A.D., but is also visible in changing domestic architecture. While minor repairs to existing architectural elements suggest some continuity, major plan alterations in the Earthquake House suggest that functional changes in domestic space mirrored functional changes in the urban environment of Late Roman Kourion. This poster will re-evaluate the Kourion “Earthquake House” diachronically and synchronically, based on new evidence from the 2013 and 2014 seasons of the Kourion Urban Space Project, in support of a recursive link between people’s needs and reformation of the structures they use and the cities they inhabit.

Jeremy Beller (University of Victoria), “Raw Material Characterization and Lithic Procurement in the Azraq Basin, Jordan, during the Lower–Middle Paleolithic: A Pilot Study from Shishan Marsh 1”

Recent excavations at Shishan Marsh 1 in the Azraq Basin, Jordan have uncovered two artifact-bearing layers, which correspond to the Lower and Middle Paleolithic. A paleoecological assessment of sediments from these occupational phases indicates a trajectory towards warmer and dryer conditions in the region, similar to those of the present. Like other organisms living under these harsh conditions, hominins were forced to contract around the receding spring-fed oasis of the Shishan Marsh, ultimately leading to

increased competition for resources. In order to survive around this desert refugium, hominins likely had to engage in certain adaptive strategies, such as predator avoidance, carcass protection, and a broader subsistence base. Consequently, Shishan Marsh 1 presents the opportunity to investigate lithic procurement strategies practiced by hominins of the Lower and Middle Paleolithic in a water-stressed and arid environment. A pilot provenance study of chert sources in the region and a sample of 35 hand-axes are being conducted using LA-ICP-MS. The preliminary results indicate that while local procurement was predominantly practiced, hand-axes of more distant sources were also brought into the site. In addition, there is a broader variety of sources exploited during the Middle Paleolithic occupation than the Lower Paleolithic. This tentative pattern is indicative of more opportunistic and embedded procurement, as focus shifted to other survival activities.

Amanda Buessecker (Brigham Young University) and Jeffrey Chadwick (Brigham Young University), “The Stylistic Integration of Egyptian Iconography within Late Bronze Age Canaan”

The globalized Late Bronze Age world was one of sophisticated trade, conquest, and foreign influence in much of the eastern Mediterranean and Near East. Archaeological excavations in modern Israel have revealed numerous artifacts of Egyptian origin and style within Late Bronze Age Canaan. The Late Bronze Age in Canaan encompasses the 18th through 20th dynasties in Egypt, and evidence of Egyptian control in Canaan is manifest throughout the reigns of Thutmose III, Amenhotep III, Akhenaten, Ramesses II, and Ramesses III. Egyptian administrative centres have been recorded at Megiddo, Beth Shean, Jaffa, and Deir el-Balah, and this poster will present a visual example of the nature of Egyptian-style artifacts at these sites as they reflect the relationship between a Canaanite elite and the Egyptian ruling class. Although there is some evidence of the importation of Egyptian goods as luxury items, especially at cities such as Lachish, Late Bronze Age Canaanites of the working class retained their own iconographic representations and styles with very few exceptions. Temples, stelae, statues, and jewelry found in the region suggest that Egyptian iconography penetrated only into administrative and cultic centers established by Egypt. Canaanite culture as a whole, however, did not extensively adopt an Egyptian iconography or cultural expression, and there is little case for Egyptian infusion into the presentation of Canaanite identity.

Ivan Stepanov (University of New England), Peter Magee (Bryn Mawr College), Kristina A. Franke (University of New England), Charlotte Cable (University of New England), Yaaqoub Yousif Al Aali (Dubai Municipality), Mansour Boraik Radwan Karim (Dubai Municipality), Lloyd Weeks (University of New England), “Insight into the Earliest Iron Technology in Southeastern Arabia: Comparative Analysis of the Ferrous Remains from Saruq al-Hadid, Dubai and Muweilah, Sharjah”

In southeastern Arabia, the period from 1300–300 B.C. is conventionally known as the Iron Age, despite the fact that the evidence for the use and production of iron in the region at this time is both small-scale and rare. However, the recent discovery of Saruq al-Hadid in the desert of Dubai has revealed more than 200 kg of remains of Iron Age ferrous and bimetallic artefacts that challenge previous understandings and raise questions about the adoption and use of ferrous metallurgy in Arabia (and the Near East more widely). The settlement of Muweilah, located in coastal Sharjah, is the second Iron Age site after Saruq al-Hadid with non-negligible evidence (several kilograms) of ferrous remains including artifacts and ironmaking slags, production residues that were not found at Saruq al-Hadid. The present research provides insight into the nature of iron technology in southeastern Arabia through complex investigation of ferrous artifacts from these two sites: typological analysis, study of fabrication techniques via optical microscopy and x-ray imaging, assessment of the carbon content of the metal by metallography, and insight into provenance through analyses of slag inclusions by SEM-EDS and LA-ICP-MS. Preliminary results reveal dominance of different object typologies at each site and similarities in the overall quality of the metal largely represented by soft iron and mild steel. Chemical analyses suggest similar provenance of artifacts at both sites, although the Muweilah assemblage is characterized by a

wider variation, a possible indication that iron at this site was coming from a larger number of sources.

Daniel Calderbank (University of Manchester), “Who Set the Standard? Assessing Plain Ware Pottery at Tell Khaiber, Southern Iraq”

Plain, standardized pottery is often interpreted as the direct result of state interference. Production of vessels is thought to have been governed by state-attached specialists, while their communal contexts of use are said to have strategically promoted shared cultural or political identities. Recent studies are, however, beginning to emphasize the decentralized structure of ancient state societies, and are also calling into question the assumed mass production of pottery. Recent excavations at the Sealand period (ca. 16th century B.C.) site of Tell Khaiber provides critical new material with which to assess these issues. In this period, large-scale state collapse and social flux in the southern plains stand in stark contrast to the continuation and resilience of a distinct pottery tradition—a tradition of plain, standardized vessel shapes.

The evidence from Tell Khaiber is therefore inconsistent with the view that standardized pottery was a manifestation of state power. Envelope systems, in which vessels of the same type are overlain and the similarities and differences are judged, present an effective visual indicator of what constituted an ideal vessel shape in Sealand society. Coupled with CV (Coefficient of Variation) statistics, these envelope systems demonstrate low-intensity production by potters with variable skill levels. Consequently, this poster suggests that vessel standardization at Khaiber was driven by informal everyday interactions between producers and consumers in a decentralized economic system, rather than by direct state imposition or mass-production.

Mark Cavanagh (Tel Aviv University), Guy Stiebel (Tel Aviv University), and Dafna Langgut (Tel Aviv University), “Dust to Dust, Ashes to Ashes: The Charcoal Fertilizers of King Herod the Great”

In his account of the Jewish War, Josephus (VII, 288) relates how Herod the Great (74/73–4 B.C.E.), the Roman-allied king of Judaea, transformed the top of his remote, monumental desert fortress of Masada into an agricultural plain, so that the inhabitants might sustain themselves should procuring outside provisions become difficult. Utilizing aerial photographs taken prior to the large-scale excavations that have taken place upon the site’s summit, the likely location of such a plain was identified on the basis of sediment typology and surrounding structures. As part of the first season of the renewed excavations directed by Guy Stiebel from Tel Aviv University, a survey was conducted and a number of probes were made into the surface of the plain. The aim was to ascertain and delineate the boundaries of the presumed agricultural field and to gather archaeobotanical materials to help understand the agrarian and sustainability practices of the occupants. This poster presents in part the results of that investigation. For the first time, charcoal (belonging to species gathered locally) and ash (identified by the presence of graded microcharcoals occurring in greater numbers closer to the surface than below) were found together, corroborating contemporaneous Early Roman accounts of their collective use and benefits as a plant fertilizer. Future research, including palynological analysis, 14C dating, and sedimentological and total organic carbon content tests will continue to elaborate on these preliminary findings.

Chloe Clouse (University of Kansas), Christina Olson (University of Kansas), and Eric Welch (University of Kansas), “The Missing Link? Olive Oil Production in the Ninth Century B.C.E. at Tell es-Safi/Gath”

As the basic dietary source of fat, a common fuel for lamps, and the base of cosmetics and medical balms, olive oil was in constant demand in antiquity. Because the production of olive oil uses large stone components, it is very easy to track its production in the archaeological record. To date, excavations in Israel have yielded a strong typology for Iron Age olive oil presses with two major known forms, dating to the 12th–10th centuries B.C.E. and to the eighth and seventh centuries B.C.E. What is missing from the current typology is a comprehensive understanding of how olive oil was produced during the ninth century B.C.E.

As a city with its terminal phase in the ninth century B.C.E., Tell es-Safi/

Gath offers valuable insight into this question. In the lower city of Gath, as well as on the tell, excavations have uncovered two areas thought to be dedicated to olive oil production. This poster will present the monolithic stone installations of Areas A and K from Tell es-Safi/Gath, and explore their relationship to the known types of olive presses for the Iron Age. In it we will suggest that the monolithic stone basins found at Safi represent an evolutionary stage between the primitive oil press of the 12th–10th centuries and the better-known beam press of the Iron Age IIB.

Steven Edwards (University of Toronto), “WQ-120: A Middle Bronze Age Farmstead along the Wadi Qusayba, Jordan”

The site WQ-120 was first identified in 2012 on the northern flank of the Wadi Qusayba, Jordan. A small test pit was excavated next to several stone wall lines visible on the surface and adjacent to the modern footpath leading eastward from the Jordan Valley to the plateau above. Ceramics collected during this operation presented a range of material dating from the Middle Bronze Age through Roman periods. The Wadi Qusayba Project returned to WQ-120 in 2014 in an attempt to further delineate the plan of the structure first identified in 2012, and also to refine its dating. Preliminary results from this most recent season indicate that the building comprises at least two rooms and a stone glacis or retaining platform. The eastern room contains a doorway and threshold on the south, providing access to a street or corridor. Immediately south of the footpath, and downslope from the main building, excavations revealed a small storage unit containing several MB II cooking pots. Pottery collected from the floors within the main building corroborate a MB II date for the structure. The main building at WQ-120 remains only partially exposed, but it appears to represent a small, isolated MB II farmstead. A nearby spring provided access to water. Given its location and small size, WQ-120 offers a unique opportunity to explore a non-urban site dating to the Middle Bronze Age.

Florencia Fustinoni (University of British Columbia), “If Stones Could Speak: The 2000 Year Old Square at Tell es-Safi/Gath”

The site of Tell es-Safi/Gath has one of the best-excavated stratigraphic trenches in all of Israel: Area F. It has been under the guidance of Area Supervisor Jeffrey R. Chadwick since it opened. Square 16C in Area F first revealed the room of a house that was built up directly against the large city wall of the upper city of the site. The room levels were in constant, domestic use from the Late Bronze Age to the Iron Age IIA. During my tenure as square supervisor, we excavated through the Late Bronze Age layers, down to Middle Bronze Age (otherwise known only in Area F on the entire tell) and, just this past season, Early Bronze Age levels (in the form of a wall and stone installation). The square is a prime example of the complex stratigraphy of the site as a whole, and serves also to demonstrate the process associated with digging a stratigraphic trench throughout several seasons. The uniqueness of Square 16C has allowed us to track the various uses of a singular square over an astonishingly long period of time, and to constantly arrive at new conclusions in regards to not only Area F as a whole, but also the entire site.

Elizabeth Gibbon (University of Toronto), “Local vs. Global Interaction in the Wadi Rabah Period of the Southern Levant: A Social Network Analysis Approach”

The purpose of this project is to investigate the relationship between local and global interaction networks during the Wadi Rabah period (5746–5118 cal B.C.) in the southern Levant. Previous scholarship has characterized the Wadi Rabah period as a time of socio-cultural ‘devolution’ or ‘collapse.’ However, there is still evidence for the widespread adherence to particular technological traditions and long-distance trade of raw materials across the Levant. In this project, social network analysis techniques (e.g. clustering, centrality, density) are employed to explore the integration and connectedness of Wadi Rabah settlements across the Levant. Similarities of proportions of ceramic wares and obsidian sources are used as evidence of more direct and/or intensive interactions between settlements. Analysis of the Wadi Rabah network suggests that the structure of ancient social interaction simultaneously allowed

for the development of locally situated identities within a more expansive and dispersed global network. The increasingly localized interaction sphere of the Wadi Rabah period does not necessarily have to reflect some sort of socio-cultural ‘collapse,’ but should instead be explored in the context of complex and flexible social relationships.

Natalia Handziuk (University of Toronto), “Band-Slip Diversity in Early Bronze Age Jordan”

Band-slip is a motif applied to ceramics during the Early Bronze Age in the Levant. It consists of a series of intersecting bands that extend across the body of a vessel in a net-like pattern. The band-slip motif is a prevalent feature in the ceramic assemblage at Tell Rakân II, a large-scale EB I olive oil press in the northern Jordanian Highlands. This poster presents an analysis of band-slip recovered at Tell Rakân II, with a focus on its distribution across vessel types and the application of the motif, including color and patterning. This analysis enables an insight into the relationship between band-slip and the exchange of goods, such as olive oil, in the commodity-driven economy of the Early Bronze Age. Furthermore, the analysis of the band-slip motif aims to evaluate the effectiveness of the category “band-slip ware” as an overarching category at Tell Rakân II, and across the broader southern Levant in the Early Bronze Age.

