

TAU ARCHAEOLOGY

The Jacob M. Alkow Department of Archaeology and Ancient Near Eastern Cultures
and The Sonia and Marco Nadler Institute of Archaeology

Tel Aviv University | Number 2 | Summer 2017



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Newsletter of

The Jacob M. Alkow Department of Archaeology and Ancient Near Eastern Cultures
and The Sonia and Marco Nadler Institute of Archaeology

Tel Aviv University | Number 2 | Summer 2017

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Photo by: Yogevev Attias

Message from the Chair of the Department and the Director of the Institute



Director of the Institute, Prof. Oded Lipschits (left), and Head of the Department, Prof. Ran Barkai (right)

Modern archaeology is a complicated discipline, one that is executed in both the classroom and the field. Such a practice requires the integration and cooperation of numerous experts who work together to excavate, analyse, and interpret the multitude of excavation results and finds.

The challenges that face excavation directors today are enormous. First and foremost, excavation directors are teachers. Yet they must also document large volumes of data, which are sourced from vastly different perspectives. These department members are coordinators of diverse expertise, involved in the many 'scientific' aspects of excavation, and implement long-term plans so as to glean as much information as possible in the pursuit of different avenues of research.

Students who participate in today's archaeological curriculum are exposed to both the traditional methods of study, as well as pioneering macro and micro archaeo-scientific research. However within this exposure, students are still the agents who decide their own research track, develop varied research skills, and unlock even greater pathways on their road to becoming a scholar.

International cooperation is an essential component of the new archaeology curriculum. We cannot imagine a field project without students and experts from all across the world. In an immediate sense, working with people from abroad invites new attitudes, skills, and knowledge to the field. In the long-term, these same contributions elevate our laboratory research, studies, and the publication of reports. In many cases, our excavation teams are characterised by the inclusion of a spectrum of different nationalities and research disciplines.

We consider our cooperative projects with international institutions and individuals a defining strength in the continued development of the Institute. Such collaborations ensure our students utilise the best we have to offer in both the classroom and in the field.

The June 2017 edition of the TAU Archaeology Newsletter is dedicated to highlighting the innovative interdisciplinary research and international collaborations currently active within the Institute, and the global research community at large.

Prof. Oded Lipschits
Director, the Sonia and Marco Nadler
Institute of Archaeology

Prof. Ran Barkai
Chair, Department of Archaeology and
Near Eastern Cultures

FIELDWORK



Central Timna Valley Excavations 2017: A Short Stint in the Field

Erez Ben-Yosef and Benjamin Douglass

The 2017 season was shorter than previous years, undertaken with the goal of redefining and narrowing future avenues of research. Part of the season was devoted to surveys and discussions of future collaborative research with international institutions, such as the experimental reconstruction of the mining and smelting processes with European researchers. The season focused on conducting probes in several areas such as Site 34 (Slaves' Hill), Solomon's Pillars, and stone piles in the vicinity of Site 35, alongside conservation work in areas excavated in past seasons. Throughout the long history of excavations in the Central Timna Valley, almost no

burial remains have been discovered. It was hoped that the discovery of intact graves would shed light on the subject. Our probes revealed a number of empty or disturbed cist tombs and tumuli that did not assist our research. Yet a small number of probes do indeed show promise. It is hoped that in the coming months, further defined and systematic excavations of the mounds will reveal the information that we seek.

To discover more about archaeological excavation and research at Central Timna Valley, visit our website archaeology.tau.ac.il/ben-yosef/CTV/, or Facebook page (@CentralTimnaValleyProjectCtv).



Excavating Tumulus S35 (Photo by: CTV Project)



S34 Gatehouse (Photo by: CTV Project)



Overlook on the Timna Valley (Photo by: CTV Project)

The Masada Expedition 2017

Guy Stiebel

In February 2017, The Neustadter Masada Expedition conducted its first season under the auspices of the Institute of Archaeology at Tel Aviv University. Directed by Dr. Guy Stiebel, five areas were excavated at the top of the site, through the combined efforts of Israeli B.A. and International M.A. Program TAU students.

Focusing on as yet unexplored areas, the aim of the season was to utilise the archaeological advantages of micro-archaeology and hi-tech methodologies. In Area B the uncovered complex is understood as twin Herodian water-cisterns, which were later reused by Byzantine hermits who founded a monastery at Masada in the 5th century CE. Area A was devoted to the exploration of the period of the First Jewish Revolt (66–73 CE). The potential of continued excavation in Area D of a newly explored small cave is promising. Our two final areas of excavation pursued the archaeobotanical remains of the site. Finally, the 3D modeling project produced a new understanding through unique photometric documentation, of the Roman siege system, as well as the trails that ascend the site and its environs.

Register for our second season next winter, January 28 – February 23, 2018. Discover more about archaeology and excavation at Masada, head to our website masadaexpedition.org, Facebook page (@MasadaExpedition), or email us at masada.expedition@gmail.com.



Director Guy Stiebel collaborating with students in Area A, Masada (Photo by: Sasha Flit)



Fieldwork in Area A, Masada (Photo by: Omer Ze'evi)

Setting the Clock in the City of David: Excavations of 2017

Yuval Gadot, Johanna Regev, Helena Roth, and Elisabetta Boaretto

The ancient core of Jerusalem (City of David/Silwan) is one of the most excavated and researched archaeological sites in the world, subject to over 150 years of intensive archaeological research. The main goal of site explorers has been to link the archaeological record of the city with the comprehensive textual evidence, through a reliance on relative typology-based chronology. However to achieve this goal, a reliable and detailed absolute chronology, namely radiocarbon dating, is required. This project focuses on an absolute dating of the carefully documented strata sequence of Y. Shiloh's Area E-north, the key excavation area of Jerusalem, which serves as the stratigraphical backbone for Jerusalem.

Excavations were conducted in 2015 and 2016 in collaboration with scholars and students of several universities. The spring 2017 season was a collaboration with Charles University, Prague. The excavation is under the direction of Yuval Gadot (TAU), in cooperation with Johanna Regev and Elisabetta Boaretto of the D-REAMS Radiocarbon Dating Laboratory, Archeological Unit, (Weizmann Institute of Science), with Helena Roth (TAU) as field director. In its entirety, the project is a unique multinational collaboration between archaeologists, radiocarbon scientists, theologians, and Old and New Testament scholars.

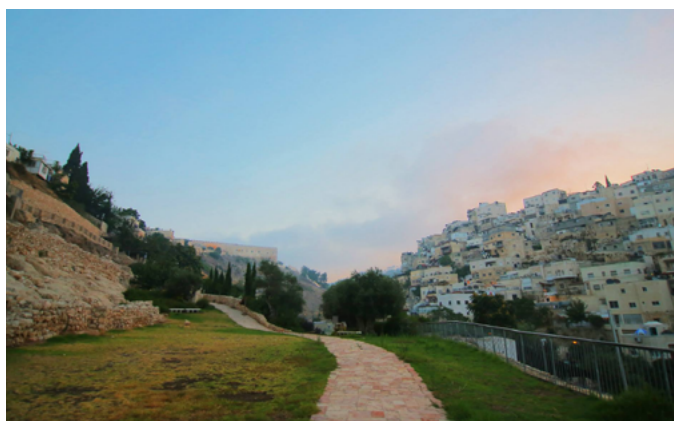
Excavations focused on the baulks that remained from the Shiloh expedition, with extensive efforts dedicated to obtaining organic material from well-defined context. Meaningful preliminary results were obtained from the Iron Age II and Early Bronze Age. Remains dating to the Middle Bronze were only just reached and will be dealt with in the coming seasons.



Excavating and cleaning the sections in Area E-north
(Photo by: Simon Manderla)



Taking samples from section bd-bd (Photo by: Yuval Gadot)



View of the eastern slopes of the "City of David" Hill
(Photo by: Benjamin Sitzmann)

The Shmunis Family Excavations at Kiriath-Jearim

Israel Finkelstein, Thomas Römer, and Christophe Nicolle

Kiriath-Jearim is located in a commanding spot in the Judean highlands, 12 km west of Jerusalem. The Arab name *Deir el-Azar* probably stems from the reference to Eleazar, who according to 1 Samuel 7:1 took charge of the Ark of the Covenant when it was brought to Kiriath-Jearim. The identification of Deir el-Azar with biblical Kiriath-Jearim is unanimously accepted. The mound is ca. 250 x 250 m in size (5 hectares), one of the biggest Iron Age tells in the highlands.

The site is mentioned several times in the Bible: as a border town between the territories of the tribes of Judah and Benjamin, in the Ark Narrative, in the list of returnees from exile, and other places. According to the Book of Samuel the Philistines captured the ark following the defeat of Israel in the Battle of Eben-ezer. It then spread havoc in Philistine cities and was hence returned to Beth-Shemesh. From there, it was taken to Kiriath-Jearim and finally brought by King David to Jerusalem. The Ark Narrative and the strong polemic against

the town in the Bible hint at the existence of a temple in late-monarchic times.

Excavations at Kiriath-Jearim are expected to shed new light on an important site close to Jerusalem, and on the history of ancient (biblical) Judah and its countryside. Furthermore, the new project intends to deploy cutting-edge archaeological methods and scientific techniques for the first time on a site located in the highlands.

The excavation of Kiriath-Jearim is a joint project of Tel Aviv University and the Collège de France in Paris, under the direction of Israel Finkelstein (TAU), and Thomas Römer and Christophe Nicolle (Collège de France). To discover more about archaeology and excavation at Kiriath-Jearim, visit our website at kiriathjearim.wordpress.com, Facebook page (@kiriath.jearim.expedition), or email us at dig.kiriathjearim@gmail.com.

Excavation Dates: August 7th – September 1st 2017



Aerial view of Kiriath-Jearim (Photo courtesy of: William Schlegel)

Ashdod-Yam Archaeological Project

Alexander Fantalkin

The fate of Ashdod-Yam was always connected to the capital city of Ashdod, one of the five major Philistine cities during the Iron Age. After Ashdod revolted against the Assyrians in the late 8th century BCE, the army of Neo-Assyrian King Sargon II took over the cities of Ashdod, Gath, and Asdudimmu; the latter is identified with the site of Ashdod-Yam (Ashdod-by-the-Sea). The Iron Age enclosure of Ashdod-Yam was excavated in intervals from November 1965 until March 1968 by Jacob Kaplan, on behalf of the Museum of Antiquities of Tel Aviv. A new excavation project was launched in 2013 on behalf of the Institute of Archaeology at Tel Aviv University, and the Institut für Alttestamentliche Wissenschaft of the University of Leipzig, under the directorship of Dr. Alexander Fantalkin and Prof. Angelika Berlejung. This summer, we intend to continue excavations of the Iron Age compound at Ashdod-Yam, to further explore what happened when the Assyrians crushed Ashdod and expanded the nearby city of Ashdod-Yam.

During the 2017 excavation season we will continue the exposure of an enormous system of fortifications from the Iron Age IIB (8th –7th centuries BCE). We shall also attempt to locate a man-made harbor at Ashdod-Yam, and clarify the nature of the Hellenistic occupation, traces of which (including what seems to be evidence of earthquake destruction) have

already been discovered. The excavations will shed light on the modes of Assyrian imperial control of subjugated areas, clarifying the nature of interaction between different peoples in the Mediterranean melting pot at Ashdod-Yam.

To discover more about archaeology and excavation at Ashdod-Yam, visit archaeological.wixsite.com/ashdodyam, our Facebook page (@AshdodYamExcavations), or email us at fantalk@post.tau.ac.il or aberlejung@aol.com.

Excavation Dates: July 9th – August 6th 2017



Excavating at Ashdod-Yam (Photo by: Itamar Ben-Ezra)



Seaside bucket line, Ashdod-Yam (Photo by: Itamar Ben-Ezra)

Simultaneous Studies: Students' Field Research

Exploring a diverse range of research projects and methodologies, discover the different types of academic research the students of the Institute and the Department pursue in addition to their central research topics.

Digital Archaeology at Masada

Omer Ze'evi

Currently, my central thesis research evaluates the typology and cultural implications of a 14th century BCE pottery assemblage. Yet during my fieldwork at Tel Beth-Shemesh, Zvi Lederman introduced me to the different aspects of digital archaeology, emphasising its vast potential as a documentation tool.

In the winter of 2017, together with Hai Ashkenazi and under the direction Guy Stiebel, we set out to investigate Masada's road and siege systems, using high accuracy digital position recording and photogrammetric 3D modeling. These tools allow us to take measurements, whilst offering a previously unavailable birds-eye point of view. At the onset of this research, digital archaeology is proving itself to be a valuable tool in answering a range of archaeological questions. For example, can the accurate quantification of the material used for the construction of the siege system facilitate an estimation of the length of time it took to construct the system at Masada?