Madaline Harris-Schober (University of Melbourne), “Cult of the Philistines: Ethnographic Artistic Reconstruction of Ritual Space”

Ritual spaces are emblematic of the past human condition. Unfortunately, with the positivistic turn of the last century, researchers sought to rely solely on the archaeological record in order to eliminate the possibility of error. As a result, the understanding of ritual space and cultic items became two-dimensional and dehumanized. It is now understood that archaeology is partly interpretive and not solely data driven. Using an informed artistic lens, this project explores new avenues of understanding ritual space, cultic items, and religious identity through the reconstruction of Philistine sacred sites and temples. Working from known Philistine cultic sites such as Tell Qasile, Tell es-Safi/Gath, Ekron, and Ashkelon, we can begin to decipher Philistine ritual space through a new method of reconstruction called ‘ethnographic artistic reconstruction.’ This method of inquiry requires the archaeologist to analyze and explore all aspects of ritual space, employing sensory, experimental, and interpretive archaeology. This poster will present examples of ethnographic artistic reconstruction using the archaeological evidence of the elite ritual space at the site of Tell es-Safi/Gath, which exhibits characteristics indicative of cultural entanglements with the Aegean, Cyprus, Egypt and Anatolia.

Britt Hartenberger (Western Michigan University), Tina Greenfield (University of Saskatchewan), and Dirk Wicke (Goethe-Universität), “Room Function at the Assyrian Provincial Palace at Ziyaret Tepe (Ancient Tušhan): Combining Architectural, Faunal, and Artifactual Data”

The multi-period site of Ziyaret Tepe (Turkey) was excavated from 1997–2014 by an international team led by Tim Matney of the University of Akron. Excavations revealed a substantial Neo-Assyrian settlement identified as ancient Tušhan, which Ashurnasirpal II claimed to have rebuilt in the ninth century B.C. A substantial structure on top of the mound matches architecture typical of Assyrian palaces: a public reception or ‘throne’ room lies between by two courtyards, which are surrounded by smaller rooms. The site provides a unique opportunity to study architecture, features, ecofacts, and finds to determine room functions for an Assyrian provincial palace, since few detailed, room-by-room finds lists have been published from other palaces. Greenfield, Wicke, and Matney (2013) have already interpreted functions for the Tušhan palace rooms using architectural and faunal data. They suggest that the courtyards were used for food preparation, the reception room for entertaining, and the smaller rooms as a bathroom and a domestic suite. This poster will illustrate the spatial distribution of newly integrated additional artifactual and micro-remain data and use these data to re-visit the functions suggested from architectural and faunal data. We interpret the artifact

distributions to support earlier designations of certain areas as containing food production, as well as indicate several possible additional room uses.

Nicole Herzog (University of Tübingen) and Sebastiano Soldi (National Archaeological Museum of Florence), “Shaping Cuisines: Variation in Cooking Pot Ware Forms from Iron Age Zincirli Höyük”

Ongoing excavations at Zincirli Höyük (ancient Sam'al) have revealed extensive exposure of domestic space occupied throughout the Iron Age II–III period. While the Cooking Pot Ware (CPW) from these households, reflecting the greater ceramic assemblage, is broadly similar to sites in the wider region, this ceramic category also exhibits a noticeably local character, displaying features that seem to be typical of the ceramic production of the Karasu river valley's settlements during the Iron Age. A preliminary analysis of CPW from Iron Age Zincirli shows a certain range of variation in forms, many of which are unattested in the greater region. As is common to nearby Iron Age sites, the highly standardized globular hole-mouth cooking pot dominates this ware category at Zincirli. However, a small but significant proportion of CPW vessels differ greatly from these expected forms. This poster introduces the preliminary typology of Zincirli's Cooking Pot Ware vessels and their distribution through time and space, and discusses this specialized cookware as a marker of local practices in the foodways of ancient Sam'al—particularly in the relationship between food preparation and ritual.

Mara Horowitz (Purchase College, State University of New York), “Experimental and Experiential Archaeology: Foodways and Plates at LB I Alalakh”

The LB I Orontes River region is poorly documented and poorly understood with respect to ongoing political, social, and cultural changes that laid the foundation for the great International Age of the LB II. On the local scale at ancient Alalakh, this project is working with the ceramic material correlates of foodways to build a narrative of continuity and change that can illuminate local life in this tumultuous period. Like all aspects of household archaeology, dining style and change therein can be seen as a microcosm of the world around it. The presentation and consumption of the meal is culturally specific, but must also respect practicalities of food and vessels. Experiential testing of reproductions created at the newly founded Albion Experimental Archaeology Studio has focused on a common vessel introduced in the LB I across the Near East, the v-shaped plate. Ancient pottery is often recovered in sherd form and studied via section drawings. In section, the v-shaped plate does not look significantly different from the shallow bowls that preceded it in the Middle Bronze Age. However, experiential testing of reproductions has shown major differences in the functional parameters of these vessels that would have affected dining style. In this way, we can begin to reconstruct changes in the experience of dining, a vital part of everyday life, and place those changes within the context of environment and diet, the Hurrian migration, imperialism, and internationalism at LB I Alalakh.

Jeffrey P. Hudon (Andrews University), “Refreshing an Archaeological Site: The Example of Tall Hisban, Jordan”

Aside from sporadic conservation efforts focused on installations and structures, archaeologists usually give little consideration to the site itself once excavations are completed. Instead, their attention inevitably focuses upon the laborious process of studying and publishing the finds. Meanwhile, the site sits abandoned and neglected. Deterioration of its now exposed features quickly follows. Many excavated sites also suffer from illicit digging and vandalism, as well as becoming a trash receptacle for the surrounding communities. Even at sites regularly visited by tourists and/or sites with restored walls and other features, consistent site refreshing (periodic maintenance, repairs and cleaning of pathways, viewing platforms, and signage)—which draws comparisons with maintaining a botanical garden—is essential for both site preservation and visitor presentation. Moreover, refreshing archaeological sites offers year-round employment opportunities, educational prospects, and an all-important sense of ownership for the surrounding population and other stakeholders.

The poster will elaborate on site refreshment activities carried out at Tall Hisban during the summer of 2017.

Amy Karoll (University of California, Los Angeles), “Between Collapse and Mobility: Quantifying Shifts in the Third Millennium B.C. Southern Levant”

The EB IV (ca. 2500–2000 B.C.) in the ancient Near East is a phase of “collapse” and has caused some debate in recent years. Towards the end of the third millennium B.C., the previous urban system broke down; most of the population abandoned sites across the southern Levant. Even though this period has been explored since the 1950s, there is little consensus on how and why the population shifted. Therefore, this project looks at the evolution of urbanism and its effects on the local population. Changes occurred after people first formed cities in the EB II–III (ca. 3000–2500 B.C.), to their use of rural economy during the EB IV, and finally their resettlement of urban centers in the MB I (ca. 2000–1600 B.C.). Specifically, I will quantify the shifts in location of settlements utilizing Geographic Information Systems (GIS) and then put them into a larger framework of mobility types and diachronic shifts in settlement patterns in response to changes in the political, economic, social, and climatological atmosphere.

Kristina Reed (La Sierra University), Sarah Burton (Andrews University), Lawrence Geraty (La Sierra University), Oystein LaBianca (Andrews University), Randall Younker (Andrews University), and Douglas R. Clark (La Sierra University), “Golden Excavations: Fifty Years of the Madaba Plains Project”

The Madaba Plains Project (MPP) began in 1968, and 2018 marks its 50th anniversary. It is one of the longest-lived continuous archaeological projects in the Middle East. Working in the highland plateau of central Jordan between Madaba and Amman, MPP explores the land of ancient Ammonites and Moabites. Over the years, nearly a dozen directors and thousands of volunteers and students have participated in excavations, surveys, and ethnographic and anthropological projects, and scores of publications, including books and articles, have been produced.

Three major sites comprise the Madaba Plains Project: Tall Hisban (biblical Heshbon), Tall al-'Umayri, and Tall Jalul. Dating from the Early Bronze Age through the Ottoman Period, these sites constitute a rich archaeological record. Over the years, spectacular artifacts and architecture have been unearthed, adding to our understanding of the history and culture of the region, as well as of the biblical record. Among the celebrated finds are pools and reservoirs, seals and inscriptions, gates and defensive systems, temples and religious areas, ceramic technology, and domestic structures. As we look back at 50 productive years of archaeology in the Madaba Plains region of Jordan, we also look forward to a promising future for the Madaba Plains Project.

Haley Wilson Lemmon (Brigham Young University), George Pierce (Brigham Young University), and Lincoln Blumell (Brigham Young University), “An Analysis of Ptolemaic and Roman Period Stamped Amphora Handles from the Fayum, Egypt”

The role of transport amphorae in ancient economies is the subject of a long-standing discussion in the academic community, involving ways to reconstruct the economies of their production centers, their contents, the end consumers, the distribution networks connecting the production and consumption sites, and the possibility of re-use of these vessels as shipping containers for other commodities. Handles bearing stamped eponyms present the opportunity to analyze these artifacts philologically as individual items but also as indicators of the local economy of their findspots and the larger regional and supra-regional economies reflected in their manufacture and consumption. This study presents an analysis of eponyms and amphora types represented within a large cache of unpublished stamped amphora handles recovered in salvage excavations during the 1970s in Medinet Fayum and currently in the possession of the Egyptian Supreme Council of Antiquities. Although such analyses may not fully answer questions about the role of amphora shipping in the economy of the Fayum region, the analysis and

forthcoming publication of the archaeological and philological data derived from these stamped jar handles will contribute to further academic discussion of production, transport, and consumption of commodities in the Ptolemaic and Roman periods.

Leilani Lucas (University College London; College of Southern Nevada) and Dorian Fuller (University College London), “Against the Grains: The Story of Early Agriculture in Cyprus”

Our understanding of the timing and dynamics of the spread of populations to the island of Cyprus has changed significantly in the last few decades. Recent research on a few sites has provided more detail on not only when the initial explorers and farming populations arrived, but also how the unique culture of prehistoric Cyprus developed. One key development that has long characterized the island in prehistory is the introduction and sustained hunting of Mesopotamian fallow deer (*Dama mesopotamica*). In this study, archaeobotanical and faunal data from sites dated to the Neolithic through the Late Bronze Age are integrated for the first time. When compared to the mainland, the data from Cyprus reveal a slower transition to full agricultural dependence, characterized by fluctuations in the reliance on cereal-based agriculture, arboriculture, pig and caprine management, and deer hunting. Cyprus experienced a slow and bumpy transition from a small population of mobile cultivator-hunters to farmer-hunters to fully committed agriculturalists. This unique pathway was likely an adaptation to low population densities, with correlations between seasonality of deer hunting and harvesting of cereals and the development of cash crops and pig farming.

Caitlin Chartier (East Carolina University), Laura Mazow (East Carolina University), and Siddhartha Mitra (East Carolina University), “The Function of Philistine Strainer Jugs”

This project investigates the function of Philistine strainer jugs. Accepted research has interpreted the strainer jugs as being used to strain beer or wine. We posit an alternative hypothesis—that the strainer jugs were used to sprinkle olive oil on wool in order to moisten it for weaving purposes. This would be consistent with what we know of weaving technologies in the Iron Age. To test this idea seven samples of strainer jugs excavated from Tel Miqne-Ekron were analyzed by both stable isotope analysis and organic residue analysis by gas chromatography-mass spectrometry (GC-MS). The results of this research assist in better understanding Philistine practices in the Iron Age. Bulk stable isotopes of carbon suggest some influence from C4 plants. Results from residue analysis will be compared to isotopic analyses.

Eilis Monahan (Cornell University), “The Ayios Sozomenos Survey 2016: Cypriot Bronze Age Regional Settlement Patterns in a Fortified Landscape”

The Ayios Sozomenos Excavation and Survey Project (ASESP), directed by Dr. Despina Pilides (Department of Antiquities, Cyprus), was established to investigate the diachronic development of settlement and society in the catchment of the Yalias and Alykos rivers’ confluence in central Cyprus. This landscape is of particular interest due to dense habitation during the transition from the Middle to Late Cypriot Bronze Age and the presence of three monumental fortresses atop the Ayios Sozomenos plateau thought to date to this same time period. Research on this period and its accompanying social transformations has suffered from a lack of relevant and recent data, particularly of a regional or landscape nature. To address this deficiency, a “back-to-front” resurvey of the Bronze Age sites of the region was undertaken during fall 2016 in order to improve our knowledge of site location, size, chronology, and where possible, the nature of their use. Archival research was followed by pedestrian survey, with different survey techniques adopted to best address the great variability in site conditions, while maximizing data recovery appropriate to our research questions. This poster presents our methodology and the preliminary results of the survey, including new evidence for population aggregation, increased settlement density, and the chronological development of the fortifications. Discussion considers how settlement topography may relate to the fortifications and to the valley

landscape, highlighting issues of visibility, defensibility, and access to natural resources and routes of communication.

Jana Mynarova (Charles University) and Petr Zemanek (Charles University), “Old Assyrian Cuneiform Palaeography: A New Project”

In 2016 a new research project entitled “Analysis, description, and archiving of aggregate information on properties of cultural heritage artifacts and usage of such data in restoration, conservation, and research” (DG16P02M022) was started at the Charles University, the National Museum, and the Institute of Theoretical and Applied Mechanics (CAS), sponsored by the Ministry of Culture of the Czech Republic. One of its main aims is to prepare a tool for the study of the palaeography of Old Assyrian tablets.