Although digital archaeology is not currently the focus of my central thesis, it is a fascinating instrument for archaeological investigation, and will continue to be incorporated into my future research and archaeological fieldwork.

Omer is currently completing his M.A. studies in, 'The Amarna Age in the Shephelah: Analysis of a Late Bronze IIA Pottery Assemblage from Tel Beth-Shemesh', under the supervision of Shlomo Bunimovitz.



Omer Ze'evi and Hai Ashkenazi digitally documenting Masada
(Photo by: Hai Ashkenazi and Omer Ze'evi)

Seeing Colors: Stone Recycling at Qesem Cave

Bar Efrati

My M.A. study deals with an intra-site spatial analysis of flint items in the area of the hearth at Qesem Cave (420-200 kyr). Aside from this research, I am also a participant in a project that studies modified patinated items in the lithic assemblages of Qesem Cave.

The term 'patination' refers to the subjection of a flint item's surfaces to various kinds of chemical alterations over a period of time and under certain environmental conditions. One can discern patinated surfaces from 'fresh' surfaces by colour and pattern differences. The re-flaking of 'old' patinated items is accepted as the best example for lithic recycling; meaning the production of 'new' items from 'old' and discarded ones.

I was first introduced to the field of patina studies after Ran Barkai and Avi Gopher continued to emphasise its importance when considering many other questions regarding human behaviour in Prehistoric times. For me, patina studies are an interesting field of research because it offers the opportunity to handle artifacts from up close, and observe the biography of lithic items from a different perspective.

The phenomena of modified patinated items is dominant and present in all item categories at the site. This may suggest an intentional selection, gathering and use of these items as a source for new items following a specific selection process, according to a specific morphology, size and variation in colors.

I plan to continue this research in the future, as it offers new information that can facilitate new insights into different aspects of human behavior and decision-making.

Bar is currently completing her M.A. studies in, 'A Burning Matter: Intra-Site Spatial Analysis of Flint Items around the Hearth at Qesem Cave', under the supervision of Ran Barkai and Avi Gopher.



Examples of patinated lithic artefacts (Photo courtesy of: Bar Efrati)

Upcoming 2017 Excavations

In 2017, The Sonia and Marco Nadler Institute of Archaeology continues to dig deeper into the past of the country.

Excavation directors usually select their excavation season based on the domestic academic calendar (semester break), international academic calendar (to ensure international scholars and students can participate), and weather at the site (summer excavations, e.g., Tel Azekah and Tel Megiddo versus winter excavations, e.g., Masada and Timna).

The following are our planned excavations for summer 2017:

Jerusalem	July 9—July 20
Ashdod-Yam	July 9—August 6
Kiriath-Jearim	August 7—September 1



Timna Valley, Photo by: Hai Ashkenzi





RESEARCH PROJECTS

Interdisciplinary Research

Researchers and scholars of the Institute and Department of Archaeology continue to advance the borders of study through interdisciplinary collaboration and cooperation.

“Royal Herodian Gardens Come Alive”

Auspices: Israel Science Foundation grant no. 997/15

Project launch date: 2015

The aim of this project is to reveal the botanical components of Herod’s royal gardens. Samples have been collected from several sites and are currently under analysis at the Laboratory of Archaeobotany and Ancient Environments (TAU). Samples have been retrieved from the courtyard of Herod’s Promontory Palace at Caesarea, the peristyle garden of Herod’s Winter Palace at Jericho, the Northern Palace of Masada, and the three royal gardens identified at Herodium. To examine the far-reaching impact of Roman cultural influences, the plants identified in Herod’s gardens will be compared to those that we have recently identified at Villa Arianna in Stabiae, Italy.

Conducted by: Dafna Langgut (TAU), Kathryn Gleason (Cornell University), Burrell Barbara (University of Cincinnati)

Student involvement: Mark Cavanagh and Eitan Kremer

Publications:

Langgut, D., Gleason, K., and Burrell, B. 2015. Pollen Analysis as Evidence for Herod’s Royal Garden at the Promontory Palace, Caesarea, Israel. *Journal of Plant Sciences* 62: 111–121.

Several additional papers are currently in development.

The History of the Pentateuch: Combining Literary and Archaeological Approaches

Auspices: Swiss National Science Foundation

Project launch date: 2016

Conducted by: Oded Lipschits and Israel Finkelstein (TAU)

In collaboration with: Christophe Nihan (University of Lausanne), Thomas Römer (University of Lausanne), Konrad Schmid (University of Zurich)

Student involvement: Research carried out by 15 Ph.D. candidates and Post-Doctoral fellows from Zurich, Lausanne, and Tel Aviv Universities



Ancient DNA: Animals and Humans

Auspices:

ERC Grant Agreement no. 229418

The Vlad and Sana Shmunis Ancient DNA Research Program at Tel Aviv University

Innovation Fund 'Frontier', Heidelberg University

Project launch date: 2009

Conducted by: Israel Finkelstein and Meirav Meiri (TAU)

In collaboration with: Joseph Maran (University of Heidelberg), Philipp Stockhammer (University of Munich), Liran Carmel (Hebrew University of Jerusalem) and David Reich (Harvard University)

Publications:

Meiri, M., Huchon, D., Bar-Oz, G., Boaretto, E., Kolska, L., Maeir, A., Sapir-Hen, L., Larson, G., Weiner S. and Finkelstein, I. 2013. Ancient DNA and Population Turnover in Southern Levant Pigs – A Signature of the Philistine Migration? *Scientific Reports* 3: 3035

Meiri, M., Stockhammer, P.W., Marom, N., Bar-Oz, G., Sapir-Hen, L., Morgenstern, P., Macheridis, S., Rosen, B., Huchon, D., Maran, J. and Finkelstein, I. 2017. Eastern Mediterranean Mobility in the Bronze and Early Iron Ages: Inferences from Ancient DNA of Pigs and Cattle. *Scientific Reports* 7.

Sapir-Hen, L., Meiri, M. and Finkelstein, I. 2015. Pigs in the Southern Levant Iron Age: A Review of the New Evidence. *Radiocarbon* 57: 307–315.

Finkelstein, I., Langgut, D., Meiri, M., and Sapir-Hen, L. Submitted. Egyptian Imperial Economy in Canaan: Reaction to the Climate Crisis at the End of the Late Bronze Age. *Egypt and the Levant*.

Geo-Archaeological Investigations in the Negev Highlands

Auspices:

Israel Science Foundation, Grant # 506/04, 10/2005-9/2007: *Subsistence Practices in the Iron Age Sites in the Negev Highlands: A Geoarchaeological Investigation*

Ancient Israel Project (New Horizons Program), The Institute of Archaeology, Tel Aviv University, 5/2008-4/2009: *Inferring Subsistence Practices in the Negev Highlands Using Geoarchaeological Methods*

Germany-Israel Foundation for Scientific Research, Grant # I-1244-107.4/2014, 1/2015-12/2017: *The Intermediate Bronze Age in the Negev Highlands, Israel: A Multi-Disciplinary Study of Chronology and Subsistence Economy*

ERC Grant Agreement no. 229418

Project launch date: 2006

Conducted by: Israel Finkelstein (TAU)

In collaboration with: Ruth Shahack-Gross (University of Haifa)

Student involvement: Research carried out by Ph.D. candidate Zach Dunseth

Publications:

Shahack-Gross, R. and Finkelstein, I. 2008. Subsistence Practices in an Arid Environment: A Geoarchaeological Investigation in an Iron Age Site, The Negev Highlands, Israel. *Journal of Archaeological Science* 35: 965–982.

Shahack-Gross, R., Boaretto, E., Cabanes, D., Katz, O. and Finkelstein, I. 2014. Subsistence Economy in the Negev Highlands: The Iron Age and the Byzantine/Early Islamic Period. *Levant* 46: 98–117.

Dunseth, Z.C., Junge, A., Fuchs, M., Finkelstein, I. and Shahack-Gross, R. 2016. Geoarchaeological Investigation at the Intermediate Bronze Age Negev Highlands Site of Mashabe Sade. *Tel Aviv* 43/1: 43–75.

Iron Age Hebrew Ostraca in the Silicon Age: Computerized Paleography

Auspices:

Israel Science Foundation - F.I.R.S.T. (Bikura) Individual Grant no. 644/08

European Research Council under the European Community's Seventh Framework Programme (FP7/2007-2013)/ERC Grant Agreement no. 229418,

Early Israel Grant (New Horizons Project), Tel Aviv University.

Additional grants allocated by Mr. Jacques Chahine, Paris, through The French Friends of Tel Aviv University.

Project launch date: 2008

Conducted by: Israel Finkelstein (TAU)

In collaboration with: Eli Piasezky, Eli Turkel, and David Levin (TAU).

Student involvement: Research carried out by Ph.D. candidates Arie Shaus, Barak Sober, Shira Faigenbaum, Eythan Levy, and Post-Doctoral fellow Anat Mendel.

Publications:

Faigenbaum-Golovin, S., Shaus, A., Sober, B., Levin, D., Na'aman, N., Sass, B., Turkel, E., Piasezky, E., and Finkelstein, I. 2016. Algorithmic Handwriting Analysis of Judah's Military Correspondence Sheds Light on Composition of Biblical Texts. *Proceedings of the National Academy of Sciences* 113/17: 4664–4669.

Faigenbaum-Golovin, S., Rollston, C.A., Piasezky, E., Sober, B., and Finkelstein, I. 2015. The Ophel (Jerusalem) Ostrakon in Light of New Multispectral Images. *Semitica* 57: 113–137.

Faigenbaum-Golovin, S., Shaus, A., Sober, B., Finkelstein, I., Levin, D., Moinester, M., Piasezky, E., and Turkel, E. 2015. Computerized Paleographic Investigation of Hebrew Iron Age Ostraca. *Radiocarbon* 57/2: 317–325.

Faigenbaum, S., Sober, B., Finkelstein, I., Moinester, M., Piasezky, E., Shaus, A., and Cordonsky, M. 2014. Multispectral Imaging of Two Hieratic Inscriptions from Qubur el-Walaydah. *Egypt and the Levant* 24: 349–353.

Sober, B., Faigenbaum, S., Beit-Arieh, I., Finkelstein, I., Moinester, M., Piasezky, E., and Shaus, A. 2014. Multispectral Imaging as a Tool for Enhancing the Reading of Ostraca. *Palestine Exploration Quarterly* 146/3: 185–197.

Finkelstein, I., Boaretto, E., Ben-Dor Evian, S., Cabanes, D., Cabanes, M., Eliyahu, A., Faigenbaum, S., Gadot, Y., Langgut, D., Martin, M., Meiri, M., Namdar, D., Sapir-Hen, L., Shahack-Gross, R., Shaus, A., Sober, B., Tofollo, M., Yahalom-Mack, N., Zapassky, L. and Weiner, S., 2012. Reconstructing Ancient Israel: Integrating Macro- and Micro-archaeology. *Hebrew Bible and Ancient Israel* 1: 133–150.

Shaus, A., Finkelstein, I. and Piasezky, E., 2010. Avoiding the Eye of the Beholder: Automated Ostraca Facsimile Evaluation. *Maarav* 17/1: 7–20.



Inscribed sherd from Tel Megiddo (Courtesy of: The Megiddo Expedition, Photo by: Michael Cordonsky)

Paleoclimate of the Levant: The Neubauer Near East Paleoclimate Project

Auspices:

ERC Grant Agreement no. 229418

The Neubauer Foundation

Project launch date: 2009

The aim of this project is to trace links between past climate changes and settlement and demographic processes. The project considers the climate of the eastern Mediterranean (including the Levant), in the Bronze and Iron Ages (ca. 3500–500 BCE). The project will deploy two of the strongest scientific proxies in paleo-climate research: palynology (reconstruction of past vegetation and climate, based on the identification fossil pollen grains) and the study of past isotope signatures in cave formations and lake sediment cores.

Conducted by: Israel Finkelstein and Dafna Langgut (TAU)

In collaboration with: Thomas Litt (University of Bonn)

Student involvement: Research carried out by M.A. candidates Ben Laugmer and Mordechai Benzaquen

Publications

Langgut, D., Finkelstein, I. and Litt, T. 2013. Climate and the Late Bronze Collapse: New Evidence from the Southern Levant. *Tel Aviv* 40: 149–175.

Langgut, D., Neumann, F.H., Stein, M., Wagner, A., Kagan, E.J., Boaretto E. and Finkelstein, I. 2014. Dead Sea Pollen Record and History of Human Activity in the Judean Highlands (Israel) from the Intermediate Bronze into the Iron Ages (~2500–500 BCE). *Palynology* 38/2: 1–23.