The Prague group of “Cappadocian tablets” represents a small but notable collection linked to the archaeological activities of Bedřich Hrozný at Kültepe (ancient Kanesh) in 1925. At present, the Prague collection consists of 416 documents, with administrative texts, memoranda, letters, and legal texts represented unevenly in reference to the number of documents. As opposed to comprehensive treatments of the 1925 excavations, the tablets were published by means of two volumes (Matouš – Matoušová-Rajmová 1962; Hecker – Kryszat – Matouš 1998) and presently can be accessed by means of a series of high-resolution digital images via the CDLI. Given the importance of the Prague collection, the palaeographical study of the corpus represents a long-neglected task. It is the aim of the proposed poster to introduce both the project, designed as a complex system combining and integrating several domains of information (obtained through various types of analyses, including high-resolution computed tomography, spectrometry, X-ray Fluorescence, and colorimetrics), and one of its key-elements, the palaeographical analysis, discussing its methodology, techniques, and possible results.

Thaddeus Nelson (Stony Brook University), “Addressing the Loom: How to Count Loom Weights When You Have Too Much of a Good Thing”

Weavers used warp-weighted looms from the Neolithic to the twentieth century C.E. and from the southern Levant to Greenland. The clay, stone, and bone weights for which these looms are named create a uniquely rich archaeological record of weaving. It may be because warp-weighted looms leave a richer record than wooden varieties of looms that the hundreds or thousands of weights found in excavations are a challenge for archaeologists to interpret. Here, I suggest that archaeologists faced with large numbers of loom weights spread across their excavations need to deal with the same counting problem that other material specialists (e.g. ceramicists and lithicists) have tackled for their respective forms of material culture. In order to address this need, I demonstrate an initial comparative measure of the number of loom weights that accounts for both the size and the number of these artifacts. Recognizing that this is a preliminary description with its own limitations, I will suggest further research that may strengthen this method of counting loom weights.

Josie Newbold (Brigham Young University), “The Tombs of Petra in Both Geological and Cosmological Space”

Many studies have discussed the first century B.C. to first century A.D. Nabataean rock-cut monuments in the city of Petra, Jordan. These surveys have provided information about proposed chronologies for the façade tombs and limited data about the burial customs and funerary rites of the Nabataeans themselves. One topic that has not yet been explored is Nabataean tomb placement in relation to the structural geology of the Petra region. During the 2014 field season of the Brigham Young University Ad-Deir Monument and Plateau project, it was discovered that the Ad-Deir monument (“The Monastery”) was built between geologic faults and fractures, suggesting that the Nabataeans used these features to carve the façade. In order to study the Nabataean knowledge of geology and the landscape used in the placement of their tombs, I have been conducting a survey of the Petra façade tombs, with an emphasis on their relationship to the local and regional faults and fractures. The data I collect will help archaeologists better understand the Nabataeans’ placement of monumental tombs, as well as how their preferences

reflected an awareness of the geological and cosmological worlds in which their civilization evolved.

Erika Niemann (Mississippi State University) and Billy Wilemon (Mississippi State University), “PXRF and Vessel Form Analysis”

This project explores whether portable X-ray Fluorescence (PXRF) can be used in archaeological analysis as a tool to identify whole vessel forms of pottery sherds based on similarities among elemental compositions in case studies. PXRF analysis uses x-rays to identify the elemental composition of the item tested. If certain types of vessels (e.g., all bowls, or all storage jars) are made with similarly composed clay, or from a single clay source, then those vessels should exhibit the same elemental signature. This case study examines 150 restored vessels from the Iron Age II stratum in Field V at Tel Halif, Israel from the 2008–2009 excavation seasons. The paste of each vessel underwent PXRF for both light and heavy elements. The compositions were grouped into a hierarchical structure of similarity. Descriptions, including vessel form, were gathered for each vessel. If certain clays or pastes were used exclusively for particular vessel types, those vessel types will group together in the PXRF hierarchical structure. If grouping is tight enough within a site sample, or stratum sample, other sherds (including non-diagnostic sherds) may be tested to identify vessel form without extensive restoration of the entire collection. If vessel forms are not clustered or exclusive to groups in the hierarchical structure, then selection of clay for particular vessel form seems unlikely. Portable X-ray Fluorescence is useful for various types of study in archaeology; this project highlights one potential use of this PXRF technology for analyzing pottery collections and vessel forms.

Kristina Reed (La Sierra University), “Tall al-‘Umayri: 32 Years of Excavations and Discoveries”

The Madaba Plains Project (MPP) began in 1968, and 2018 marks its 50th anniversary. It is one of the longest-lived continuous archaeological projects in the Middle East and is comprised of three major sites in Jordan: Tall Hisban (biblical Heshbon), Tall al-‘Umayri, and Tall Jalul.

Tall al-‘Umayri, located south of Amman, was first surveyed in 1976 as part of a regional survey, and excavations began in 1984. The Queen Alia airport highway splits the site into ‘Umayri-West and ‘Umayri-East. ‘Umayri-East consists of a Roman church, while ‘Umayri-West is the main tell, which dates from the Early Bronze Age to Iron Age II. In conjunction with five consortium colleges and universities, ‘Umayri has been excavated for 18 seasons spanning 32 years.

Over the years, spectacular artifacts and architecture have been unearthed. Among the celebrated architectural finds are an Early Bronze Age dolmen, Middle Bronze Age domestic structures and a rampart defensive system still in use during the Iron Age, a Late Bronze Age temple, and an Iron Age four-room house and associated structures. Artifact finds include the Baalis seal, an alabaster jar, metal weapons and implements, standing stones, cultic objects, 70 pithoi, imported pottery, and hundreds of additional pottery vessels.

As we look back at the excavations at Tall al-‘Umayri and 50 productive years of archaeology in the Madaba Plains region of Jordan, we also look forward to a promising future for the Madaba Plains Project.

Rachel Risk (Baylor University) and Deirdre Fulton (Baylor University), “Kathleen Kenyon and John Allegro: Revealing the Contents of the Dead Sea Scrolls”

The Dead Sea Scrolls have been a source of fascination since their initial discovery in 1947. They have also been a source of controversy among scholars, however, who debate their origin and significance. This study brings to light a little-known conflict between two British scholars, Kathleen Kenyon and John Allegro, in the quest to recover, translate, and publish the Dead Sea Scrolls. A thorough examination of correspondence written between 1960–1965, housed in the Kathleen Mary Kenyon Collection at Baylor University, reveals two opposing sides in the debate concerning how the information contained in the scrolls should be handled. While Allegro was of the opinion that the text and translation of the scrolls found in Cave 11 should immediately be

published and placed on exhibition in England and the United States, Kenyon and her colleagues disagreed, preferring a more careful approach, since the delicate scrolls were desperately in need of conservation work to keep them from disintegrating entirely. Additionally, Allegro angered Kenyon by insisting that some of the scrolls contained clues to the location of lost treasures of the Second Temple, and by leading his own excavations that tended to damage historical sites rather than produce important discoveries. This study provides a particularly powerful example of the ongoing relationship of ethics, research, and information distribution in the archaeological community.

Rebekah Ross (Southwestern Baptist Theological Seminary) and Laura Swantek (Arizona State University), “The Good China: The Cultural Biography of the Millefiori Plate at Kourion”

This poster will present the cultural biography of an imported glass plate dated to the Late Roman period, found in the remains of an elite structure within the city of Kourion on the southern coast of Cyprus. The various fragments of the large green and yellow millefiori plate, scattered throughout the remains of a destroyed building, attest to the catastrophic end of both the structure and its contents.

Millefiori plates of this kind were made in only one place during this period: the Kharga Oasis, Egypt. The distance traveled by this plate from site of manufacture to consumption, and the object’s quality, suggest that it was not for everyday use, especially in the world of utilitarian ceramic plates. Further, given its find spot among destroyed marble wall coverings, painted wall plaster, porphyry, and carved gypsum, it is possible to state that this plate was a luxury item in a well-appointed building.

This research focuses on the use-life of the millefiori plate, illustrating the manufacture, process of import, consumption, and violent end, while also examining the significance of this object in the history of the elite structure where it was found and the socio-economically changing city of Kourion in the fourth century C.E.

Andrea Squitieri (Ludwig-Maximilians-Universität München), Florian Janoscha Kreppner (Ludwig-Maximilians-Universität München), and Karen Radner (Ludwig-Maximilians-Universität München), “Peshdar Plain Project 2015–2017: Investigating the Assyrian Province of the Palace Herald on the Frontier to Iran”

This poster presents the results of the 2015–2017 excavation seasons at the Neo-Assyrian Dinka settlement complex, in the Peshdar Plain, Sulaymaniyah province, Iraqi Kurdistan. The investigation of this site is part of the Peshdar Plain Project, directed by Karen Radner and Janoscha Kreppner, and conducted under the auspices of the Sulaymaniyah Antiquities Directorate. The project aims to uncover the ancient history of this area with a focus on the ninth–seventh centuries B.C. The project was inaugurated in 2015 after a 725 B.C. tablet was found on the surface of Qalat-i Dinka, indicating that this area was part of the Neo-Assyrian empire and possibly is to be identified with the Province of the Palace Herald, on the border with the kingdom of Mannea (Radner 2015). The multidisciplinary approach of this project casts light on a hitherto little known frontier region of the Neo-Assyrian empire, and it provides the rare chance to study a site located on the frontier with the Medians and the Mannans in Iran. This project offers the chance to study the local pottery development, link it to the historical setting, and provide a chronological anchor that can help synchronize the western Iranian pottery cultures with the Neo-Assyrian material. This poster will also show some of the environmental studies conducted in parallel to the excavation.

Veli Voipio (Aalto University), “Was the Equinox Year in Use in the Early Part of the Biblical Period?—A Possible Solution to Biblical Chronology”

The Pentateuch seems to support the existence of two new years during one solar year. I suggest that in ancient Israel an equinox year (six months long) was in place until Tiglath-Pileser III, when the “Assyrian Koine” began in the Levant.

The reign Solomon is traditionally dated to the tenth century B.C.E. but many archaeologists believe that Jerusalem became a significant city only in

the latter half of the ninth century B.C.E. According to my chronology, the reigns of David and Solomon fall in the middle of the ninth century, and the reign of Omri at the end of the ninth century.

These synchronisms seem to fit: Hadad-ezer, present at the battle of Qarqar, could be the same figure mentioned in the Old Testament at the time of David and Solomon. Shishak from Solomon's time could be Sheshonq III from 837 B.C.E. onwards. The reign of Omri is close to the time of the Mesha stele, dated by some to 810 B.C.E.

Another suggestion is that the sabbatical year was actually an intercalary month when harvesting and sowing were postponed for a month. Thus 7 years would be $6 \times 6 \text{ months} + 1 \text{ month} = 37 \text{ months} = \text{three solar years}$. And $7 \times 37 \text{ months} + 1 \text{ month (jubilee year)} = 260 \text{ months} = 21 \text{ solar years}$. If the word "year" was originally more like a timepoint/harvest festival than a time duration, then this interpretation would seem plausible.

If my speculation is correct, then I expect more synchronisms will be found.

Vanessa Workman (Tel Aviv University), Orit Shamir (Israel Antiquities Authority), Thomas E. Levy (University of California, San Diego), and Erez Ben-Yosef (Tel Aviv University), "Preserved in the Smelt: Analysis of Fabric Impressions on Iron Age Technological Ceramics from Faynan's Copper District"

A comprehensive collection of copper smelting-related technological ceramics was uncovered as part of the Edom Lowlands Regional Archaeology Project's (ELRAP) excavations at Khirbat en-Nahas and Khirbat al-Jariyeh. Many of the ceramic fragments in this collection were found with textile impressions, which testify to the use of textiles as part of the manufacturing process of tuyères and furnaces during the wet clay stage; this practice left behind an indirect record of the fabrics utilized in the 11th–9th centuries B.C.E. within the Faynan copper district. As a limited collection of textile materials was found preserved in this environment, our study analyzed the impressions as a proxy to generate empirical data on the realities of fabrics during the height of copper exploitation in the region. We were able to identify techniques utilized in the textile tradition at Iron Age Faynan and to assess the quality of fabrics employed in the process of fashioning tools for the metal workers. Ultimately, these data are compared to textiles found throughout the southern Levant in order to generate a more complete picture of the variety of techniques within this typically invisible ancient craft tradition.

Randall Younker (Andrews University), "Highlights from the Heights of Jalul"

Work at Jalul (5 km east of Madaba in Jordan) began in 1992. Since that time there have been five full regular seasons on the tell, plus 13 shorter or limited focus seasons on the tell and in the Islamic village to the south. Excavations on the tell have revealed an Iron Age city with an occupational history running from the Late Bronze Age/Iron Age I to the Iron Age IIC/Persian period. Inscriptions and material cultural remains also indicate that different groups of people occupied the site during this period—Israelites from the 13th to ninth centuries B.C.E., Moabites during the ninth and eighth centuries B.C.E., and Ammonites from the late eighth to the late sixth centuries B.C.E. Geographic and ancient sources suggest that the site should be identified with Biblical Bezer—a Levitical city of refuge. Its location near a border undoubtedly explains the cultural diversity found at the site. This poster will provide an illustrated history and highlights of the finds from the archaeological excavations at Tall Jalul, and show how these discoveries and their interpretation fit into the larger research objectives of the Madaba Plains Project (and its sister sites of Hisban and Tall al-'Umayri).

William Zimmerle (Fairleigh Dickinson University; Sultan Qaboos Cultural Centre), "Cultural Treasures from the Cave Shelters of Southern Oman: A Digital Humanities Preservation Initiative of the Painted Rock Art and South Arabian Inscriptions of Dhofar"

Protected by the natural environment in cave shelters, Dhofar's painted rock art and inscriptions in southern Oman are remarkably well preserved,

and give us an unprecedented glimpse into Oman's pre-Islamic history. The petroglyphs and accompanying pre-Islamic South Arabian inscriptions, which extend from the coastal plain to the Rub' Al Khali desert and the Jebel Qara mountains at the beginning of the famed incense trail, where the history of frankincense began, can be tentatively dated to at least the first millennium B.C. The rock art of the Jebel Qara, painted in red and black ink, depict images from the natural environment including *flora* and *fauna* indigenous to the local landscape, consist of hunting and battle scenes, anthropomorphic stick and ritually dressed figures, dhows and other ships, simple pictorial narratives of pastoral life, maps of the wadi, South Arabian alphabetic letters, and ritual emblems such as hand prints to invoke protection. This poster displays a sample of high-resolution photographs taken for the 2017 heritage exhibition curated by Dr. William Zimmerle as a cultural heritage preservation and conservation project. The exhibition, sponsored by the Sultan Qaboos Cultural Centre under the auspices of the Diwan of the Royal Court of the Sultanate of Oman, is traveling internationally through the United States, the United Kingdom, Germany, and the Sultanate of Oman in 2017–2019. It consists of 31 high resolution photographs, informational digitized charts, and three-dimensional images taken across six field sites from current archaeological fieldwork and ethnographic and epigraphic research directed by Zimmerle in Dhofar and sponsored by the Diwan of the Royal Court in Muscat.

Digital Archaeology Demo Showcase

Poster Abstracts

CHAIRS: Thomas E. Levy (University of California, San Diego) and Neil Smith (King Abdullah University for Science and Technology)

Mohamed Shalaby (King Abdullah University for Science and Technology; FalconViz), Ahmed AlHasanat (FalconViz), Khaled Abdelgawad (FalconViz), Luca Passone (King Abdullah University for Science and Technology; FalconViz), Travis Cline (FalconViz), and Neil Smith (King Abdullah University for Science and Technology; FalconViz), “Aerial Mapping and 3D Restoration of Cultural Heritage”

Aerial mapping of cultural heritage sites is a growing discipline within modern industries. In this paper we present the work of two years of development on using drones not only to acquire aerial data from sites but also to fully reconstruct the captured areas in 3D and visualize them for public awareness and asset management. We present the methodology of our approach and explain each step of our workflow to go from aerial capture to visualization. As a demonstration of our approach, we examine the case study of an extensive Aerial and Terrestrial 3D scan of the UNESCO cultural heritage site Al-Balad, Jeddah. We present in this paper the results of our work using Unmanned Aerial Vehicles, Laser Scanning, Structure-from-Motion and a new 3D modeling technique for rapidly reconstructing As-built models of cultural heritage sites.

Sowparnika Balaswaminathan (University of California, San Diego), Aditya Sampath (University of California, San Diego), Subhankar Panda (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Crafting Narratives: Experimentations in Ethnographic Storytelling and Ethnoarchaeological Analogy”

This digital humanities project uses ethnographic and archaeological data to experiment with pedagogy and anthropological storytelling. The Swamimalai bronze-casting sculptor community in Tamilnadu, India claims an artistic heritage dating to the ninth century C.E., tied to the Imperial Chola’s temple building projects. With data collected over an eight-year period, consisting of multimedia, 3D models, and GIS, the website is a digital archive to be used to craft narratives. The site has been created using website development technologies, including HTML, JavaScript, CSS, PHP, and MySQL. These technologies allow the site to be interactive and allow users to create their own narratives in an engaging user experience. Visitors to the site, envisioned as students, choose an anthropological category (“Tradition,” “Governmentality”) and put together materials from the archive to create and publish their anthropological narrative about the Swamimalai sculptors. The published narrative will be open for review and comments from the public, thus encouraging the writers to be reflexive about their position as unilateral narrators of the stories of “others” and encouraging empathy and critical thinking. Furthermore, by opening the practice of anthropological writing to the public, this project aims to reintroduce experimentation into anthropological writing. The project contributes to the University of California Office of the President’s Research Catalyst initiative for “At-Risk Cultural Heritage and the Digital Humanities” by helping to develop an online curation program for both tangible and intangible cultural heritage that can be a source for ethnoarchaeological analogy relevant to ancient metallurgical craft organization in the Levant and Mediterranean.

Kathleen Bennalack (University of California, San Diego), Matthew Howland (University of California, San Diego), Isabel Rivera-Collazo (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San

Diego), “Erosion and *Longue Durée* 3D Modeling of Wadi Fidan 61, A Late Neolithic Site in Southern Jordan”

Wadi Fidan 61, a large village on the edge of the Arabah Valley, was occupied during the seventh millennium B.C., including probably throughout the 8.2ka climate event—perhaps the most significant short-term climate event of the Holocene. Via mapping, computer simulations, and mathematical modeling, we estimate the size and erosional trajectory of the Late Neolithic site and its contemporary landscape, as well as its climatic and hydrological context.

Aaron Greener (University of Haifa; Albright Institute of Archaeological Research), Nathaniel Deaton (Tel Aviv University), Omri Yagel (Tel Aviv University), Craig Smitheram (University of California, San Diego), Vanessa Workman (Bar-Ilan University), Casandra Sobieralski (University of California, Santa Cruz), Mark Cavanagh (Tel Aviv University), Willie Ondricek (Tel Aviv University), and Erez Ben-Yosef (Tel Aviv University), “GIS and Photogrammetry: Digital Mapping and Documenting Ancient Copper Mining and Smelting Sites by the Central Timna Valley Project”

Commenced in 2012, the Central Timna Valley Project (CTV) of Tel Aviv University is a multi-year multidisciplinary research project attempting to elucidate various aspects of the archaeological record in the vicinity of the copper ore deposits of the southern Arabah. As part of this project we have been reinvestigating the main copper mining and smelting sites of the region using several key digital applications, including: 1) dGPS/GIS layered mapping of various sites and areas; 2) topographic modeling and geomorphological reconstructions based on GIS (3D Extension in ESRI ArcView); 3) GIS stone-by-stone mapping of architectural features based on georeferenced aerial photographs (Phantom 2 Vision drone); 4) GIS layered mapping of pXRF soil pollution surveys; 5) 3D documentation of excavated features, based on photogrammetry (Agisoft PhotoScan); and 6) digital GIS-based database of field work documentation. The digital applications follow the system applied by Levy and Najjar’s expedition to Faynan—Timna’s Jordanian counterpart—and thus allow for integrated studies and easy cross-referencing. The use of a digital documentation system has facilitated data processing, including those data used for establishing the new chronological framework for the copper production in Timna: based on a large suite of radiocarbon dates from well-controlled contexts, it is now recognized that the peak in production took place at the tenth century B.C.E. Related anthropogenic and environmental phenomena are currently being studied based on the digital mapping and associated data (see: <http://archaeology.tau.ac.il/ben-yosef/CTV/>).

Travis Corwin (University of Central Florida) and Tiffany Earley-Spadoni (University of Central Florida), “Digital Storytelling as Public Archaeology”

As the field of digital archaeology grows, there are new opportunities for scholars to present their data visually and engage the public in their research. The Vayots Dzor Fortress Landscapes Project (Armenia) employs digital storytelling as a method of dissemination with the public in mind. Digital storytelling is an outgrowth of the field of new media studies, a humanistic discipline that explores the nexus of computing, science, and visual culture. Digital storytelling began as a workshop-based approach utilizing digital media to create short audio-visual stories, frequently oriented towards the autobiographical and confessional, but has subsequently expanded in its application to include fields such as public history. This poster will showcase digital projects produced as a result of the 2017 summer season, and discuss the potential of multimedia narratives in public archaeology initiatives. The authors argue that incorporating the described digital humanities techniques

into their archaeological practice proved beneficial for engagement with both scholarly and non-scholarly audiences.

Bradley Erickson (University of North Carolina at Chapel Hill), “Envisioning the Past: Digital Documentation and Visualization at ‘Ayn Gharandal”

During the 2017 excavation season at ‘Ayn Gharandal, Jordan, the archaeological team employed photogrammetry to create 3D models of the excavation process, architectural features, and special finds from the dig. Following the excavation, the team used the 3D data to create visualizations of how the site may have looked in antiquity. These visualizations are accessible to the public via a first-person playable character on the internet and also through the HTC Vive, a room-scale virtual reality device. Our poster presents our cultural heritage development pipeline, beginning with the generation of georeferenced 3D data through the construction of an interactive 3D model using the modeling software Blender and game engine software Unreal Engine.

Amanda Gaggioli (Stanford University), “Engineering Earthquake Resilience: Restoration and Reconstruction in Post-Earthquake Akrotiri and Pompeii”

The capacity of resilience to environmental risks in urban societies is a major concern of disaster research. In the climatically and seismically complex region of the ancient Mediterranean and Near East, analyses of the vulnerability and response of human societies to environmental risks in terms of social, economic, political, and technological changes are possible. In particular, the concepts and goals of disaster research applied as a framework to the cases of Akrotiri and Pompeii in their final phases, during periods of frequent earthquakes prior to the catastrophic Bronze Age (ca. 1630 B.C.E.) and 79 C.E. eruptions, reveal the complexities involved in determining when and how the added stress of seismic activity impacted early urban societies. Patterns of restoration and reconstruction activities highlight that the inhabitants developed local seismic cultures with the capacity and resources to engineer seismic resilient architectures and to develop building regulations not codified under written policies, but rather through ideologies and knowledge passed between local members and generations. The examination of rebuilding activities prior to the Thera and Vesuvius eruptions have a number of shared insights, which can be applied to the study of earthquakes and associated natural disasters throughout the ancient Mediterranean and Near East where evidence of earthquakes is prevalent. Analyses of disaster response in ancient urban societies can even provide a source of knowledge for engineering communities to better assess seismic vulnerability and identify strategies to improve the resilience of buildings in modern urban contexts.

Tina Greenfield (University of Saskatchewan), Jane Sanford (University College London), Haskel Greenfield (University of Manitoba), Shira Albaz (Bar-Ilan University), and Aren Maeir (Bar-Ilan University), “Morphometrics and Sheep Goat Breeds in the Early Bronze Age of Tell es-Safi/Gath”

The site of Tell es-Safi, located in the Shephalah region in Israel, has yielded the remains of an Early Bronze Age neighborhood with a rich assemblage of animal bones from several houses, courtyards, and an adjacent alleyway. The Early Bronze Age is a time of extensive trade and movement of animals both regionally and inter-regionally. In this period, Tell es-Safi is known to have a merchant’s quarter with evidence of extensive trade with the surrounding regions, particularly Egypt to the southwest.

Using ovicaprine astragali recovered from these deposits, geometric morphometric comparisons were conducted to determine the composition of and changes to sheep and goat breeds during this period. These studies can help both to determine the movement of possible different breeds of caprines across the landscape, and also to provide insights into the animal management strategies conducted at Tell es-Safi.

Jennifer Ramsay (The College at Brockport, State University of New York) and Noah Haber (State University of New York Geneseo), “Examining the Concept of Hinterland in Antiquity in Arid Regions of the Levant Using Archaeobotanical Data and GIS Analysis”

Does size matter? Archaeological studies concerning the size of agricultural hinterland in antiquity have generally been conducted on sites with favorable climates, which have become the standard comparative tool. However, there has been little examination of the size of a settlement’s hinterland in arid environments, even when there is excellent archaeological evidence for extensive agricultural production, such as can be seen in southern Jordan and Israel during the Roman and Byzantine periods. Likewise, a disproportionate focus has been placed upon urban settlements in archaeological research and, as a result, the knowledge we possess of rural hinterlands and their contributions to the agrarian economy of the overall region is largely unknown and under-studied. Identifying the type and scale of agricultural productivity in arid environments between urban centers and their respective hinterlands can be examined using botanical remains overlaid with spatially variant environmental attributes that are deemed essential in the success of agrarian practices. The use of Geographic Information Systems (GIS) can make the complicated process of analyzing the nature and composition of botanicals according to environmental conditions readily possible. Applications of GIS-utilized morphological qualities of the landscape such as relief, elevation, slope, and aspect aid in gaining a better understanding of the relationship between a settlement and its hinterland. Preliminary results of this study provide an example of how GIS can aid in analyzing the relationship between settlements and hinterlands in antiquity by comparing plant communities and the corresponding essential environmental parameters within which they were located.