Langgut, D., Lev-Yadun, S. and Finkelstein, I. 2014. The Impact of Olive Orchard Abandonment and Rehabilitation on Pollen Signature: An Experimental Approach to Evaluating Fossil Pollen Data. *Ethnoarchaeology* 6: 121–135.

Finkelstein, I. and Langgut, D. 2014. Dry Climate in the Middle Bronze I and Its Impact on Settlement Patterns in the Levant and Beyond: New Pollen Evidence. *Journal of Near Eastern Studies* 73: 219–234.

Langgut, D., Finkelstein, I., Litt, T., Neumann, F.H. and Stein, M. 2015. Vegetation and Climate Changes during the Bronze and Iron Ages (~3600–600 BCE) in the Southern Levant Based on Palynological Records. *Radiocarbon* 57/2: 217–236.

Finkelstein, I., Langgut, D., Meiri, M. and Sapir-Hen, L. In Press. Egyptian Imperial Economy in Canaan: Reaction to the Climate Crisis at the End of the Late Bronze Age. *Egypt and the Levant*.

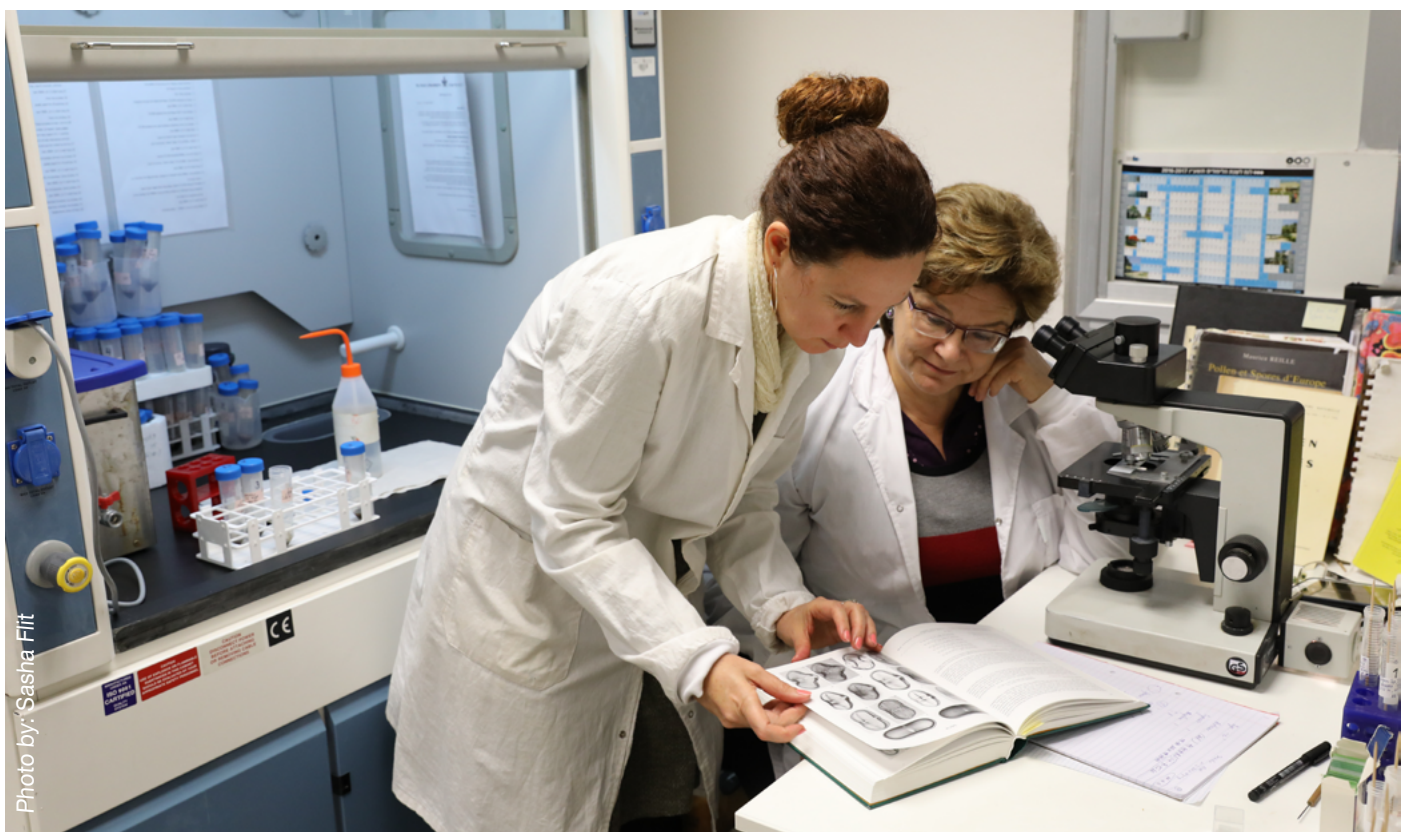


Photo by: Sasha Flitt

Jerusalem Foodways

Project launch date: 2014

Conducted by: Israel Finkelstein and Lidar Sapir-Hen (TAU)

Publications:

Sapir-Hen, L., Gadot, Y. and Finkelstein, I. 2016. Animal Economy in a Temple City and Its Countryside: Iron Age Jerusalem as a Case Study. *Bulletin of the American Schools of Oriental Research* 375: 103–118.

Early Indigenous Coinages of the Southern Levant

Auspices: Private Donations and Funding

Project launch date: 2005

Conducted by: Oren Tal (TAU) and Haim Gitler (Israel Museum, Jerusalem)

In collaboration with: Dana Ashkenazi (TAU), Matthew Ponting (University of Liverpool), and Adin Stern (Ben Gurion University of the Negev)

Student involvement: Research carried out by M.A. students Elisa Vanzetti and Yaniv Schauer



Samarian



Edomite



Judean



Philistian

Selection of coins dated to the Persian period from the Southern Palestinian region (Photo courtesy of: The Israel Museum)

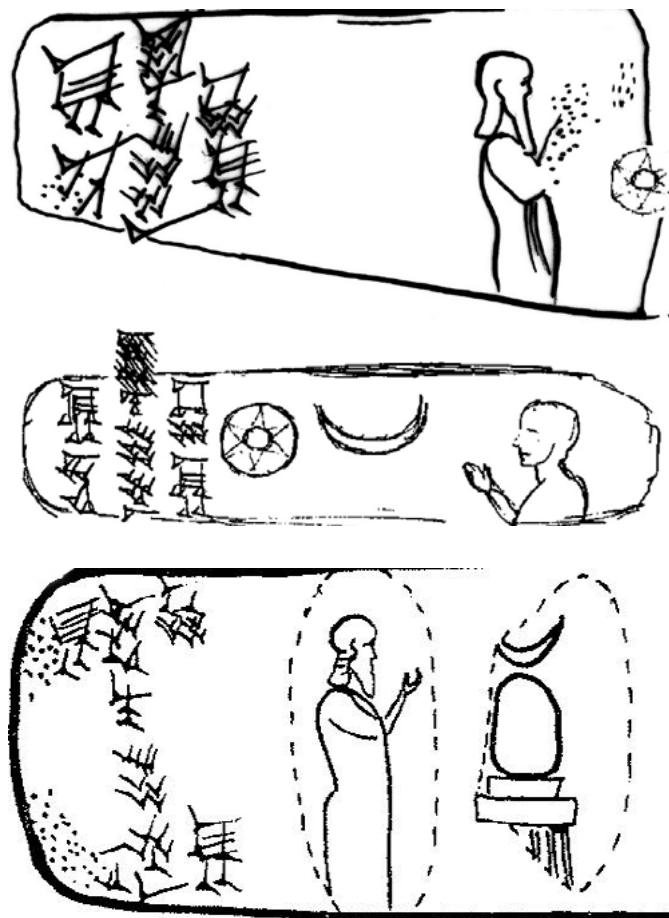
The Priesthood of Uruk in Late First Millennium BCE Babylonia

A Thyssen Grant Research Project

Yoram Cohen (TAU), Michael Jursa (University of Vienna),
and Shai Gordin (TAU)

Our research project is concerned with the southern Mesopotamian urban centre of Uruk (biblical Erech, modern Warka). It is known as one of the earliest cities in history, believed in ancient mythology to have been ruled over by the legendary hero Gilgameš. In the 'long sixth century' (ca. 620–484 BCE), between the ascent of the Neo-Babylonian kingdom (after the fall of Assyria) and a major disruption of social and economic life in Babylonia after the Babylonian rebellion against the Persian king Xerxes, the city and its main temple, the Eanna (sanctuary of the goddess Ištar), were key players in the regional and inter-regional network of people and goods that flowed south from Babylon along the Euphrates. The project aims to reconstruct an important facet of the religious and social landscape of Babylonia, through a study of the Urukian clergy, as attested in the Eanna archive and in the private archives from Uruk.

Our study includes researchers from the Institute of Archaeology of Tel Aviv University and from the Institut für Orientalistik Department at the University of Vienna. The drawings of the seal impression impressed on business documents that appear here will be published in an article written by Shai Gordin ('A Glimpse into the Šumu-libši Archive: The Sociohistorical Context of a Prebend Sale from the E-kar-zagina of Ea in Babylon and Related Texts', *Zeitschrift für Assyriologie und Vorderasiatische Archäologie*). The seals illustrate our work on familial relations and businesses of the priesthood of Uruk during late first millennium BCE Babylonia.



The seal of Notary Scribe Mušēzib-Marduk from the Atkuppū family depicts the worshipping of the an-iconic symbols of the moon-god Sin and the goddess of love, Ištar. The seals were impressed on a series of legal tablets from Babylon dated to the early reign of Darius the Great. (Graphic provided by: Shai Gordon, based on copies by Cornelia Wunsch)

Additional International Collaborations

Connecting and collaborating across the world, researchers at the Institute and Department of Archaeology continue to develop dynamic projects in cooperation with a range of international scholars and academic bodies.

TAU Member	International Partner	International Institute	Country	Project Title	Project Launch Date
Ran Barkai	Parth Chauhan	Indian Institute of Science Education & Research	India	The First Global Culture: Lower Paleolithic Acheulean Adaptations at the Two Ends of Asia. The joint UGC - ISF Research Grant (Israel-India program)	2017
	Thorsten Uthmeier	University of Erlangen	Germany	Cultural and Biological Transformations at Middle Pleistocene Qesem Cave, Israel. The German Research Foundation (DFG).	2015
	Ruth Blasco	National Research Centre on Human Evolution	Spain		2012
	Jordi Rosell	Institut Català de Paleoeecologia Humana i Evolució Social	Spain		2012
	Cristina Lemorini	Rome University La Sapienza	Italy		2001
	Christophe Falgueres	French National Centre for Scientific Research Paris	France	The Qesem Cave Research Project	2001
	Lutz Maul	Senckenberg Research Institute	Germany		2005
	Krister Smith	Senckenberg Research Institute	Germany		2005
	Lucy Wilson	Niversity of New Brunswick	Canada		2011
Israel Finkelstein Mario A.S. Martin	Matthew M. Adams	The Albright Institute	Israel	The Megiddo Expedition	1992
Yuval Gadot Oded Lipschits	Manfred Oeming	Heidelberg University	Germany	The Lautenschläger Azekah Expedition	2012
Raphael Greenberg Sarit Paz	David Wengrow	University College London	England	Tel Bet Yerah and the Kura-Araxes Culture – A Eurasian Research Collaboration	2003
Oded Lipschits	Gary N. Knoppers	Notre Dame University	U.S.A.	A Critical and Historical Commentary on the Bible: the Book of Ezra and Nehemiah	2014
Oren Tal	Barbara Scholkmann	Universität Tübingen	Germany	Die kreuzfahrerzeitliche Stadt Apollonia/Arsur in Israel: Struktur - Kulturadaption - Stadt-Umland-Beziehungen	2012

SPOTLIGHT



Tel Bet Yerah and the Kura-Araxes Culture: A Eurasian Research Collaboration

Raphael Greenberg and Sarit Paz

The Tel Bet Yerah Archaeological Project, fielded by the TAU Institute of Archaeology, sustains a series of international collaborations. As a collaborative effort with the University College London Institute of Archaeology, field schools conducted since 2009 have involved nearly 100 UCL students. Joint research supervised by senior faculty at UCL and TAU has resulted in a Ph.D. project and four M.A. theses. One of the focal points of Bet Yerah research has been the Kura-Araxes culture (a 3rd millennium BCE complex), which extends through intercultural contact and ancient migration, i.e., from the southern Caucasus to Anatolia, the Levant in the west, and Iran in the east.