Ortal Harush (The Hebrew University of Jerusalem), Lena Dubinsky (The Hebrew University of Jerusalem), and Leore Grosman (The Hebrew University of Jerusalem), “HUJI Computerized Archaeology Laboratory: 3D Analysis of Archaeological Artifacts and Engravings”

The Computerized Archaeological Laboratory offers a complete and automatic documentation and analysis procedure for the investigation of archaeological finds. By examining large assemblages of archaeological items, the HUJI laboratory leads the way to new research directions and archaeological questions. Artifact 3D was developed for the investigation of complex shape artifacts. The program positions the artifact by deducing its intrinsic geometric properties and generates views, dimensions, and sections. The program also enables a large repertory of measurements, production of sections, angle calculations, geometric morphometric analysis, and other visual aids. The software calculates quantities that are not accessible without this 3D information such as the location of center of mass and its inertia moments. Recently we developed a method for analyzing rock engraving techniques, in particular the “Chariots” engraving at the Timna site. The aim of the study is to formulate criteria that would pave the way for the characterization of the engraving techniques that were used in ancient times. A 3D scan of the engravings was extracted using the latest technologies available. The digital data were analyzed by means of a unique algorithm, Harutot, that helps identify the tools used by the creator, in accordance with the types of engravings, and characterization of the variety of skills and practices. This analysis will help establish the identity of the creators of the rock engraving and attempt to better understand their productive environment.

Matthew Howland (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Developing a Standardized Workflow for Digital Preservation and Analysis of Archaeological Ceramics”

The digital revolution in archaeology has opened up a new avenue of archaeological preservation: digital documentation and storage. Adding a digital record of excavated artifacts can preserve the original, excavated form of artifacts against both physical deterioration over time and destructive sampling of objects. A digital record of artifacts can also allow for techniques of digital

shape/volume analysis not possible through analog methods. These advantages of digital recording and analysis are dependent on a consistent, quality data acquisition strategy to ensure comparability between different artifacts or even datasets. To that end, this poster describes the creation of a standardized Structure from Motion and morphological and typological analysis program applied to ceramics recovered by the Edom Lowlands Regional Archaeology Project, as well as the creation of a systematic digital database for the results of modeling and analysis. 3D modeling is done using Agisoft Photoscan, while form analysis is performed using the Pottery Informatics Database, developed by Dr. Neil Smith. This work is part of a larger ceramics study, the full extent of which is beyond the scope of this poster.

Ran Kafory (EyeCue Vision Technologies; University of Haifa), “Qlone—A Revolutionary Mobile App for 3D Scanning of Artifacts”

3D scanning can be carried out on artifacts from archaeological excavations as part of data collecting and archiving. The digital data is utilized to create a 3D visual catalog and safeguard the finds by enabling future replicas. In the near future, it can be used for automatic restoration and extraction of the characteristics associated with design, technology, and typology. It is not far-fetched to assume that querying 3D databases and automatic retrieving of similar artifacts will be a common practice for archaeologists. Unfortunately, the technological progress and the use cases for archaeologists are still limited by the lack of available data. Only a small percentage of expeditions use a 3D scanner. Those that use one limit their scanning efforts to their most extraordinary finds, and none, to the best of our knowledge, scan their whole assemblage. The explanation for this is that current 3D scanners are expensive, not portable, use software that requires skilled personnel, and allow scanning of only a few artifacts per day. Qlone is a revolutionary mobile app that uses cutting-edge computer vision to turn a smart device into a portable all-in-one 3D scanner of objects. The processing is done instantaneously, including in-app optimization options that avoid the necessity for external software. Direct export to 3D databases allows on-site scanning with remote expert interpretation. It is affordable and enables everyone with a smart device to scan hundreds of artifacts per day. By creating huge databases of scanned artifacts, Qlone can shape the future of archaeological research.

Tuna Kalayci (Istituto Per I Beni Archeologici e Monumentali [IBAM]—Consiglio Nazionale delle Ricerche), “A Satellite Remote Sensing Approach for the Determination of Early Bronze Age Traffic”

Ancient paths cross-culturally reflect motivations and needs behind social, economic, political, and religious relations of past societies: they imposed spatial order on production, enabled transportation of bulk-goods, mediated power, and facilitated urban fabric. Considered as not only the container of action, but also the action itself, these mnemonics have much more to say on the ancient movement praxis. This study explores Early Bronze Age traffic in Upper Mesopotamia with a focus on Tell Brak. At this place and time, the movement embedded within production economies contributed to the formation of paths (usually called hollow ways).

It is hypothesized that variations in the ancient traffic differentially changed soil physical characteristics (e.g. soil compaction/moisture) so that past variation in traffic is still detectable on remote sensing data. As for the methodology, first, historic CORONA satellite imagery is deployed for a remote sensing archaeological survey of hollow ways. Next, Near-Infrared and Short-wavelength Infrared portions of the electromagnetic spectrum are exploited to generate proxy variables (vegetation/moisture indices) from LANDSAT data. Finally, these proxy variables are used to model variations in ancient traffic on hollow ways. The resulting model is able to identify hollow ways that must have carried more traffic than others.

Eric Kansa (Open Context, Alexandria Archive Institute) and Sarah Whitcher Kansa (Open Context, Alexandria Archive Institute), “Open Context: Publishing Research Data on the Web”

Since 2006, Open Context has collaborated with researchers to publish open access datasets that document excavations, surveys, specialist studies,

and collections. Open Context now publishes over 100 data publications representing 1.1 million items and 100,000 images, a large fraction of which document Near Eastern archaeology. Working with data authors, our editors review and clean datasets, then organize media, documents, and geospatial information with other data. Open Context links data to other research collections on the Web, making data easier to discover, integrate, and use with a wider universe of information. Because citation is a key requirement for scholarship, every record in Open Context has its own stable Web identifier (URI), making it easy to reference and cite very specific items of data, even including individual potsherds, bones, and excavation contexts. To preserve irreplaceable data, Open Context archives data with the California Digital Library, University of California. We partner with academic presses to augment and enrich conventional publishing with rich, interoperable, and dynamic datasets and media, including 3D models. The National Science Foundation and National Endowment for the Humanities reference Open Context for assistance with data management plans required of all applicants. See more at opencontext.org

Doga Karakaya (University of Tübingen) and David Lipovitch (Wilfrid Laurier University), “Plants and Bones in Context: The Spatial Distribution of Floral and Faunal Remains in the Neo-Assyrian Sacred Precinct at Tell Tayinat, Amuq Valley, South-Central Turkey”

The excavations at Tell Tayinat unearthed the ruins of a Neo-Assyrian temple, Building XVI, on the upper citadel mound during the 2009 excavation season. This monument is located within a larger religious complex with two other buildings, namely Tayinat’s famous *bit-hilani* palace (Building I) and an adjacent temple to the south (Building II) with a double-lion column base at its entryway. While the built environment inside and outside of Building XVI was further modified during the Neo-Assyrian occupation (Iron Age III, the late eighth or early seventh century B.C.E.), it has been argued that there was an early use-phase of this cultic structure, given the clear architectural similarities to the nearby Iron Age II monuments. The preliminary analysis of the spatial distribution of plant and faunal remains demonstrates a clear patterning across various depositional contexts. The heavily sampled soil sediments from the pithos to the west of the monument are rich in plant remains. Other evidence of plant remains, albeit in low counts, indicates the frequent appearance of olive stones in different excavated trenches. In addition, substantial faunal remains were recovered and analyzed from a number of related loci. This poster aims to document the spatial distribution of floral and faunal remains according to the various contexts and to address the parallel examples of possible ceremonial/sacrificial use of plants and animals in the Near East.

Avshalom Karasik (Israel Antiquities Authority) and Ortal Harush (The Hebrew University of Jerusalem), “Automatic Classification of Ceramics: User Interface”

Pottery analysis is an essential and elementary task in any post-excavation examination and in the ensuing research. Usually, this involves the documentation and classification of hundreds or even thousands of fragments. It consumes a lot of time, and delays the analysis of the finds significantly. Further research may also require the comparison of assemblages emerging from the same or from different sites, to examine temporal or spatial relations. Several years ago Karasik and Smilansky published a novel method for computerized ceramic typology and classification (*Journal of Archaeological Science* 38, 2011). The method is based on a distance function that is defined in terms of digital representation of the profiles of the vessels. In the poster, we shall present a newly developed user-friendly interface that uses the algorithm described in that paper and classifies pottery assemblages based on morphology, which is a prominent attribute in any attempt to classify potsherds. The program enables the researchers to highlight the differences between pre-determined groups, to emphasize various morphological features that they consider the most relevant for study, and to see its impact on the objective results of the computerized classification. The results can be automatically exported as typological drawing plates ordered and arranged typologically.

Catherine Kearns (University of Chicago), Peregrine Gerard-Little (Cornell University), Anna Georgiadou (University of Cyprus), and Georgia Andreou (Cornell University), “The Archaeology of Rural Landscapes: Surface Survey and Magnetic Anomaly Test Excavations at Maroni, Cyprus”

A component of the Kalavassos and Maroni Built Environments Project (KAMBE) working in south-central Cyprus initiated a pilot season in 2017 of surface collections, geophysics, and test excavations in an area of high-density ceramic assemblages near the Late Bronze Age site of Maroni-Vournes. The project’s goal is to elucidate Iron Age re-use and long-term investment in the coastal landscapes around Maroni, especially small rural settlements associated with agropastoral practices and a sanctuary beginning in the late Geometric and early Archaic periods (ca. eighth–seventh centuries B.C.E.). This poster presents the preliminary findings from the 2017 program of fluxgate gradiometry and the sampling strategy of several test trenches over magnetic anomalies, which revealed a system of agricultural drainage and soil engineering features indicative of diachronic use of the iron-rich coastal plains. An assessment of the viability of magnetometry for discerning agropastoral activities and a comparison of surface collections at a nearby Iron Age site, Kalavassos Vounaritashi, further highlight the variability of smaller rural settlements and their landscape histories.

Elise Jakoby Laugier (Dartmouth College), “Geophysical Prospection of Land-Use Features in Transitional Ecological Zones, Kurdish Region, Iraq”

Land-use features, such as hollow-ways and irrigation works, provide evidence for strategies and structures of past agro-economic systems. Arguments concerning presence or absence of these features (particularly hollow ways) are largely based on their visibility in historic satellite imagery; however, more intensive ground-based geophysical methods may yet provide evidence for localized land-use features which are less robust or well-preserved than their satellite-resolvable counterparts.

This poster presents results of the Sirwan (Upper Diyala) Regional Project’s (SRP) 2017 magnetic gradiometry survey in the Kurdish Region of Iraq (conducted August–September). The aim of the 2017 season was to prospect for and associate land-use features with archaeological sites in varying ecological zones by conducting off-site geophysical survey around several single-period, fifth to second millennium B.C. sites. The SRP study region, located along the Zagros-Mesopotamian interface, is characterized by a rapidly changing agro-ecological gradient between rain-fed highlands and irrigated lowland plains. The ecologically transitional nature of the region, coupled with climatic fluctuations occurring during the period of interest (i.e., mid-late Holocene transition), make the coupled human-natural system of the fifth–second millennium B.C. SRP study area an ideal time and place from which to investigate synchronic and diachronic land-use practices. Geophysical evidence for synchronic and/or diachronic variation in land-use practices may provide insight into unique and varying management practices necessary in transitional ecological zones.

Thomas E. Levy (University of California, San Diego) and Margie M. Burton (University of California, San Diego), “The University of California Office of the President’s Research Catalyst Project: Digital Documentation, Preservation, and Dissemination of At-Risk World Cultural Heritage”

Recent current events have dramatically highlighted the vulnerability of the world’s material cultural heritage. Funded by a University of California (UC) Office of the President’s Research Catalyst grant beginning in 2016, the At-Risk Cultural Heritage and the Digital Humanities project catalyzes a collaborative research effort by four UC campuses (San Diego, Berkeley, Los Angeles, and Merced) to use cyber-archaeology and computer graphics to document and safeguard virtually some of the most at-risk heritage objects and places. Faculty and students involved in this project are conducting path-breaking archaeological research covering more than 10,000 years of culture and architecture in Cyprus, Greece, Egypt, Ethiopia, Israel, Jordan, Morocco, India, and Turkey. Our aim is to link UC labs, libraries, and museums to form a highly-networked collaborative platform for curation, analysis, and visualization of 3D archaeological heritage data. This poster presents a

summary of the objectives of the project and digital field data acquisition and technical achievements since inception.

George Papatheodorou (University of Patras), Maria Geraga (University of Patras), Dimitris Christodoulou (University of Patras), Nikos Georgiou (University of Patras), Xenophon Dimas (University of Patras), Spyros Sergiou (University of Patras), Ioannis Liritzis (University of the Aegean), Richard Norris (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Marine Geophysical Survey in the Gulf of Corinth, Greece—Implications for the Late Bronze Age Kastrouli–Antikyra Bay Land and Sea Project”

Human settlement in coastal zones provides an ideal locale for understanding cultural evolution and environmental changes on both local and regional scales. As part of the Late Bronze Age Kastrouli–Antikyra Bay Project, our team carried out two geophysical surveys in a series of small bays along the northern coast of the Gulf of Corinth. The goals included: identifying possible Late Bronze Age anchorages that would have served the inland Kastrouli site; mapping the bathymetry of these bays using side scan sonar to identify ancient submerged archaeological features and paleo-beach deposits indicative of sea level change; and using sub-bottom profiling to map the thickness of sediments in the bay to locate deposits suitable for sediment coring using scuba. Here we describe the field and digital workflow coupled with preliminary survey results and some of the implications of this study for the collapse of civilizations during the Late Bronze Age in the eastern Mediterranean.

Brady Liss (University of California, San Diego), Matthew Howland (University of California, San Diego), Mohammad Najjar (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Go Big, and Stay Home: Testing Google Earth Engine for Satellite Imagery Analysis on a Regional Scale in the Southern Levant”

Google Earth Engine (GEE) is an in-development, cloud-based platform for visualizing and analyzing satellite imagery (<https://earthengine.google.com>). GEE operates through a computer web browser, but analysis is completed on Google’s cyber-infrastructure, facilitating rapid analyses of satellite imagery on any scale (including planetary). Moreover, users can freely create custom scripts to suit their specific research questions. As such, GEE affords a unique opportunity for innovative methodologies involving satellite imagery in any number of fields. This poster explores potential contributions of GEE to archaeological research. To do so, GEE was tested for the quick and automatic identification of particular archaeological features in the Faynan region of Southern Jordan. Specifically, the authors employed GEE to automatically locate copper slag mounds across a large swath of the Faynan landscape (ca. 135 sq. km). Slag provides important evidence for the scale of metal production in Faynan, making mapping its distribution a valuable endeavor. In the presented results, GEE successfully identified possible slag mounds in the entire region of interest with unmatched data acquisition times (approximately one minute). Through this case study, GEE proved to be a viable tool for archaeological research with significant potential to supplement traditional forms of archaeological survey.

Ho Jung Yoo (University of California, San Diego), Brady Liss (University of California, San Diego), Rosemary Elliott Smith (University of California, San Diego), Ryan Johnson (University of California, San Diego), Chris McFarland (University of California, San Diego), Falko Kuester (University of California, San Diego), Thomas DeFanti (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Curating Cultural Heritage Data for Long-Term Access and Discovery in a Library Digital Repository”

As part of its mission to disseminate archaeological data for the long term, the Center for Cyber-Archaeology and Sustainability (CCAS) has been collaborating with the UC San Diego Library to archive and publish data collected by researchers at four University of California campuses (San Diego, Merced, Los Angeles, and Berkeley) from at-risk sites in the eastern Mediterranean. Excavation data, which are stored in the ArchaeoSTOR

database developed at CCAS, consist of reports, photos, geographical information, and physical descriptions at various levels of spatial organization. 3D data from the sites, including high-resolution stereo photographs and point clouds, are stored on a locally developed database called CAVEbase. CCAS is working with the Library to develop a workflow for depositing data from ArchaeoSTOR, CAVEbase and other sources into the UC San Diego Library Digital Collections, a repository designed to support ingest, discovery of, and public access to digital assets of the University. All repository data are replicated in a geographically distributed preservation system, for the purpose of disaster recovery. Global discovery of content is promoted by making its metadata available for crawling by search engines and by sharing key metadata directly with external databases. Data can be structured hierarchically, which helps clarify contextual relationships between various components and allows for flexibility in the way data are presented for discovery and access. The joint curation work between CCAS and the Library is enabling the digital safeguarding and wide dissemination of important, at-risk, world heritage data in a comprehensible and reusable format for current and future generations.

Sveta Matskevich (The Hebrew University of Jerusalem), Ayellet Tal (Technion–Israel Institute of Technology), Ilan Shimshoni (University of Haifa), Michael Kolomenkin (Technion–Israel Institute of Technology), and Ayelet Gilboa (University of Haifa), “D.o.R.—Illustration of Complex Archaeological Objects Based on 3D Models”

We present a computerized automatic system to illustrate complex archaeological objects. The illustrations are based on 3D scans of the artifacts, which are rapidly becoming very easy to obtain. The 3D models can be automatically translated, by new algorithms specifically designed for this purpose, into line drawings; into colored images that emphasize the salient shape attributes of the artifacts and of the 3D designs on them; and into images that enhance faint/eroded designs that are otherwise difficult to discern. These illustrations are intended to replace traditional manual drawings, which are very expensive to produce and are never accurate enough. Our illustrations also provide a better visualization tool than the 3D models themselves. Though 3D scanning already improves the visibility of objects and their features, it does not suffice for rapid visual recognition. Our system generates efficient, accurate, and simplified representations of complex objects and the designs on them from any number of required views.

Christopher McFarland (University of California, San Diego), Thomas DeFanti (University of California, San Diego), Thomas E. Levy (University of California, San Diego), and Falko Kuester (University of California, San Diego), “CAVEBase: Preserving and Accessing Digital Cultural Heritage through 3D Virtual Reality Environments: Case Studies from the Eastern Mediterranean”

New technologies have made it possible to create records of historical and archaeological sites at unprecedented detail, resulting in data management challenges that impact how data can be accessed, visualized, and analyzed. CAVEBase is an online repository addressing these challenges, allowing images, videos, and 3D models to be stored and accessed by multi-user Virtual Reality (VR) environments. The CAVEBase workflow enables the upload and processing of site- and artifact-related data assets as well as associated metadata such as descriptions, locations, instruments used, level of processing, shared use, and copyright information. Once data are uploaded they are automatically processed and replicated for multi-site use, enabling collaborative data analytics on networked VR systems. These visualization instruments access CAVEBase and its large-scale remote storage via high-bandwidth networks, allowing big-data assets to be accessed at fully interactive rates over large distances. This case study demonstrates how high-resolution 3D cultural heritage image data from ancient eastern Mediterranean sites including Greece, Egypt, and Jordan can be stored, accessed and visualized using CAVEBase.

Dominique E. Meyer (University of California, San Diego), Assaf Yasur-Landau (University of Haifa), Erez Ben-Yosef (Tel Aviv University), Anthony T. Tamberino (University of California, San Diego), Falko Kuester (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Multiscale Aerial Cyber-Archaeology in Israel”

Archaeological fieldwork has advanced in the application of remote sensing and GIS methodologies to enhance site-wide data collection efficiency and analytical data integrity. With these accumulating data types at different scales, it is critical to begin contextualizing data sets with one another and with the environment in which they were collected. We propose a data workflow for the efficient generation and integration of aerial imagery that relates the micro excavation scale to the landscape-wide morphology. Area specific, low altitude surveys for sub-centimeter resolution models enable precise landmarks to be placed within the large-scale topographic landscape. As part of a land and sea project that focuses on Iron Age copper exchange in the southern Levant, we provide a case study of the harbors near Tel Dor and the mining region of Timna, where we demonstrate the use of aerial image acquisition, optimized for resolution and scale to contextualize previously completed archaeological surveys.

Rosemary Elliot Smith (University of California, San Diego), Franklin Reece (University of California, San Diego), Carolyn Breeze (University of California, San Diego), Taylor Harman (University of California, San Diego), Michael Tolentino (University of California, San Diego), Brady J. Liss (University of California, San Diego), Ho Jung Yoo (University of California, San Diego), Margie M. Burton (University of California, San Diego), Aaron Gidding (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “ArchaeoSTOR: A User-Friendly Web-Based Archaeological Database”

Cultural heritage sites around the world are under threat; it is vital that these sites, their architecture, and artifacts be recorded and preserved for future generations. ArchaeoSTOR is a web-based database for the curation of digital cultural heritage data collected by archaeologists during the excavation process. Designed as both a research tool and an exploratory project, ArchaeoSTOR allows for the secure storage and analysis of artifact metadata, location data, photographs, and point cloud data. First published in 2012, recent enhancements of ArchaeoSTOR have focused on improving the usability of the application, aiming to make it streamlined for efficient research. The improved database serves both in the field as a standalone server as well as hosting in the home lab, making it a versatile tool. Further, as ArchaeoSTOR is being developed for use by multiple University of California (UC) campuses and their unique projects, it is an exploration into the adaptability of SQL databases to archaeology—a discipline in which standardization in recording methods has remained elusive. Finally, ArchaeoSTOR has been enhanced to expedite the deposit of archaeological field data directly into the digital collections of the UC San Diego Library to make the data freely available and to ensure long-term preservation.

Isabel Rivera-Collazo (University of California, San Diego), Richard Norris (University of California, San Diego), George Papatheodorou (University of Patras), Ioannis Lirizis (University of the Aegean), and Thomas E. Levy (University of California, San Diego), “Landscapes, Human Activity, and Sediment Profiles in Antikyra Bay, Phokis, Greece: Land and Sea Connections Through Marine Geoarchaeology and Geo-Spatial Databases”

The Mediterranean Sea has been the stage for thousands of years of human activity. Social processes, combined with changes in climate and biotic parameters, influence the sediment budget that is transported towards the sea. Therefore, the analysis of the sediments from the sea bottom complements the record from land in the understanding of socioecosystem and landscape change. This information is especially relevant to the understanding of the Late Bronze Age collapse problem. The Antikyra Bay project combines the assessment of currently coastal landscapes with marine geophysics, sedimentary analyses, and library geospatial digital collection archiving. Nine underwater cores were extracted from close to shore, shallow-water basins. The basins were

also examined with marine geophysics. Coring locations were selected based on the expected sediment thickness. Sedimentary and geochemical analyses have been completed for two of the cores. Analysis suggests a pattern of sea level rise combined with erosion of terra rossa soils and sea-level stabilization, with indications of an erosion event that may be linked to ca. 3500 B.P. (and culminating around 2500 B.P.). High-precision dating is being carried out to test hypotheses. The sediment stratigraphy documented on the cores provides a high-resolution record of erosion and stabilization. Further analyses, including absolute dating, will help contextualize the changes within the social processes of the Late Bronze Age and the disarticulation and re-structuring of social processes in the Aegean region.

Stephen Savage (University of California, San Diego), Thomas E. Levy (University of California, San Diego), Andrew C. Johnson (University of California, San Diego), and Michael Tolentino (University of California, San Diego), “The ASOR Cultural Heritage Initiative TerraWatchers Collaborative”

Since 2014, ASOR’s Cultural Heritage Initiatives (ASOR CHI) has been working on projects to document, protect, and preserve the cultural heritage of war-torn Syria, northern Iraq, and Libya, funded through major grants from the U.S. Department of State, and contributions from the Getty Conservation Institute, the Kaplan Foundation, and the Whiting Foundation. However, the task of documenting looting and conflict-related damage to sites across most of the Fertile Crescent was beyond the scope of the initial project. Consequently, ASOR partnered with the TerraWatchers crowd-sourced satellite image analysis platform to develop a citizen science mission to help monitor site conditions. Through a University of California (UC) Office of the President’s Catalyst Grant, coordinated through the Center for Cyber-Archaeology and Sustainability at UC San Diego, students from four UC campuses (San Diego, Los Angeles, Berkeley, and Merced) have been working with the TerraWatchers web platform for the past two years. Students have been trained in satellite image interpretation, and have subsequently made tens of thousands of observations in 14 categories related to conflict and development damage on nearly 11,000 sites in Lebanon, Syria, and Iraq. To date, 131 students have been trained; hundreds of looted sites have been identified; and hundreds more have been documented to have had military uses, with many sustaining direct damage as a result. This poster and demonstration will feature the most up-to-date results of the mission, and provide a hands-on demonstration of the web-based TerraWatchers platform.

Sandra Schloen (Oriental Institute, University of Chicago) and Miller Prosser (Oriental Institute, University of Chicago), “GIS Features in the Online Cultural and Historical Research Environment (OCHRE)”

The Online Cultural and Historical Research Environment (OCHRE) was developed for use by archaeology, philology, and other research projects. In this demo, visitors can experience OCHRE’s integrated GIS features called GEOchre. For many scholars and researchers, geospatial data are perceived to be so inherently different from other data stored in more traditional record-keeping systems that they are managed separately, often by project staff with a completely different skill set, overlapping only awkwardly with other project data. Information needed to describe shapes, features, layers, images, and models is typically keyed redundantly into a geodatabase as needed, or omitted altogether from either the GIS system or the core database of record. That is the problem that GEOchre is meant to address. With this recent innovation, OCHRE becomes a complete data capture tool for archaeological record keeping by integrating spatial data with core project data. No more paper forms. No more separate spreadsheets or databases.

Rebecca Seifried (Institute for Mediterranean Studies) and Chelsea A. M. Gardner (Mount Allison University), “The Value of Travelers’ Itineraries in Archaeological Research: A GIS Analysis of Pathways through the Mani Peninsula, Greece”

This poster presents the results of a Geographic Information Systems (GIS) analysis of major itineraries taken by visitors to the Mani Peninsula,

Greece over the past two millennia. Two categories of itineraries are assessed. The first includes travelers’ accounts, which were frequently written by visitors interested in documenting evidence of visible antiquity. In addition to Pausanias’ first-century C.E. account, the routes of numerous later travelers are mapped, including those of Cyriac of Ancona, Evliya Çelebi, Vincenzo Coronelli, and Colonel W. L. Leake. The second category comprises the records of Venetian and Ottoman administrative officials, who traveled through the region in the 16th–18th centuries to record (and ultimately tax) its major settlements.

This study underscores the value of travelers’ itineraries in archaeological landscape studies. We demonstrate that the digitization and analysis of travelers’ itineraries provides insight into actual pathways of movement and whether they shift over time; in turn, these pathways can serve as critical data points for testing the results of least-cost-path modeling. Our analysis highlights the fact that geographical considerations and political motivations often diverted travelers’ paths away from more mountainous areas of a landscape, despite the frequent existence of contemporaneous settlements and/or traces of earlier human activity in these topographically-challenging regions. In the case of the Mani peninsula especially, many of these bypassed areas contain rich evidence of human activity, underscoring the continuing need to examine such “empty” places through remote sensing analysis or field reconnaissance.