Kura-Araxes research at TAU has involved collaborations with archaeologists and scholars from Armenia, Georgia, Azerbaijan, Russia, and Turkey. These collaborations include joint publications, international conference sessions, and a SSHRC-funded seminar at the University of Toronto (2017), which will result in an agenda-setting publication by leading scholars in the field, including two researchers from TAU.

In addition to the project director, two post-doctoral scholars are currently engaged in international research projects.

Mark Iserlis is currently a Minerva Post-Doctoral fellow at the German Institute of Archaeology, where he has collaborated with a number of European colleagues in the study of late Neolithic ceramic technologies in the Azerbaijan and Georgia.

Sarit Paz is currently an adjunct lecturer in the Unit of Culture Research at Tel Aviv University. As a recipient of a three-year White-Levy Program for Archaeological Publications (Harvard University) grant, she is currently engaged in the publication of a major Kura-Araxes excavation at Kvatskhelebi, Georgia. This is a collaborative project with Mindia Jalabadze of the Georgian National Museum. Within the project, Paz has focused on the nature of ancient migrations and inter-cultural contact. The study of ancient connectivity, as well as ancient cultural identities, is fundamental to the understanding of modes of cultural adaptation and resistance in our own world.



Aerial photo of Areas SA and GB, Tel Bet Yerah (Photo courtesy of: Tel Bet Yerah Research and Excavation Project)

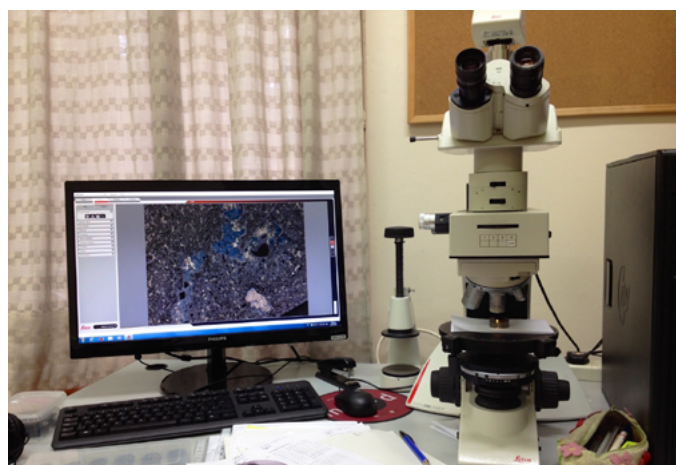
The Rush for Ancient Copper: Cyprus vs. Timna in the Early Iron Age

Lente Van Brempt, Vasiliki Kassianidiou, and Erez Ben-Yosef

Cyprus is well known for many copper ore deposits, which enabled the island's dominant position in the metals trade of the Late Bronze Age (LBA) in the eastern Mediterranean. As a result, the copper production on LBA Cyprus is subject to great attention, but metallurgical studies related to the aftermath of the flourishing Late Cypriot IIC (13th cent. BCE) period, remain limited. The collapse of the eastern Mediterranean powers and their trade networks at the end of the Bronze Age affected the demand for Cypriot copper. Further to this, the collapse put a certain end to the metal industry on the island, until its revival in the 9th century BCE. Direct evidence for the continuation of copper production in Cyprus in the early Iron Age (EIA) was only discovered in the northern workshops of a temple complex at LBA Kition that remained active in the 11th century BCE. Direct evidence was also recovered at the modern mine of Skouriotissa: one of the ancient slagheaps, Skouriotissa-Phoenix, holds samples that were radiocarbon dated to the 11th–10th centuries BCE, and the 4th–3rd centuries BCE. In contrast, the large-scale metallurgical evidence from Faynan and Timna implies that the Arabah had become the major copper producer and exporter.

A complete evaluation of the copper production in Cyprus from the Bronze to the Iron Age is of great importance in understanding these times of political, social, and economic upheaval of the LBA–EIA eastern Mediterranean. Therefore, the present project, undertaken within the framework of the Central Timna Valley project under guidance of Erez Ben-Yosef, and in close collaboration with Vasiliki Kassianidiou (University of Cyprus), aims for the comparative study of the very few Cypriot metallurgical remains dated to the 11th and 10th centuries BCE.

As the remains from Kition are currently under the investigation of Kassianidiou, this research involves the analysis of slag sampled from the successive strata of the Skouriotissa-Phoenix slagheap. Metallurgical slags are composed of the unwanted ore-minerals that are separated from the metal during smelting. Their microstructural and chemical composition is defined by the technological choices made by the ancient metallurgist. The study of slags thus enables the identification of the applied technological process, and the changes through time, which we can hopefully relate to the economic and socio-political context within which the production process was taking place. The technological and socio-political organisation of the metal industry in Cyprus is consequently contrasted to contemporaneous activities in the Arabah.



Microstructural Analysis of Metallurgical Slags by Optical Microscopy (Photo courtesy of: The CTV Project)



The Phoenix pit at the open cast mine of Skouriotissa, indicating the exposed slag heap (Photo courtesy of: The Cyprus Archaeomagnetic Project)

Man and Elephant: The First Two Million Years

Ran Barkai

Early humans and elephants roamed the Pleistocene landscapes of the Old and New Worlds, and shared habitats for hundreds of thousands of years. Notwithstanding the assumption that prehistoric humans conceived of elephants and mammoths as habitat companions and as other-than-human-persons, and that the more recent hunter-gatherers still do so, the archaeological and ethnographic evidence regarding the human dietary use of these mega-herbivores is unquestionable. Many Paleolithic archaeological sites are abundant with elephant remains, which clearly demonstrates that early humans were capable of obtaining these mega-herbivores.

Paleolithic nutrition was based on animal fat and meat in addition to plant-based food. Evidence of elephant exploitation for dietary purposes is present at many Paleolithic sites over hundreds of thousands of years. Such evidence reveals bones with cut and percussion marks. In several cases elephant body parts were transported to cave sites, most probably in order to be consumed and shared in better settings. The significant role of elephants in the Paleolithic is well demonstrated, and the dietary significance of proboscideans has recently been explored.

During Paleolithic times, proboscideans (when available) were a constant and significant source of calories for early humans, who were actually dependent on mega-herbivores for their successful survival. Moreover it appears that the central role of proboscideans as a food source, coupled with the social, behavioural, and even physical resemblance between these animals and humans, were the reasons behind the cosmological conception of elephants by early



A reconstruction of elephant butchery, and fat and meat transportation, during Paleolithic times. Note that the whole hunter-gatherers group enjoys the enormous food-package of the elephant, and that selected food-items are transported to a better location.

humans. Elephants and mammoths had ontological and epistemological significance for humans, as their bones were used to produce artifacts. Such artifacts include those that depict the iconic Lower Paleolithic stone handaxe, in addition to their representations in Upper Paleolithic depictions and engravings made from mammoth ivory and bone. However, the question of how prehistoric people acquired proboscideans remains unanswered. Based on archaeological and anthropological evidence, and given the important nutritional, social and cosmological roles attributed to proboscideans by past and recent hunter-gatherers, it is suggested that early humans possessed the necessary abilities to actively and regularly hunt elephants; and, indeed, that they performed this unique and challenging task at will.



A bi-face made from an elephant limb bone, mimicking the iconic stone hand axe (Fontana Ranuccio, Italy). Elephant limb bones were fractured (most probably using stone hand axes) in order to extract the marrow, and then the large bone fragment shaped as a hand axe. (Photo courtesy of: M. Mussi)



A butchering experiment using replica of an Acheulian handaxe. (Photo by: Ruth Blasco)

Cypriot Opium at Canaanite Beth-Shemesh? The Beth-Shemesh Amarna Age Palace

Shlomo Bunimovitz and Zvi Lederman

The Amarna Age (Late Bronze IIA, 14th century BCE) is well known as the era of the heretic Egyptian Pharaoh Akhenaten (Amenhotep IV) and his wife Nefertiti. This age is also renowned for the archive of international correspondence, the el-Amarna clay tablets, which included texts from the rulers of city-states in Canaan and copies of reply answers and instructions sent by the Pharaoh. The letters shed light on the array of Canaanite city-states and their mutual relations, the Egyptian administration, Canaanite society, and more. Surprisingly, excavations at several major sites in Canaan exposed barely any remains from the 14th century BCE. As a result, the archaeological picture of the Amarna Age in the southern Levant is still vague and minimal. This anomalous situation highlights the importance of the recent exposure of an Amarna Age palace at Tel Beth-Shemesh.

The palace was discovered in 2007 under a heavy mantle of fallen mudbricks, which were fired in a fierce conflagration. The multi-roomed structure revealed a variety of finds: over 150 pottery vessels including jars full of plant remains, two decorated Minoan cups from Knossos in Crete, a commemorative scarab of Pharaoh Amenhotep III, imported Cypriote pottery, a plaque figurine of a female Canaanite ruler (presumably Belit-labi'at, 'Lady of the Lionesses', the governess of Beth-Shemesh who wrote el-Amarna letters 273–274), and more. A series of interdisciplinary projects concerning these finds emphasize their important implications

for key issues in the archaeology of the Amarna Age in the eastern Mediterranean.

Over half a century ago Robert S. Merrillees hypothesised that Late Cypriote Base Ring juglets were shaped like an inverted poppy seed pod to advertise their contents (Fig. 1). In order to provide new insights into this intriguing issue, three Base Ring I juglets (found in secured context at the Late Bronze IIA palace at Beth-Semesh (Fig. 2) were submitted for chemical Organic Residue Analysis by Zuzana Chovanec at the University of New York at Albany (Fig. 3). There were no traces of opium found in the sampled juglets. The analysis of 14 additional Base Ring juglets and jugs from Cyprus yielded similar results. Rather, the juglets from Beth-Shemesh contained aromatic oils, which could be used externally or consumed for their medicinal benefits. The analytical results are supported by textual evidence attesting to a lively trade across the eastern Mediterranean in aromatic substances and compounds rather than in opium.

Research Publications:

Chovanec, Z., Bunimovitz, S. and Lederman, Z. 2014. Is There Opium Here? – Analysis of Cypriote Base Ring Juglets from Tel Beth-Shemesh, Israel. *Mediterranean Archaeology and Archaeometry* 15.2: 175–189.

Bunimovitz, S. and Lederman, Z. 2016. Opium or Oil? Late Bronze Age Cypriote Base Ring Juglets and International Trade Revisited. *Antiquity* 354: 1552–1561.



Figure 1: Poppy Seed Pod



Figure 2: Cypriote Base Ring Juglets from the Late Bronze IIA Palace at Tel Beth-Shemesh (Photo by: Studio M. Fishbain)



Figure 3: Dr. Zuzana Chovanec, SUNY at Albany

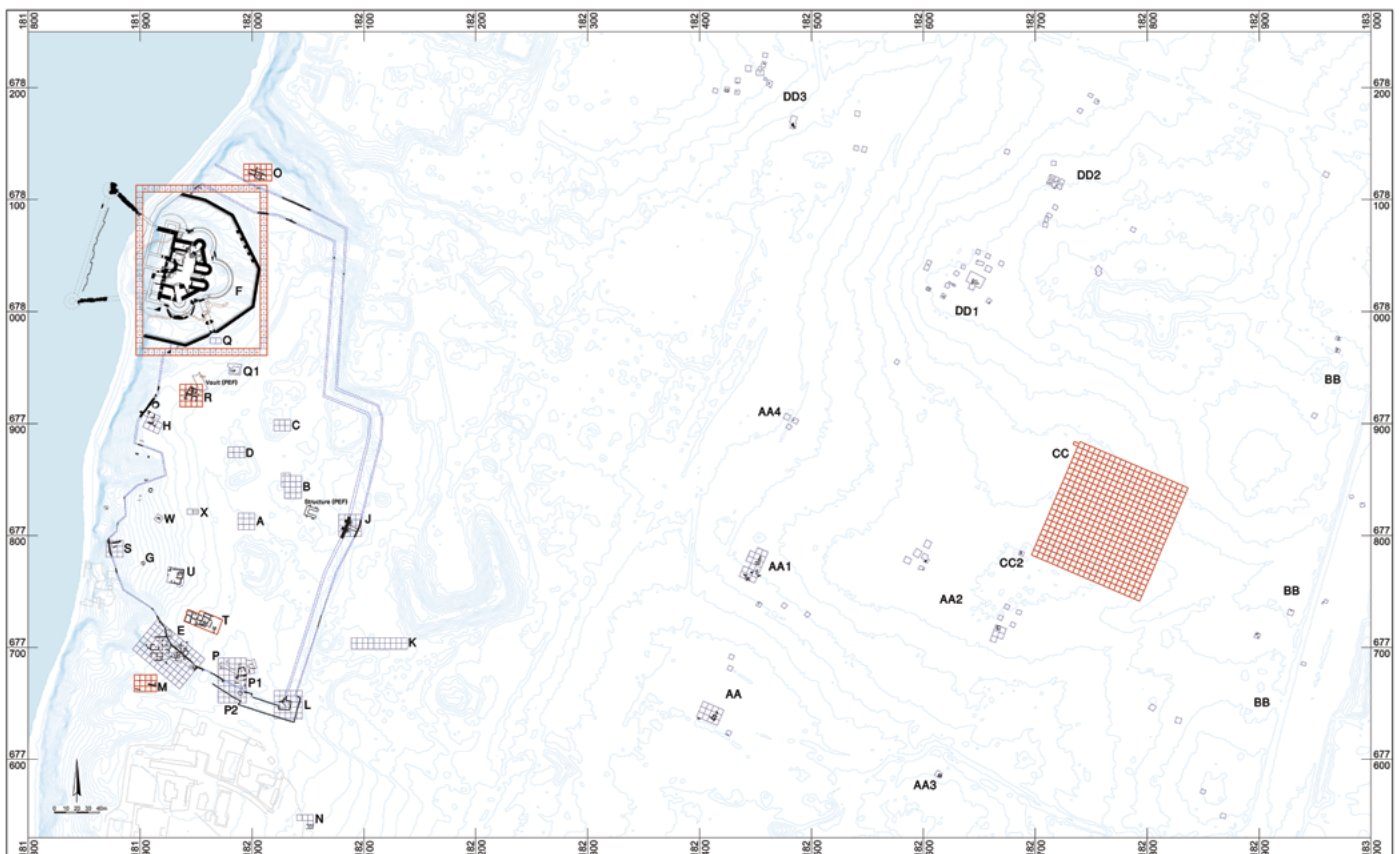
The Crusader Town of Apollonia / Arsur (Israel): Structure – Cultural Adaptation – Urban-Rural Relations

Oren Tal

This project is partially funded by the Deutsche Forschungsgemeinschaft (DFG), with the aim of investigating the European vs. local cultural influences that dictated the structure and organization of the town of Arsur and its hinterland. The town's abandonment following its Mamluk destruction led to a unique archaeological setting in which the Crusader layers were left largely undisturbed by later settlement activities, and thus are highly suitable for intensified archaeological research. These layers were the object of extensive light detection and ranging (LIDAR) analysis, as well as geo-magnetometer and geo-physical surveys. Such analyses allow for the reconstruction of the original topography and design of the medieval town. This is achieved through the identification of structures and their layout, still hidden below the ground. The finds from excavations complete the picture already drawn through surveys, by allowing for greater insight into the material culture and daily life activities of the town's inhabitants.



Aerial photo of Apollonia/Arsur (Photo courtesy of: Apollonia/Arsur Excavation Project)



Map of Apollonia/Arsur Excavation Areas (Graphic by: Itamar Ben-Ezra)

Lithic Procurement Strategies in the Lower Paleolithic: A View From Acheulo-Yabrudian Qesem Cave

Aviad Agam

Lithic raw material procurement strategies during prehistory are commonly divided into two main types: direct procurement, which is a foray aimed specifically towards the acquisition of lithic materials; and embedded procurement, in which lithic materials acquisition is integrated into other subsistence activities. The study presented here questions the dichotomy of characterising raw materials studies in relation to lithic procurement strategies. Understanding how lithic materials were procured, why certain raw materials were selected for use, and how much effort was put into their acquisition, may improve our perception of the behaviour of past societies.

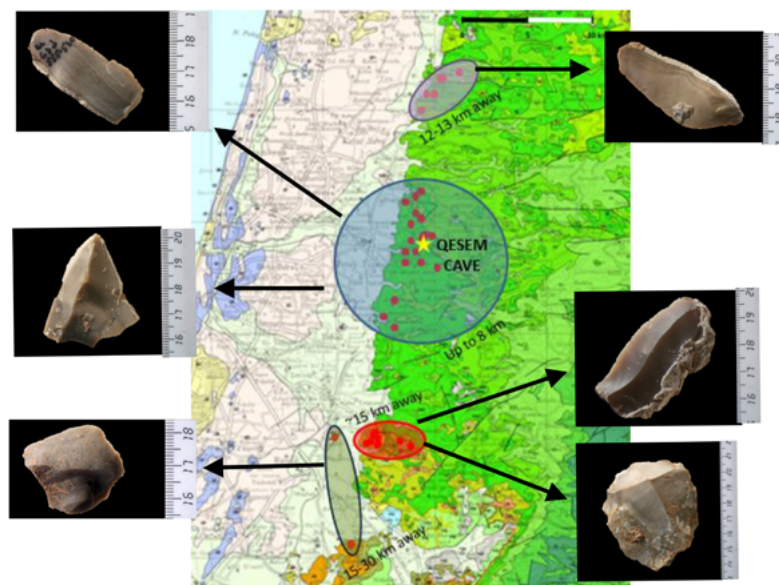
To that aim, ~6000 items from three well-defined lithic assemblages from Acheulo-Yabrudian Qesem Cave (~420,000 to 200,000 years ago) were studied, all dated to ~300 kya. Two of them are Amudian blade-dominated, and one is Yabrudian, dominated by Quina scrapers. The studied items were classified into flint types, based on visual traits. Fieldwork was undertaken to locate potential flint sources, following geologic maps. Flint sources were then crossed with flint types, using macroscopic data and petrographic thin sections of both archaeological and geological samples. Eventually, flint types were divided into five groups of potential sources: up to 8 km from the site (Turonian, 'local'); 12–13 km to the north (Cenomanian/Turonian); ~15 km to the south (Campanian); 15–30 km to the south (Eocene); and unknown.

The results demonstrate that while local materials dominate the three assemblages, the noticeable presence of non-local sources (from 12–13 km and ~15 km away) cannot be dismissed

as an embedded procurement. Interesting results appear, for example, in regard to the use of type AF (a flint type from ~15 km away), which stands out in certain categories within specific assemblages. These observations imply that procurement of distant flints was not random. Among the local materials, selectivity and specific preferences were also detected.

In conclusion, it appears that measuring the procurement strategies of the Qesem Cave inhabitants in terms of 'direct' versus 'embedded' procurements is not suitable. Rather, we should employ the term 'strategic procurement', as even if the procurement of flint was indeed integrated into other subsistence activities (i.e., fallow-deer hunting, or wood collecting); flint acquisition still had considerations of its own, including costs (e.g., collecting and transportation) and benefits (ease of knapping, durability, appearance). Thus, the notion that lithic procurement was always embedded within other activities cannot be accepted in our case. Moreover, as lithic procurement among modern hunter-gatherers was demonstrated to bear symbolic significance, and as some groups invest a lot of effort in procuring lithic materials, it seems likely that prehistoric groups gave extensive thought and effort to the acquisition of lithic materials (located locally and distantly), viewing their procurement as a main subsistence activity.

Aviad is currently a Ph.D. student under the supervision of Ran Barkai, Avi Gopher, and Lucy Wilson. Aviad's research examines patterns of flint procurement and exploitation within the lithic assemblages of Qesem Cave.



Map of the area of Qesem Cave (yellow star) and its potential sources (red dots), with flint types typical of each source group, and source examples (Graphic courtesy of: Aviad Agam)

Evidence of Prestige and Splendor in the Lower City of Jerusalem, Based on Wood Remains

Helena Roth

Jerusalem of the Early Roman period (63 BCE–70 CE) experienced a growth in its population, its urban and agricultural territories, as well as in its economy. Though wood may have played a central part in the life of the city, as is reflected in the use of timber in construction and in everyday objects as well as fuel, this aspect has scarcely been addressed.

Charred wood remains were obtained from four different areas of excavation within the Lower City of Jerusalem, and analysed using the Dendroarchaeological method of anatomical determination of wood. The results were then compared to those of other archaeological and archaeobotanic studies, as well as the rich corpus of textual evidence dating to the period. Further to this, for the first time, the morphology of the charred wood remains was examined and documented using 3D scanning. Following the Dendroarchaeological and morphological studies, a typology of wooden objects was established.

The results have shown that the wood assemblages represent remains of construction timber and household wooden objects (which were preserved as charred material during the violent destruction of the great revolt); discarded fuel remains cleared into what proved to be the city's garbage dump, as well as fuel remains found in the constructional fill (originating in an accumulation of urban garbage) used as fill in a secondary deposit. The study showed that pruned branches from agricultural contexts were mainly used as a fuel source, indicating the specific field of horticulture practiced in the vicinity of the city.

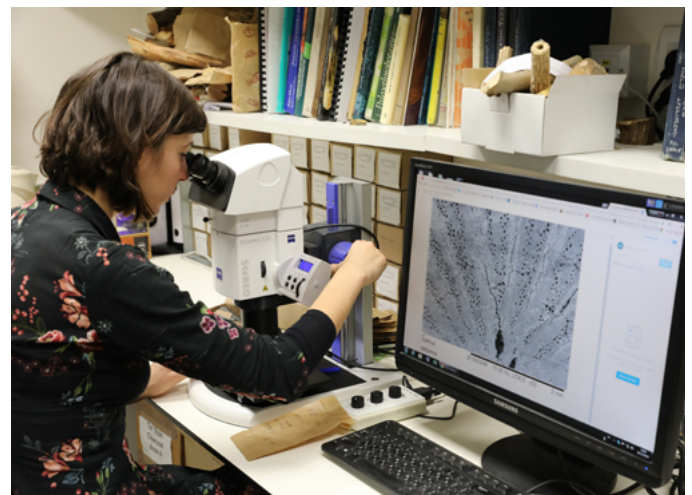
In contrast to the previous assumption, it was demonstrated that the Lower City was inhabited by members of the upper classes, who built their houses using prestigious trees such as the imported *Cedrus libani* (Cedar of Lebanon), as well as other local coniferous species (e.g., pine and cypress). Such types were valued for their long, straight trunks, and used as support and roofing beams in elite and monumental buildings. The residents of this part of the city also possessed vessels and other objects made of valuable imported wood, such as *Buxus* (boxwood).



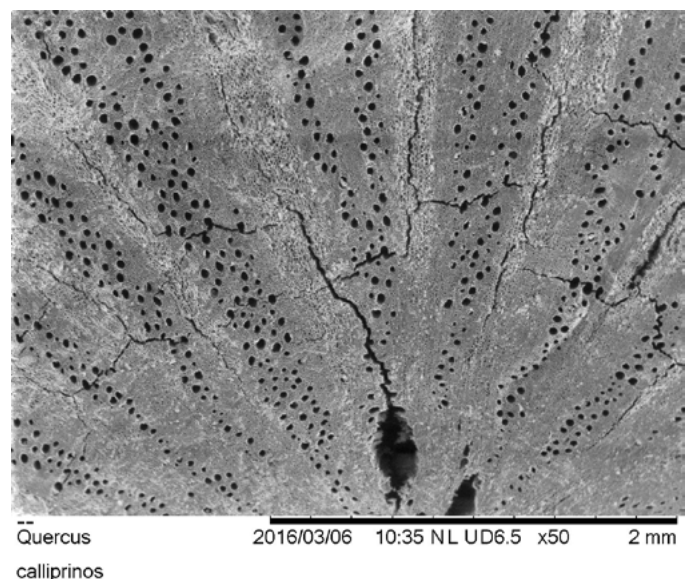
3D imaging of a wooden juglet, based on a charred wooden fragment from Jerusalem (Graphic courtesy of: Helena Roth)

It was also demonstrated that the arboreal landscape surrounding the city during the Early Roman period was comprised mainly of olive plantations, which could possibly represent a centralized agricultural system conducted by the Temple.

Helena recently completed her M.A. thesis, The Wood Economy in Early Roman Period Jerusalem, under the supervision of Yuval Gadot and Dafna Langgut. Helena's research enables the reconstruction of Jerusalem's surrounding arboreal environment, agriculture, and the social stratification of the Lower City.



Helena Roth during her archaeobotanic laboratory work (Photo by: Sasha Flit)



X50 Magnification of a sample from Jerusalem, showing the anatomical structure of *Q. Calliprinos* (Photo courtesy of: Helena Roth)

Animal Dung and Archaeological Sites: Microarchaeological Investigations of Intermediate Bronze Age Subsistence Practices in the Negev Highlands

Zach Dunseth

Archaeological surveys and excavations over the past forty years have shown that settlement oscillations characterize the human history of the arid Negev Highlands. In 2005, Israel Finkelstein and Ruth Shahack-Gross began the Negev Highlands Project to study the main settlement periods, utilizing high-resolution microarchaeological and absolute dating techniques. Recently the focus of the project shifted to the Intermediate Bronze Age (ca. 2500–1950 BCE, also known as the Early Bronze IV) one of the longest, yet least understood, settlement peaks in the Negev Highlands. This phenomenon is especially intriguing as it follows the slow disintegration of Early Bronze urban cities in the southern Levant.