Connor Smith (University of California, San Diego), Jurgen Schulze (University of California, San Diego), Kristin Agcaoili (University of California, San Diego), Anish Kannan (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Big VR Environments and Personal VR Devices for At-Risk Cultural Heritage in the Eastern Mediterranean—From Conservation to Hackathon”

Archaeologists, engineers, and computer scientists at UC San Diego’s Qualcomm Institute have pioneered the development of large-scale Virtual Reality (VR) environments for sharing 3D cultural heritage images and data. A University of California (UC) Office of the President’s Research Catalyst grant has made possible a network of CAVES (Cave Automated Virtual Environments) at four UC campuses linked by the high-speed Pacific Research Platform to allow collaborative sharing of research data and imagery from at-risk sites in Greece, Egypt, Israel, and Jordan. At the same time, personal or head-mounted VR devices such as Oculus Rift or HTC Vive systems allow for broader public dissemination of shareable cultural heritage. Optimizing a head-mounted VR ‘experience’ and research applications involves: 1) automating the loading and visualization of archaeological data, including point clouds, panoramas, 3D models, pictures, audio, and video; and 2) developing research and narrative elements that make archaeological data interesting to the public. This demonstration will use either an Oculus Rift or an HTC Vive to provide examples of how at-risk cultural heritage sites in the eastern Mediterranean can be preserved virtually and made accessible to the public. Student projects developed during a recent UC San Diego Cyber-Archaeology VR Club Hackathon are featured.

Neil Smith (King Abdullah University for Science and Technology), “UE4Archaeology”

We present an end-to-end pipeline for capturing, processing, and visualizing archaeological datasets inside Unreal Engine 4. Through intelligent down sampling and subsurface texture transfer for physics-based rendering it is now possible to import high detail photogrammetric scans into the UE4 game engine. In this demo, we provide the steps and tools developed to allow any archaeologist to transfer their 3d scans into UE4. The advantage of using a mainstream game engine for disseminating archaeological datasets is that it can be ported to many different operating systems, game consoles, and mobile tablets or phones. Alternatively, full immersion within VR head mounted displays can be easily achieved. As a demonstration of the pipeline, we use Khirbat al-Iraq Shmaliyah (KIS) as a case study. KIS, dating to the Iron Age II, is one of the best-preserved and intact excavated sites in the region known as ancient Edom. In previous work, the site was scanned using LiDAR and SfM with centimeter accurate XYZ recordings of every special find and in situ

artifact discovered during excavation. Now many of the artifacts have also been 3D scanned and re-imported into their original found locations within the virtual archaeological excavation. The Unreal Engine 4 enables users to fully immerse themselves within the archaeological site, navigate through it, and analyze at 1:1 scale the artifacts and stratigraphic layers of the site.

Anthony T. Tamberino (University of California, San Diego), Scott McAvoy (University of California, San Diego), Matthew Howland (University of California, San Diego), Brady J. Liss (University of California, San Diego), Kathleen C. Bennalack (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “3D Printing for Cultural Heritage Preservation and Education”

Creative, science-based applications of 3D printing technology can help preserve cultural heritage, and educate the general public about ancient human settlements and landscapes. Digital 3D terrain models are powerful visualization tools, but are often difficult to interpret in a museum setting. Additionally, huge LiDAR scans and Structure-from-Motion data sets require significant computing resources and technical skill to process and view. While digital data can be easily transmitted, technical expertise and computing resources cannot. The use of 3D printing to create inexpensive, high quality solid terrain models of archaeological sites can offer another alternative for the preservation and dissemination of digital archaeological data. These solid terrain models can function as interactive data visualizations, pedagogical tools, and museum exhibits for community museums. For this project, a variety of excavated and digitally documented archaeological sites located in the eastern Mediterranean were selected for 3D printing, including the important Bronze Age sites Khirbat en-Nahas and Khirbat al-Jariya in modern Jordan. Key information about the site is displayed on the blank side and bottom surfaces of each model. Notably, we have created a solid terrain high definition model with removable layers correlating to different occupational periods to showcase the digitally reconstructed Bronze Age copper mining site of Khirbat en-Nahas in Jordan. We present the steps in the creation of the printed models and the kinds of data required.

Khalil Barzinji (Directorate of Antiquities, Erbil Governorate, Iraq), Nader Babakr (Directorate of Antiquities, Erbil Governorate, Iraq), and Jason Ur (Harvard University), “Integrated Remote Sensing and Archaeological Field Survey on the Erbil Plain, Kurdistan Region of Iraq”

The Erbil Plain Archaeological Survey is recording the cultural landscape of the Kurdistan Region of Iraq via a combination of satellite, aerial, and UAV photography and GIS-enabled field survey. The protocol allows for rapid field documentation, which is critical in a rapidly-changing modern landscape where sites are constantly under threat of development. This poster illustrates our methods, with particular emphasis on how remote sensing and ground observation are integrated in a recursive manner.

Assaf Yasur-Landau (University of Haifa), Tali Treibitz (University of Haifa), Christian McDonald (University of California, San Diego), Anthony T. Tamberino (University of California, San Diego), and Thomas E. Levy (University of California, San Diego), “Underwater Imaging for the Israel Archaeology Land and Sea Project”

In preparation for the University of California, San Diego–University of Haifa Marine Archaeology Field School Expedition, a pilot project was carried out in September 2017 to compare stereo camera recording to use of a single camera, both using Structure from Motion (SfM) photography processing of imagery of submerged Iron Age archaeological features in the bays around Tel Dor, Israel. The stereo underwater imaging system consisted of two high-end Nikon D810 SLR cameras with wide angle (35mm) lenses. They were housed in a Hugyfot housing with a dome port. The cameras are electronically synchronized by a custom cable made by Dr. Tali Treibitz’s Marine Imaging Lab, Charney School of Marine Sciences, University of Haifa. The stereo pair is calibrated before the imaging task. 3D is reconstructed from both the stereo pair camera and from SfM image processing. Reconstruction from the stereo pair yields a distance map in real units as this is pre-calibrated. This was

merged with the SfM to yield scale. The single camera recording system was based on a Sony a6500 camera, Nauticam housing with a WW1 wide-angle port, a traditional port, and some Light and Motion Sola 3600 video lights. The pros and cons of the two systems are evaluated.

Ilya Zaslavsky (University of California, San Diego), Margie M. Burton (University of California, San Diego), Patrick S. Quinn (University College London), and Thomas E. Levy (University of California, San Diego), “Shared Visual Exploration of Archaeological Images across Temporal and Spatial Scales Using SuAVE: Examples from the Eastern Mediterranean”

As archaeologists explore images of sites and artifacts, they seek to quickly formulate and test hypotheses by analyzing statistical, visual, and cartographic patterns. To understand the past, they need to transcend spatial and temporal scales, move from general patterns to analysis of individual artifacts, connect with other sources of information, and share their analytical insights with other researchers. We present a new online visual discovery and exploration system named SuAVE (Survey Analysis via Visual Exploration, <http://suave.sdsu.edu>) that can satisfy image-based data sharing, analysis, and storytelling needs of archaeologists. This demonstration of SuAVE capabilities is jointly prepared by archaeologists at the University of California, San Diego’s Center for Cyber-Archaeology and Sustainability (<http://ccas.ucsd.edu>) and the Institute of Archaeology at University College London and computer scientists at the San Diego Supercomputer Center (<http://www.sdsu.edu>). Employing high-resolution archaeological digital image collections and associated metadata, we explore case studies from the ancient eastern Mediterranean world—Neolithic to Late Bronze Age Greece (Yiros and Crete) and Chalcolithic Israel (Shiqmim). We demonstrate the power of SuAVE to organize and juxtapose images—from thin section photomicrographs to photographs of artifacts and excavations—using different animated views of the entire collection or a subset of the collection based on various image characteristics. Analysis of explanatory rules, and the ability to efficiently relate geo-referenced image-based datasets at micro and macro levels in user-constructed narratives of changing human societies and their environments, are additional unique features of SuAVE that will be demonstrated. We believe that SuAVE can become an important analytical tool for archaeologists.

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- 12C. Saturday, November 18 4:20–6:25pm

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- 7F. Friday, November 17 2:00–4:05pm

ARCHAEOLOGY OF ISLAMIC SOCIETY

- 10H. Saturday, November 18 10:40am–12:45pm

ARCHAEOLOGY OF ISRAEL

- 2C. Thursday, November 16 10:40am–12:45pm
- 3C. Thursday, November 16 2:00–4:05pm

ARCHAEOLOGY OF JORDAN

- 7D. Friday, November 17 2:00–4:05pm
- 8D. Friday, November 17 4:20–6:25pm

ARCHAEOLOGY OF LEBANON

- 6A. Friday, November 17 10:40am–12:45pm
- 7A. Friday, November 17 2:00–4:05pm

ARCHAEOLOGY OF MESOPOTAMIA

- 1A. Thursday, November 16 8:20–10:25am

ARCHAEOLOGY OF THE NATURAL ENVIRONMENT: ARCHAEOBOTANY AND ZOOARCHAEOLOGY IN THE NEAR EAST

- 9E. Saturday, November 18 8:20–10:25am

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- 1F. Thursday, November 16 8:20–10:25am
- 2E. Thursday, November 16 10:40am–12:45pm
- 3F. Thursday, November 16 2:00–4:05pm

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- 4F. Thursday, November 16 4:20–6:25pm
- 5F. Friday, November 17 8:20–10:25am

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- 7I. Friday, November 17 2:00–4:05pm
- 8I. Friday, November 17 4:20–6:25pm
- 9I. Saturday, November 18 8:20–10:25am

ART HISTORICAL APPROACHES TO THE NEAR EAST

- 7B. Friday, November 17 2:00–4:05pm
- 8B. Friday, November 17 4:20–6:25pm

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- 12E. Saturday, November 18 4:20–6:25pm

CULTURAL HERITAGE MANAGEMENT: METHODS, PRACTICES, AND CASE STUDIES

- 5C. Friday, November 17 8:20–10:25am
- 6C. Friday, November 17 10:40am–12:45pm

DIGGING “LUSTILY” INTO CYPRIOT PREHISTORY: STUDIES IN HONOR OF STUART SWINY

- 8E. Friday, November 17 4:20–6:25pm

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- 10I. Saturday, November 18 10:40am–12:45pm

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- 8A. Friday, November 17 4:20–6:25pm

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- 8F. Friday, November 17 4:20–6:25pm

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- 5A. Friday, November 17 8:20–10:25am

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10K. Saturday, November 18 10:40am–12:45pm

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1E. Thursday, November 16 8:20–10:25am

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11J. Saturday, November 18 2:00–4:05pm

Member-Organized Sessions**ALTERED STATES: ALTERNATIVE TRAJECTORIES TO COMPLEXITY IN THE ANCIENT MIDDLE EAST**

11D. Saturday, November 18 2:00–4:05pm

12D. Saturday, November 18 4:20–6:25pm

AMBIGUITY IN THE ANCIENT NEAR EAST: MENTAL CONSTRUCTS, MATERIAL RECORDS, AND THEIR INTERPRETATIONS

6H. Friday, November 17 10:40am–12:45pm

7H. Friday, November 17 2:00–4:05pm

8H. Friday, November 17 4:20–6:25pm

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9F. Saturday, November 18 8:20–10:25am

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11H. Saturday, November 18 2:00–4:05pm

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6F. Friday, November 17 10:40am–12:45pm

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4H. Thursday, November 16 4:20–6:25pm

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7J. Friday, November 17 2:00–4:05pm

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2E. Thursday, November 16 10:40am–12:45pm

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9A. Saturday, November 18 8:20–10:25am

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7C. Friday, November 17 2:00–4:05pm

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3J. Thursday, November 16 2:00–4:05pm

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11B. Saturday, November 18 2:00–4:05pm

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3K. Thursday, November 16 2:00–4:05pm

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11F. Saturday, November 18 2:00–4:05pm

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8J. Friday, November 17 4:20–6:25pm

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Member-Organized Workshops**DIGITAL ARCHAEOLOGY DEMO SHOWCASE**

Friday, November 17 6:30–10:30pm

INTEGRATING ORGANIC RESIDUE ANALYSIS INTO ARCHAEOLOGY

1C. Thursday, November 16 8:20–10:25am

PUTTING YOUR DEGREE TO WORK: HOW TO APPLY FOR CAREERS INSIDE AND OUTSIDE THE ACADEMY

9D. Saturday, November 18 8:20–10:25am

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4E. Thursday, November 16 4:20–6:25pm

TALKING ABOUT GENDER-RELATED “SITUATIONS” IN OUR WORKPLACES

11E. Saturday, November 18 2:00–4:05pm

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9G. Saturday, November 18 8:20–10:25am

10G. Saturday, November 18 10:40am–12:45pm

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Download the ASOR Meeting App

The 2017 ASOR Annual Meeting app contains the academic and business schedules, exhibitor details, and other important information that will get you where you need to go during the meeting.

- ▶ Go to the app store for your mobile device
- ▶ Search for “2017 ASOR Annual Meeting”
- ▶ Download, and go!

Complimentary Wifi

ASOR is pleased to provide meeting attendees with complimentary wifi in all of the meeting space.

Network: WestinBostonMeeting

Password: ASOR17

Hotel and General Information

Conference Venue

The 2017 ASOR Annual Meeting is being held at The Westin Boston Waterfront at 425 Summer Street, Boston, Massachusetts. The hotel's phone number is 617-532-4600.

Registration Desk

The ASOR Registration and Help Desk are located in the foyer on the Harborwing Conference Level outside of the Harbor Ballroom.