Previous archaeological work suggested the existence of two complementary elements during the Intermediate Bronze Age (IBA): large central sites specialized in copper processing and production, and smaller ephemeral sites supported by nomadic-pastoralism. Both settlement types have been assumed to have practiced livestock rearing and dry seasonal farming. However, to date, these assumptions have been based on misleading ceramic typologies, the presence of flint blades, grinding stones, and scant zooarchaeological assemblages. Direct evidence for either herding or cultivation is very limited.

Recent geoarchaeological work by the project at other sites in the Negev Highlands has demonstrated the potential for recovering direct evidence for subsistence practices through the analysis of phytolith assemblages in well-dated archaeological sediments containing microarchaeological

evidence of degraded animal dung. Phytolith morphologies can provide taxonomic information to the family and sometimes even species level of ancient plant remains. As a result, phytolith assemblages sourced from degraded dung contexts can thus assist in reconstructing aspects of animal diet, and by proxy, foddering strategies, and even cereal cultivation practices of human populations.

Guided by this approach, two central (Mashabe Sade and Ein Ziq) and one ephemeral (Nahal Boqer 66) IBA sites were excavated, with the investigation of a second ephemeral site currently underway. The excavations focused on sediment sampling and radiocarbon dating from varied contexts (floors, courtyards, pits, etc.). Our results show the presence of ancient livestock dung at the ephemeral site of Nahal Boqer 66, with phytolith assemblages indicative of free-ranging animal husbandry. In contrast, the two central sites show no evidence for any type of food production, nor evidence for copper processing/production activities. These results are a catalyst for a new discussion on subsistence and society at central sites, and the role of larger international economies and copper trade during the IBA in the arid Negev Highlands.

Zach is currently completing his Ph.D. on an integrated micro- and macro-archaeological study of settlement in the Negev Highlands during the Intermediate Bronze Age (ca. 2500–1950 BCE), under the supervision of Israel Finkelstein and Ruth Shahack-Gross.



Intermediate Bronze Age two-roomed structure at Mashabe Sade (Photo by: Zach Dunseth)



View overlooking the site of Ein Ziq (Photo by: Zach Dunseth)

The Potters of the Shephelah: Between Tradition and Innovation

Sabine Kleiman

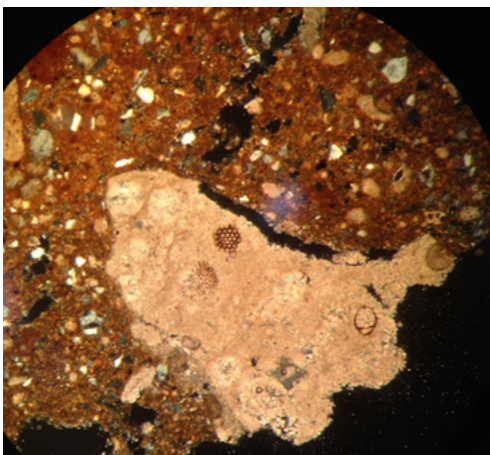
Pottery is the most common find in excavations and has become a central component for diverse studies such as chronology, ethnicity, trade, prestige, function, technology, and cultic activity. Furthermore, the manufacture of ceramics is understood to be a traditional craft, where knowledge is passed on by senior generations to apprentices. Thus pottery production preserves technical and stylistic traditions over a period of time. Modifications in pottery production and circulation, therefore, may reflect deeper social and political changes. These changes relate to population increase, movement of territorial borders, and level of social integration.

This research aims to investigate the cultural, social, and economic order of people living in the Shephelah during the Late Bronze and Iron Ages, through a study of the production, style, and movement of ceramic vessels. The period under investigation spans the Late Bronze Age IIA to the Iron Age IIA (14th century - middle of the 8th century BCE). As a case study, this research will focus on finds from Tel Azekah. During the course of current excavations, a large quantity of ceramic items dating to the Late Bronze and Iron Ages was uncovered in well-stratified contexts. This assemblage can be used for comparison with other important Shephelah sites (i.e., Tel Lachish, Tel Gezer, Tel Batash and Tel Beth Shemesh), as well as sites from the inner coastal plain, (i.e., Tell es-Safi/Gath and Tel Miqne/Ekron), to shed light on possible site relations, and common traditions in production and style, etc.

This research endeavours to apply the 'dynamic systems framework' on a large quantity of ceramic items, recovered from several locations and belonging to different time periods, through the application of different scientific methods. Its point of departure will be the environment, which will be studied petrographically, an approach that makes it possible to identify a specific place of origin. The next step is the investigation of the technical task using inter alia the method of Xeroradiography. The results of these investigations will be considered within the background of the subject who produced the object, thus placing it within a sociocultural context.

In sum, the research endeavors to conduct a large-scale investigation of ancient pottery production within the Shephelah during the Late Bronze and early Iron Ages from a long-term approach. Through mapping the appearances of fabric groups at the main sites in the Shephelah, it will be possible to draw conclusions about potential economic relationships. Such a comparison will clarify the ancient territorial map and division of power between major political entities over the *longue durée*.

Sabine is currently completing her Ph.D. on the production, style, and movement of pottery in the Shephelah during the Late Bronze and early Iron Ages, through a holistic and long-term study of ceramic production, under the supervision of Oded Lipschits, Yuval Gadot, and Anat Cohen-Weinberger.



A Late Bronze Age bowl from Azekah through the lens of a petrographic microscope (Photo courtesy of: Sabine Kleiman)



Selected vessels from the Late Bronze Age pottery assemblage from Tel Azekah (Photo courtesy of: Sabine Kleiman)

PEOPLE



Scholarships

The Institute and Department of Archaeology awards scholarships to B.A. and M.A. students who have demonstrated academic and archaeological fieldwork excellence. Such scholarships are awarded to support students as they continue to contribute to the future of their chosen academic field of research.

B.A

Ronnie Avidov	The Yohanan Aharoni Scholarship
Yael Duvdevani	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Yana Kirilov	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Daniella Nirgad	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Getta Rosenzweig	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Eran Shalit	The Friends of the Institute of Archaeology Scholarship
Talia Siegel	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Jacqueline Zaluda	The Sonia and Marco Nadler Institute of Archaeology Scholarship

M.A

Bar Efrati	The Rosenfeld Scholarship
Shirad Galmore	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Ben Laugner	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Barak Levi	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Linoy Namdar	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Barnea Levi Selavan	The Rosenfeld Scholarship
Omer Ze'evi	The Eastronics Scholarship

International M.A. Program in Archaeology and History of the Land of the Bible

Lisa Campbell	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Nathaniel Deaton	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Jenna Hockema	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Li Mengmeng	The Sonia and Marco Nadler Institute of Archaeology Scholarship
Yu Zhang	The Sonia and Marco Nadler Institute of Archaeology Scholarship

The Dan David Scholarship, 2017 Past-Archaeology and Natural Sciences

Zach Dunseth, for *The Negev Highlands During the Intermediate Bronze Age (ca. 2500–1950 BCE): A Geoarchaeological Perspective*



Pictured: Yael Duvdevani and Prof. Ran Barkai (Left), Nathaniel Deaton and Prof. Oded Lipschits (Right). Photos by: Omer Ze'evi

“Where are They Now?”

The International M.A. Program in Ancient Israel Studies: Archaeology and History of the Land of the Bible

Zach Dunseth



Zach joined the first year of the M.A. program in 2011. Zach utilized the opportunity to collaborate with a number of excavation projects, excavating at Tel Megiddo, Tel Kabri, and several sites in the Negev. In 2012 Zach began his thesis research into microarchaeological indicators of subsistence practices of Mashabe Sade, a large Intermediate Bronze Age (IBA, ca. 2500-1950 BCE), in the Negev Highlands.

A dynamic project, Zach's research was funded by a scholarship sourced from the ERC Grant: Reconstructing Ancient (Biblical) Israel: The Life Sciences Perspective. Working under the supervision of Israel Finkelstein (TAU) and Ruth Shahack-Gross (University of Haifa).

Zach's scholarship enabled his research into a wide range of innovative geoarchaeological studies, including radiocarbon, and phytolith and microremain investigations of ephemeral archaeological sites.

Following the successful completion of his M.A. studies, Zach continued his Ph.D. research with Israel Finkelstein and Ruth Shahack-Gross. Within his Ph.D. Zach has expanded the initial scope of his M.A., broadening his exploration of both central and ephemeral IBA sites in the Negev Highlands, with a focus on macro and microarchaeological indicators of subsistence practices, absolute chronology, and long-distance trade. Nearing the final stages of his studies, Zach's Ph.D. research was recently awarded the Dan David Scholarship, for 2017 Past - Archaeology and Natural Sciences.

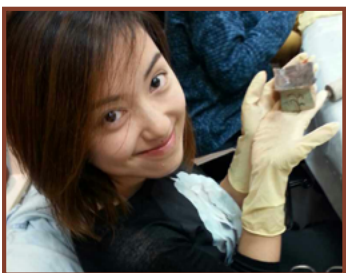
Vanessa Workman



Commencing the M.A. program in 2012 at Tel Aviv University, Vanessa has enjoyed the opportunity to excavate at Tel Azekah, Timna, and Ashdod-Yam. In 2013 Vanessa chose to pursue a thesis with Erez Ben-Yosef (TAU) and Orit Shamir (IAA), with a specialized focus on early Iron Age textiles from copper production sites within the Timna Valley. Vanessa was able to develop and expand her professional repertoire while working as a team member of the Central Timna Valley project, where she conducted surveys, supervised excavation areas, and analyzed artifacts. Due to the quality of her research, Vanessa was the recipient of several scholarships and able to present her research abroad at international academic conferences.

Following the completion of her M.A. (with honors) at TAU, Vanessa received a full scholarship from the Minerva Center for the Relations Between Israel and Aram (RIAB) for her Ph.D. studies at Bar-Ilan University. Currently Vanessa researches early iron production in the southern Levant in a comparative study of metal workshops in Philistia, northern Israel, and the wider Mediterranean region. The project investigates the relationship between copper and iron working in urban settlement sites in the 9th century BCE, and the cultural, geographical, and historical settings, of some of the earliest known iron production in the region.

Yu Zhang



Excavating at a range of sites during her time at Tel Aviv University (Tel Azekah, Tel Megiddo, Tel Aphek), Yu moved to Israel to begin her M.A. in 2014. Working across a range of periods, Yu was able to access a range of material, archaeological projects, and scholars. Excelling within the program, Yu continued into a thesis year (2015) with a research focus on Canaanite cult behavior and Egyptian political hegemony. Collaborating with TAU scholars, Yu's research is under the supervision of Yuval Gadot and Shirley Ben-Dor Evian.

During the second year of her M.A. thesis research, Yu received a fellowship from the W. F. Albright Institute of Archaeological Research. Yu has been based at the Albright for over five months as a Resident Fellow. Moving forward, Yu is in the process of finalizing her M.A. thesis, and preparing her Ph.D. proposal for Shandong University, China.

Visiting Academics

The Institute and Department of Archaeology was pleased and privileged to welcome several visiting international scholars to lecture and teach at Tel Aviv University. Visiting scholars provide students and staff with the opportunity to learn the latest in international academic research.



Kathryn L. Gleason

Cornell University

Presentation Title: Excavation Methodologies and Interpretation of the Vesuvian Gardens

Invited by: Dafna Langgut and Guy Stiebel



Jean-Marie Durand

Collège de France

Presentation Title: Assemblies and Meetings at the City of Mari on the Euphrates

Invited by: Yoram Cohen



Jiří Janák

Czech Institute of Egyptology, Charles University, Prague

Presentation Title: 1. Mummification Manual for Menekhibnekau; 2. The Extinction of Gods: Impact of Climatic Change upon Egyptian Religion; 3. Sinuhe and the Patriarchs; 4. Exploring the Realm of Osiris: Czech Excavations at Abusir

Invited by: Deborah Sweeney



David Vanderhooft

Boston Collage

Course Title: Eastern Powers and Western Prophets: Israel, Judah, and the Mesopotamian Empires in Prophetic Perspective (Spring Semester 2017)

Invited by: Oded Lipschits

PH.D. Projects: 2012 – Present

Name	Project Title	Supervisor/s
Class of 2012		
Eran Arie	The Transition from the Late Bronze to the Iron I in the Northern Valleys	Prof. Israel Finkelstein
Omer Sergi	The Formation of the Kingdom of Judah in the 9 th Century BCE and its Reflection in Biblical Historiography	Prof. Oded Lipschits
Class of 2014		
Shirly Ben-Dor Evian	Egypt and Philistia in the Iron I: The Archaeological Record and the Historical Interpretation	Prof. Israel Finkelstein Dr. Deborah Sweeney
Karen Covello-Paran	The Jezreel Valley During the Intermediate Bronze Age- Social and Cultural Landscapes	Prof. Oded Lipschits Prof. Israel Finkelstein
David Friesem	Formation Processes Related to the Degradation of Mud Brick Structures and their Archaeological Implications	Prof. Israel Finkelstein Prof. Ruth Shahack-Gross
Michael Toffolo	Framing the Iron Age in the Eastern Mediterranean: Contexts, Site-Formation Processes and Chronology	Prof. Israel Finkelstein Dr. Elisabetta Boaretto
Class of 2015		
Mark Iserlis	Khirbet Kerak Ware and the Early Transcaucasian Culture: Technological Behavior as Cultural Signifier	Prof. Raphael Greenberg Prof. Yuval Goren
Ido Koch	Southwest Canaan during the Late Bronze and Early Iron Age: Empire, Elites, and Colonial Encounters	Prof. Oded Lipschits Prof. Nadav Na'aman
Class of 2016		
Marcio Teixeira Bastos	Análise e distribuição especial de lucernas romanas de disco: o caso das províncias da Palestina e do Norte da África	Prof. Oren Tal Prof. Yuval Goren Prof. M.I.D.A. Fleming
Meir Edrey	The Phoenicians in the Eastern Mediterranean during the Iron Age I-III: Ethnicity and Identity in light of the Material Culture	Prof. Oren Tal
Dan Mirkin	Aspects of Inter-Relations between Land and Sea during the Crusader Period: Crusader Seamanship in the Southern Levant	Prof. Oren Tal Prof. Ya'akov Kahanov
Yael Rotem	The Central Jordan Valley in the Early Bronze Age I and the Transition to Early Bronze Age II: Patterns and Processes in a Complex Village Society	Prof. Raphael Greenberg
Class of 2017		
Hai Ashkenazi	Southern Levantine Early Bronze Age III: Society, Social Power, and Ideology	Prof. Raphael Greenberg
Haya Zomer	Food for Thought: Cannibalism in the Archaeological Record	Prof. Ran Barkai
Present		
Aviad Agam	Flint Procurement and Exploitation Strategies in the Late Lower Paleolithic Levant: The Case Study of Acheulo-Yabrudian Qesem Cave	Prof. Ran Barkai Prof. Avi Gopher Dr. Lucy Wilson
Ayala Amir	Burial Patterns and Residue Analysis	Dr. Yuval Gadot Prof. Israel Finkelstein Dr. Ronny Neumann
Ella Asaf	Children Always Know: Archaeological Evidences for Knowledge Transmission and Learning in the Palaeolithic Period (Between 500–150,000 Years BP)	Prof. Ran Barkai Prof. Avi Gopher
Kobi Ben-Basat	The Animal World in Mesopotamian Wisdom Compositions	Prof. Yoram Cohen
Miki Ben-Dor	The Causal Association between Megafauna's Extinction and the Neandertal's Extinction in Western Europe: Application of Obligatory Dietary Fat Bioenergetic Model	Prof. Ran Barkai Prof. Avi Gopher
Nadia Bladt Knudsen	Early Bronze Age Zoomorphic Figurines in the Southern Levant: Form, Typology, and Significance	Prof. Raphael Greenberg
Efrat Bocher	Late Persian Period/Early Hellenistic Material Culture in Judah and Samaria	Prof. Oded Lipschits Prof. Israel Finkelstein
Liora Bouzaglou	Imperial Archaeology, Provincial Archaeology: The Levant during the Neo-Assyrian Domination. Stratigraphical and Ceramic Reevaluation of the Iron Age IIB (8 th –7 th centuries BCE)	Dr. Alexander Fantalkin
Zachary Dunseth	The Intermediate Bronze Age (2500–1950 BCE) in the Negev Highlands: The Geoarchaeological Perspective	Prof. Israel Finkelstein Prof. Ruth Shahack-Gross

Name	Project Title	Supervisor/s
Meir Finkel	Prehistoric Flint Extraction Sites and Workshops in the Eastern Galilee	Prof. Ran Barkai Prof. Avi Gopher Dr. Erez Ben-Yosef
Liora Freud	Judahite Pottery of the Transition Phase between the Iron Age and Persian Period	Prof. Oded Lipschits
Avivit Gera	Ideology, Politics and Reality in Planning and Presenting Archaeological Sites	Prof. Oded Lipschits Dr. Guy Stiebel Prof. Nurit Lissovsky
Boaz Gross	The Development of Public Archaeology in Israel: From the "Department of Antiquities" to the "Antiquities Authority"	Dr. Yuval Gadot Dr. Assaf Zeltser
Gil Haklay	Geometric Aspects of Late Epipaleolithic and Neolithic Architecture	Prof. Avi Gopher
Erin Hall	Archaeology of Cult in the Northern Kingdom	Prof. Israel Finkelstein
Yoram Haimi	The Archaeological Excavations at the Extermination Camp of Sobibor, Poland	Dr. Guy Stiebel Dr. Havi Dreifuss
Elon Heymans	The Early History of Money and Monetary Exchange in the Eastern Mediterranean Iron Age	Dr. Alexander Fantalkin Prof. Israel Finkelstein Prof. Irad Malkin
Shua Kisilevitz	The Origin of Cult in Iron IIA Judah – The Temple in Moza as a Case Study	Prof. Oded Lipschits
Assaf Kleiman	Border Communities in Northeastern Israel and Southwestern Syria during the 10 th and 9 th Centuries BCE	Prof. Israel Finkelstein Prof. Benjamin Sass
Sabine Kleiman	The Potters of the Shephelah: Between Tradition and Innovation – Pottery Technology and Distribution, as a Reflection of Social and Economic Order during the Bronze and Early Iron Age	Prof. Oded Lipschits Dr. Yuval Gadot Dr. Anat Cohen-Weinberger
Yoon, Kook Young	Typology and Petrography of the Judahite Pillar Figurine	Prof. Oded Lipschits Prof. Yuval Goren
Krister Kowalski	Jaffa and its Hinterland – The Late Persian to Early Roman Periods	Prof. Oren Tal Dr. Hans-Peter Kuhnen
Yitzhak LeeSak	Benjamin in History and in Biblical Historiography	Prof. Oded Lipschits
Vanessa Linares	The Invisible Trade: Organic Residue Analysis of Small Ceramic Vessels during the Late Bronze Age and Early Iron Ages	Prof. Oded Lipschits Prof. Ronny Neumann Dr. Yuval Gadot
Rafael Netzer	Hellenistic Maresha/Marisa: Food Production of the Agricultural Territory versus Food Consumption of the Local Population. An Attempt to Develop an Eco-Agricultural Archaeological Model	Prof. Oren Tal Dr. Amos Hadas
Nir Orlev	Gender, Death, and Rebirth in the Ancient Egyptian Coffin Texts	Dr. Deborah Sweeney
Yoni Parush-Glikman	Recycling Flint in the Paleolithic: Evidence for Sustainable Human Behavior in Prehistory (500,000–25,000 Years ago)	Prof. Ran Barkai Prof. Avi Gopher
Miriam Pines	The Central Negev during the Roman and Byzantine Periods: Material Culture, Architecture and Spatial Arrangement	Prof. Oren Tal Prof. Zeev Weiss
Tamar Rosenberg-Yefet	Technological Innovations and Cultural Transmission Processes among Prehistoric Societies in an Evolutionary Perspective: The Levallois Method at the End of the Levantine Lower Paleolithic	Prof. Ran Barkai
Déborá Sandhaus	The Nexus of Cultures: The Central Shephelah during the Persian and Hellenistic Periods	Prof. Oded Lipschits Dr. Yuval Gadot
Chemi Shiff	Conservation and Archaeology in the Neoliberal Age: Urban Renewal and Identity Construction in Tel Aviv-Jaffa and Jerusalem	Prof. Raphael Greenberg Prof. Tovi Fenster
Natalya Solodenko	Usewear Analysis of Two Lower Paleolithic Sites: Case Studies from Revadim and Qesem Cave	Prof. Ran Barkai
Abra Spiciarich	Religious and Socioeconomic Diversity of Ancient Jerusalem and its Hinterland: A View from the Faunal Remains	Prof. Oded Lipschits Dr. Lidar Sapir-Hen Prof. Israel Finkelstein
Nahshon Szanton	The Stepped Street in the Lower City of Jerusalem	Dr. Guy Stiebel Dr. Joe Uziel
Alon Wagner	The Historical Geography of the Book of Numbers	Prof. Oded Lipschits
Daniel Weinberger	Community Archaeology in Israel	Prof. Raphael Greenberg Dr. Alexander Fantalkin
Ariel Winderboim	The Iron IIA Pottery Assemblage from the Ophel Excavations in Jerusalem	Prof. Israel Finkelstein

Name	Project Title	Supervisor/s
Omri Yagel	Copper Production Technologies: Evolution, Innovation, and Social Impact in Late Bronze – Iron Age Timna	Dr. Erez Ben-Yosef
Ayala Zilberstein	"A City with a Wall in its Heart": Issues of Space and Identity in Jerusalem under the Seleucid Rule in Light of the Archaeological Finds from the City of David	Dr. Guy Stiebel Dr. Doron Ben-Ami
Katya Zotovsky	Dynamics of Change in Late Neolithic to Early Bronze Age Lithics and their Implications	Prof. Ran Barkai Prof. Avi Gopher
Andrea Zupancich	Understanding the Use of Quina Scrapers at Middle Pleistocene Qesem Cave	Prof. Ran Barkai Prof. Avi Gopher Prof. Cristina Lemorini

M.A. Projects: 2012 – Present

Name	Project Title	Supervisor/s
Class of 2012		
Ephrat Bocher	The yršim Stamp Impressions from the Early Hellenistic Period	Prof. Oded Lipschits
Shatil Emmanuilov	Tel Azekah in Light of the Archaeological Survey	Prof. Oded Lipschits Dr. Yuval Gadot
Boaz Gross	Gardens in the Ancient Near-East and the Garden at Ramat Rahel	Prof. Oded Lipschits
Barak Sober	Character Stroke Reconstruction	Prof. Israel Finkelstein Dr. David Levin
Class of 2013		
Alice Berger	Plant Economy and Ecology in Early Bronze Age Tel Bet Yerah	Prof. Raphael Greenberg Prof. Dorian Fuller
Zach Dunseth	Settlement Oscillations in the Negev Highlands: Exploring Subsistence Practices during the Intermediate Bronze Age – The Site of Mashabe Sade	Prof. Israel Finkelstein Prof. Ruth Shachak-Gross
Molly Eldar	The Early Phoenician Expansion to the Western Mediterranean: When and Why?	Dr. Alexander Fantalkin
Ido Gordin	The Architectural Origins of the Crusader Castle of Arsur (Apollonia-Arsuf)	Prof. Oren Tal Prof. Adrian J. Boas
Eriola Jakoel	Tombs and Burials in Jaffa (Joppa) during the Roman Period (1 st Century BCE – 4 th Century CE)	Prof. Oren Tal
Nir Orlev	The Significance of the Representation of Royal Women at Serabit el-Khadim	Dr. Deborah Sweeney Dr. Raphael Ventura
Class of 2014		
Ella Asaf	The Transmission of Knowledge and Flint Knapping Training in the Acheulo-Yabrudian? A Case Study from the Site of Qesem Cave, Israel	Prof. Avi Gopher Prof. Ran Barkai
Inbal Baum	Death and Birth in the Hittite World	Dr. Amir Gilan
Meir Finkel	Paleolithic Flint Extraction Sites and Workshops in the Nahal Dishon Central Basin	Prof. Ran Barkai
Sara Hirschberg	The Mamilah Farmhouse and the Agricultural Area around Jerusalem	Prof. Oded Lipschits
Assaf Kleiman	Tel Aphek and the Central Coastal Plain during the Iron Age IIA: Analysis of the Archaeological Assemblage and its Historical Implications	Prof. Israel Finkelstein
Lianne Merkur	Perceptions of the Past in Conflicted Societies: The Case of Lod, Israel	Prof. Oded Lipschits Dr. Yuval Gadot
Michael Millman	Archaeomagnetic Constraints on the Chronology of the Judean Stamped Jar Handles	Prof. Oded Lipschits Dr. Erez Ben Yosef
Sharon Napchan	Bliss and Macalister's Excavations at Tell Zakariya (1898-1899) in Light of Modern Research	Prof. Oded Lipschits
Yoni Parush-Glikman	Looking for Sharp Edges: Lithic Recycling at Qesem Cave, Israel	Prof. Avi Gopher Prof. Ran Barkai
Miriam Pines	Crusader Diet: Arsur (Apollonia-Arsuf) as a Case Study in War and Peace	Prof. Oren Tal Dr. Lidar Sapir-Hen
Gennadiy Shoykhedbrod	Pax Assyriaca: Did Assyrian Imperialism Introduce Economic Prosperity in Judah?	Prof. Oded Lipschits Dr. Alexander Fantalkin