The Registration and Help Desk hours are:

Wednesday, Nov. 15 from 5:00pm to 9:00pm

Thursday, Nov. 16 from 7:30am to 5:00pm

Friday, Nov. 17 from 7:30am to 5:00pm

Saturday, Nov. 18 from 8:00am to 3:00pm

*The Registration and Help Desk will be closed from 1:00–1:45pm each day during the lunch break.

Restrooms

Restrooms are located near the escalators on the Harborwing Level and on The Galleria/Harborwing Concourse Level, as well as on the Lobby Level near the Marina ballroom and at the opposite and between the Paine and Quincy rooms.

Fax, Print, and Copy

Penfield's Office is a full service business center located in the Main Lobby next to Starbucks and they can handle all of your printing, faxing, and mailing needs. For boarding passes, there is a complimentary printer at the kiosk next to the Bell Desk in the Main Lobby. You can contact Penfield's at 617-532-4635.

Internet Access

ASOR is pleased to provide meeting attendees with complimentary wi-fi in all of the meeting space. The network name is WestinBostonMeeting and the password is ASOR17.

ATM

There is an ATM in the Main Lobby near the Starbucks. There is also a Bank of America ATM located a short walk from the hotel at 601 Congress Street.

Childcare

Neither ASOR nor The Westin Boston Waterfront are in the position to hire or recommend childcare providers. The hotel suggests that guests may contact Boston's Best BabySitters at 617-455-7171 to inquire about childcare services.

Fitness Center & Pool

The Westin Boston Waterfront offers a 24-hour Fitness Studio located on the Mezzanine Level accessible with your guest room keycard. Enjoy state-of-the-art Lifestyle Fitness cardio machines, strength-training equipment, weights and Peloton bikes. The indoor pool is

open from 5:00–12:00am. The Westin has you covered if you didn't bring workout gear. Dial Service Express to have New Balance apparel and shoes delivered to your guest room (fee applies).

Check Out and Luggage Storage

The hotel's check out time is 12:00pm. Luggage may be stored with the Bell Desk in the lobby.

Transportation around Boston

Public Transportation: The MBTA, or simply the "T," is Boston's public transportation system with subway, bus, trolley, and boat services. The Westin Boston Waterfront is located on the Silver Line at the World Trade Center stop. Silver Line buses stop at all terminals at Logan Airport and can be accessed via the Red Line at South Station. Once at the World Trade Center stop, proceed 2 levels up to the Mezzanine level. The hotel is located at the end of the foot bridge on Summer Street, next door to the Boston Convention and Exhibition Center. The Number 7 Bus on the MBTA Bus Line stops outside the hotel on Summer Street. The bus schedule varies depending on the time of week. Monday – Saturday buses start leaving stations at 5:30am and the last bus leaves at 10:14pm. The cost is \$1.50 per trip.

Taxi Cab Service: Taxi service is available throughout the city. All areas within a 12-mile radius of downtown Boston are charged a meter rate. The cost is approximately \$25-\$30 between The Westin Boston Waterfront and Logan Airport.

Parking

Overnight parking at The Westin Boston Waterfront is \$36 for self-parking and \$46 for valet (includes in/out privileges). Vehicles over 6 feet, 8 inches will not fit in the parking garage.

Evaluations

We want to hear from you! After the meeting, go to www.asor.org and follow the link to fill out an evaluation form.

Name Badges and Lanyards

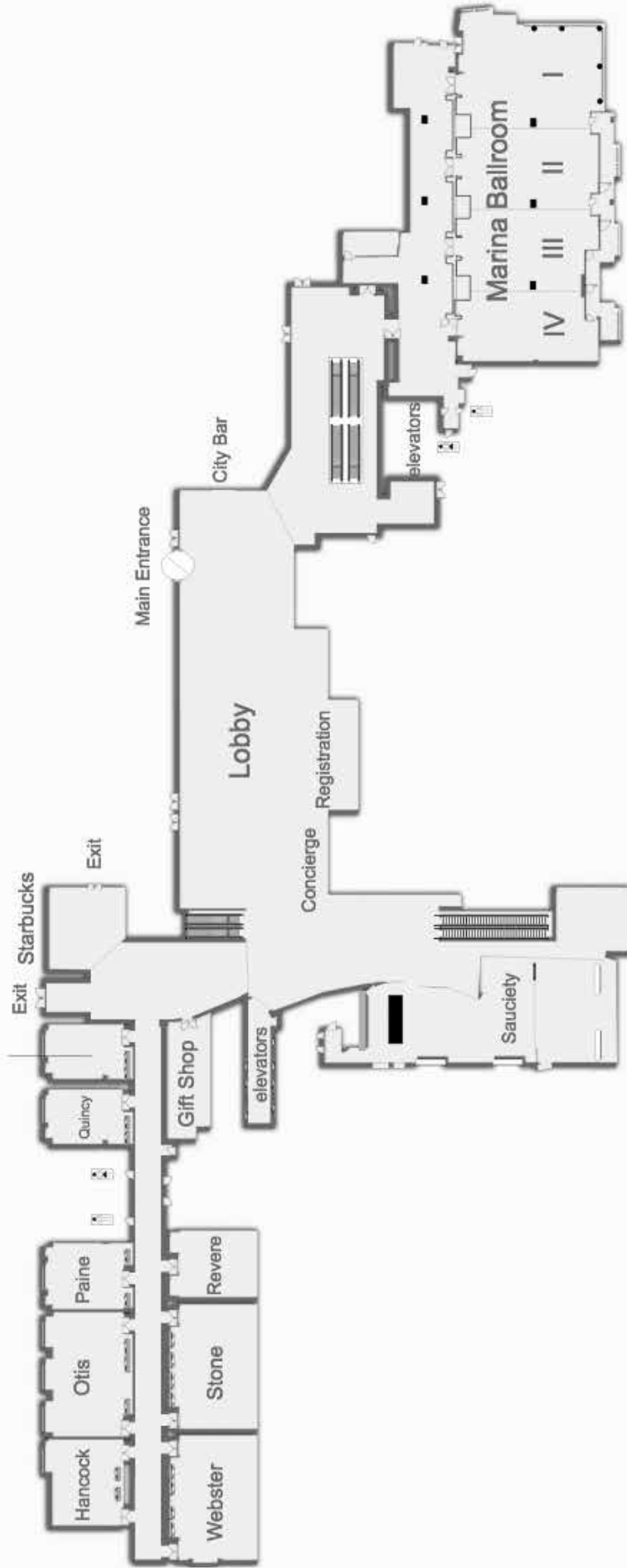
Please wear your name badge at all times. At the end of the meeting, please recycle your name badge and lanyard at the ASOR Help Desk. ASOR uses the badge holders for future meetings.

Say Cheese!

Please be ready to say "cheese" for our conference photographer! Some of the photos taken at the Annual Meeting will be used on our website and/or for other external publicity. If you would prefer to opt out of having your photo taken and used by ASOR, please be sure to alert the photographer.

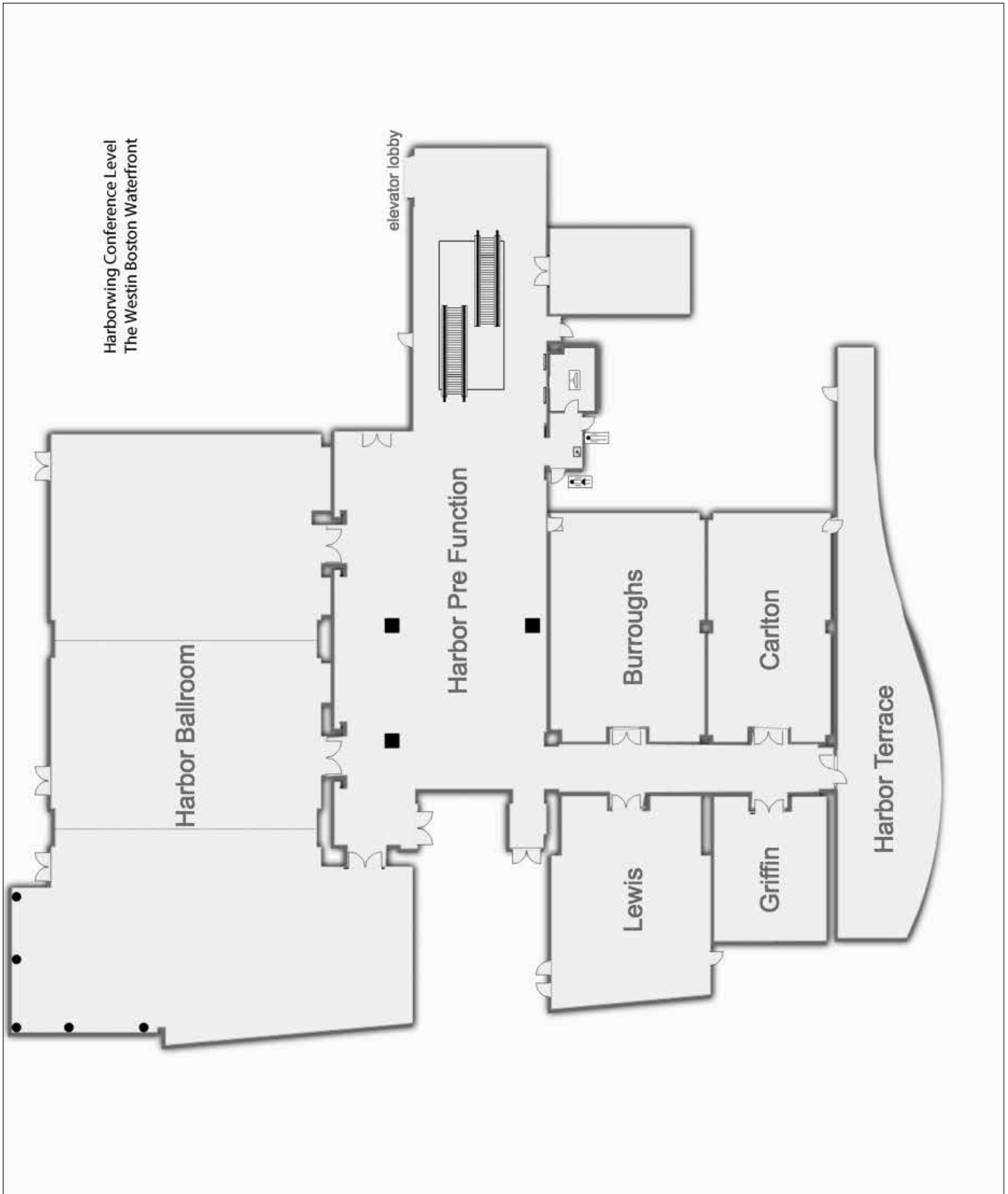
Don't Forget!

As a courtesy to the speakers and to the other attendees, please silence all cell phones and electronic devices. Should you need special assistance, please stop by at the Front Desk, Bell Desk, or Concierge.



Lobby Level
The Westin Boston Waterfront

Westin Boston Waterfront, Floor Plan



Meeting Highlights

WEDNESDAY, NOVEMBER 15, 2017

- 7:00–8:15pm Welcome to the Annual Meeting and Plenary Address (Harbor Ballroom)
 Irene J. Winter, (Professor Emerita, former William Dorr Boardman Professor of Fine Arts, Harvard University),
 “Archaeology, Object History, Art History: Questions of Definition and Discipline”
- 8:30–10:00pm Welcome Reception (Marina Ballroom)

THURSDAY, NOVEMBER 16, 2017

- 1:00–1:55pm Junior Scholars’ Panel Discussion, Heather Parker, Presiding (Harbor 1)
- 6:30–8:00pm Institute for Oriental and European Archaeology (OREA) Open Reception (Marina 2–4)
- 9:00–10:30pm Madaba Plains Project Reception (Marina 3–4)

FRIDAY, NOVEMBER 17, 2017

- 12:45–2:00pm ASOR Members’ Meeting, Susan Ackerman, Presiding (Harbor 1)
- 6:30–7:00pm Israel Finkelstein Festschrift Reception (Harbor 3)
- 6:30–7:30pm Cyprus American Archaeological Research Institute (CAARI) Reception (Paine)
- 6:30–7:30pm The CRANE Project Reception (Commonwealth A)
- 6:30–10:30pm Digital Archaeology Demo Showcase and Reception (Marina 3–4)
 *Hosted Reception from 8:00–10:00pm
- 7:00–9:30pm Legacy Circle and Friends Dinner *by invitation (Marina 1)

SATURDAY, NOVEMBER 18, 2017

- 10:25–10:40am ASOR Raffle Drawing (Harborwing Conference Level Foyer)
- 12:45–2:00pm Projects on Parade Poster Session, Jennifer Ramsay, Presiding (Galleria)
- 12:45–2:00pm Mentoring Meeting: Initiative on the Status of Women in ASOR, Beth Alpert Nakhai, Presiding (Marina 1)
- 6:30–9:00pm Harvard Semitic Museum Reception (Harvard Semitic Museum, 6 Divinity Ave., Cambridge)
 *A limited number of complimentary tickets are available. Please ask at the ASOR Help Desk for more information.

WOMEN OF ASOR

Here you can learn more about women in ASOR and network with other women in the field.



Open House Meeting
 of the Initiative on the Status of Women
 Beth Alpert Nakhai, Presiding
 Friday, November 17 from 7:15-8:15am
 Marina 3



Women’s Mentoring Meeting: Speed Networking
 Saturday, November 18 from 12:45-2:00pm
 Marina 1