Name	Project Title	Supervisor/s
Reuven Vunsh	East Mediterranean Late Holocene Relative Sea-Level Changes Based on Archaeological Indicators from the Coast of Israel	Dr. Dorit Sivan Prof. Oren Tal
Alon Wagner	Genesis 14: Its Literary Growth, Messages, and their Historical Contexts	Prof. Oded Lipschits
Class of 2015		
Itai El'ad	A Late Roman-Byzantine Villa in the Territory of Apollonia/Sozousa	Prof. Oren Tal
Sara Levavi-Eilat	Discarded Women: A Contextual Study of the Use of Canaanite Terracotta Plaque Figurines	Prof. Shlomo Bunimovitz
Mati Johananoff	Hellenistic Bronze Coins from Side (Pamphylia) in the Southern Levant	Prof. Oren Tal Dr. Alexander Fantalkin Dr. Donald T. Ariel
Adam Kaplan	Kefar Veradim Iron Age Cave 3: A Re-examination	Dr. Alexander Fantalkin
Sabine Kleiman	On the Eve of Destruction: Analyzing the Chronology, Function and Distribution Pattern of a Late Bronze Pottery Assemblage from Tel Azekah	Prof. Oded Lipschits Dr. Yuval Gadot
Vanessa Linares	Assessing Canaanite Livelihood in Tel Azekah: Organic Residue Analysis of Late Bronze Age Material Culture	Prof. Oded Lipschits Dr. Dvory Namder Dr. Yuval Gadot
George Mavronanos	Latnana and the Assyrians: Illuminating the Role of Cyprus within the Trade Network of the Assyrian Empire	Dr. Alexander Fantalkin
Ilana Peters	Determining Temporal Contexts of Technological Records: The Application of Archaeomagnetic Dating to Copper Slag Deposits in Timna	Dr. Erez Ben-Yosef
Abra Spiciarich	Dietary Habits and Identity of Early Roman Jerusalem as Reflected in the Kidron Valley Landfill Faunal Assemblage	Prof. Oded Lipschits Dr. Lidar Sapir-Hen Dr. Yuval Gadot
Yoav Tzur	Tel Socoh in Light of the Archaeological Survey	Prof. Oded Lipschits Dr. Yuval Goren Dr. Yuval Gadot
Lyndelle Webster	Developing a Radiocarbon-Based Chronology for Tel Azekah: The First Stage	Dr. Yuval Gadot Dr. Yann Tristant Dr. Kyle Keimer
Michal Weinberger	Khirbet el-Burj and Jerusalem Surroundings in the Late Iron Age and the Persian Period	Prof. Oded Lipschits
Class of 2016		
Nicolas Benenstein	The 'Yeroucham Fort': A Site of the Roman and Byzantine Periods in the Northern Negev Highlands	Prof. Oren Tal
Mark Cavanagh	Sustainability of an Industry on the Fringe: An Anthracologic Investigation into Fuel Sources at the Iron Age Copper Smelting Site of Timna 34	Dr. Dafna Langgut Dr. Erez Ben Yosef
Rotem Elinson	The Physical Potential and the Subsistence Economy in the Jerusalem Hills	Dr. Yuval Gadot Prof. Eyal Ben Dor
Joshua Errington	Processes in Site Formation of Tel Azekah from the Early Bronze until the Hellenistic Period	Prof. Oded Lipschits
Erin Hall	Megiddo Hoards in the Iron I	Prof. Israel Finkelstein Prof. Benjamin Sass
Sarah Richardson	A Late Bronze Production Kit: the Origin, Use, and Implications of the Assemblage Found in Area T2 of Tel Azekah during the 2014 Season	Prof. Oded Lipschits
Tamar Rosenberg	The Origins of the Levallois Method	Prof. Ran Barkai
Talila Rudin	Roman-Byzantine Cemeteries and Tombs around Apollonia/Sozousa: The New Discoveries	Prof. Oren Tal
Noa Shatil	Persian Period and-Early Hellenistic Pottery from Tell Azekah: Typology, Chronology and Identity	Prof. Oded Lipschits
Craig Smitheram	OSL Dating of Timna's Copper Mines: Insights into Technological Evolution and Social Organization	Dr. Erez Ben-Yosef
Vanessa Workman	The Fabric of Copper Production: The Textile and Cordage Artifacts from Iron Age Timna	Dr. Erez Ben-Yosef Dr. Orit Shamir
Omri Yagel	Late Bronze Age Copper Smelting Technology at Timna: Site 3 as a Case Study	Dr. Erez Ben-Yosef
Class of 2017		
Christina Jones	Inter-Regional Connections during the Late Bronze Age as Reflected through the Animal Economy: Azekah a Case Study	Prof. Oded Lipschits Dr. Lidar Sapir-Hen Dr. Omer Sergey

Name	Project Title	Supervisor/s
David Luria	The Nomads of the Southern Levant at the End of the Late Bronze and the Beginning of Iron Age	Dr. Alexander Fantalkin Prof. Steve Rosen
Noy Shemesh	Ornamental, Leisure and Excessive Water installations in the Private Space in Roman Palestine	Dr. Guy Stiebel
Helena Roth	Wood Economy and Botanical Reconstruction of Early Roman Jerusalem	Dr. Dafna Langgut Dr. Yuval Gadot
Present		
Elad Aaron	Select Titles of Office-Holders and Other Professionals during the Late Bronze Age	Prof. Yoram Cohen
Julia Abramove	The Inhabitants of the Pre-Pottery Neolithic B (10,500–8,250 Cal. BP) site of Yiftahel: An Anthropological, Bio-Archaeological, Cultural, and Social Analysis	Prof. Avi Gopher Prof. Israel Hershkovitz
Chen Antler	“All Due to a Small Nail”: The Metals of Shuafat Excavations, Jerusalem	Dr. Guy Stiebel
Alon Arad	The Analysis of Activity Areas at Tel Beth Yerah, and the Reconstruction of “Khirbet Kerak Ware People” Daily Practice	Prof. Raphael Greenberg
Kfir Arbiv	The Discoveries in the Russian Compound, Jerusalem: The Third Wall of Jerusalem	Dr. Guy Stiebel
Barbara Astafurova	Stages of the Conversion to Christianity of the Rural Settlement in the Province of Palaestina Prima in the Fourth –Seventh Centuries CE: The Territory of Beth Guvrin/ Eleutheropolis as a Case Study	Prof. Moshe Fische
Barak Ayali	The Jeptah Story: Its Time and Intention	Prof. Oded Lipschits
Nitsan Ben-Melekh	OSL Dating of Lime Kilns in the Judean Hills and Foothills	Dr. Erez Ben-Yosef Dr. Yuval Gadot Dr. Naomi Porat
Shira Ben Shazar	The Metals of Herodium	Dr. Guy Stiebel
Mordechay Benzaquen	The Archaeological Wood Remains of Tel Megiddo: Interpreting Environmental Conditions and Cultural Preferences Through the Analysis of Botanical Remains	Dr. Dafna Langgut Prof. Israel Finkelstein
Emily Bischoff	On Sheep, Shame, and Sodomy: A Case Study of Purification Rituals in the Hittite Empire	Dr. Amir Gilan
ZhiXia Chen	From East to West: Chinese Porcelain Found in Israel from Early Islamic and Crusader Periods	Prof. Oded Lipschits Dr. Edna Stern Dr. Asaf Goldschmidt
Eyal Dechner	Jews Camp; Christians at Diocaesarea – Sepphoris: Cultural Interaction between Jews and Christians as Reflected by Ritual Practice and Religious Way of Life from the Days of the Gallus Revolt until the Islamic Conquest	Prof. Moshe Fischer
Benjamin Douglass	The Provenance of Nabataean Copper: Lead-Isotope Analysis of Nabataean Bronze Coins Set in a Regional Context	Dr. Erez Ben-Yosef Dr. Guy Stiebel
Sean Dugaw	A Typology of Arrowheads from the Late Iron Age and Persian Period Judah and its Historical Implications	Prof. Oded Lipschits Dr. Guy Stiebel
Bar Efrati	A Burning Matter: Intra-Site Spatial Analysis of Flint Items Around the Hearth at Qesem Cave	Prof. Avi Gopher Prof. Ran Barkai
Laura Farkas	Tel Gerisa in the Late Bronze IIA: Determining the Character of the Material Culture of the Site in the Amarna Period	Dr. Alexander Fantalkin Prof. Ze'ev Herzog
Shirad Galmor	The Early Neolithic at Ahihud: Between Hunters and Herders	Dr. Lidar Sapir-Hen Prof. Tamar Dayan
Danilo R. Giordano	Cultural Contact between Mitanni and Southern Canaan during Egyptian Occupation: A study of Mitannian Cylinder Seals	Prof. Oded Lipschits Dr. Amir Gilan
Alexander Glik	Military Finds from Jaffa (18 th –19 th Centuries CE): Archaeological Finds versus Textual Evidence	Dr. Alexander Fantalkin Prof. Gideon Avni
Maya Hadash	The Cypriot Import Assemblage from Late Bronze Tel Azekah: Chronological, Typological, and Inter-Regional Implications	Prof. Oded Lipschits Dr. Yuval Gadot Prof. Assaf Yasur-Landau
Yehonatan Hershkovitz	The History, Chronology, and Geography of the First Sealand Dynasty in Southern Mesopotamia	Prof. Yoram Cohen Dr. Amir Gilan
Roni Hoofien	The Beads Assemblage from Tel Azekah as an Instrument for Understanding the Cultural, Economic, and Trade Relations	Prof. Oded Lipschits Dr. Daniella Bar-Yosef Mayer
Jenna Hockama	Archaeomagnetism of Rhodian Amphorae Stamped Jar Handles: Contribution to the Study of Hellenistic Jerusalem	Prof. Oded Lipschits Dr. Erez Ben-Yosef
Logan Hunt	A Middle Bronze Age Stone Tool Assemblage from Megiddo: Determining Function and Significance for Domestic Life	Prof. Israel Finkelstein

Name	Project Title	Supervisor/s
Eli Itkin	Horvat Tov (Bir et-Tayyib): A View on Judah's Southern Frontier in the Seventh Century BCE	Dr. Alexander Fantalkin
Yafit Keidar	Around the Hearth: Health Implications of Hearth Location in Paleolithic caves	Prof. Ran Barkai
David Krouwer	Domestic and Public Grain Storages at Tel Azekah and the Judean Shephelah during the Iron II and Persian Periods	Prof. Oded Lipschits Dr. Yuval Gadot
Ben Laugomer	Paleoclimate in the Southern Levant During the Bronze and Iron Ages Based on Isotop Composition in Soreq Cave Speleothems	Dr. Dafna Langgut Prof. Mira Bar-Matthews Prof. Israel Finkelstein
Neer Lect Ben Ami	On the Function of Mezad Tamar – in its Spatial Context	Prof. Moshe Fischer
Barnea Levi Selavan	The Use of Animal Fat in the Biblical Period	Prof. Oded Lipschits
Li Mengmeng	Archaeomagnetic Dating of the Judean Pillar Figurines	Prof. Oded Lipschits Dr. Erez Ben Yosef
Jonathan Parker	Formation of Edomite-Complexity: The Southern Perspective	Prof. Oded Lipschits Dr. Omer Sergi
Michal Piasetzky-David	Roman-Byzantine Cemeteries and Tombs around Yavne-Yam	Prof. Oren Tal
Rami Raveh	The Settlement in the Sorek Valley during the Bronze and Iron Ages in Light of the Archaeological Surveys	Prof. Shlomo Bunimovitz
Hagar Reshef	The Role of Taste in Elephant Consumption in the Paleolithic	Prof. Ran Barkai
Hemdah Sadeh	Second Isaiah and the Forging of National Identity among the Judahite Community in Babylon	Prof. Oded Lipschits Dr. Dalit Rom-Shiloni
Daniel Sanders	Civis Romanus Sum: Hellenistic and Roman Imperialisms in the Southern Levant in their Urban Contexts; Between the Ideal and Praxis in Light of the Evidence from Beth She'an (Scythopolis)	Dr. Guy Stiebel
Jacob Schreiber	Comparison of Mud-Bricks Ingredients as a Possible Basis for Chronological Identification	Prof. Oded Lipschits Dr. Yuval Gadot
Oron Schwartz	Qiryat-Ye'arim Excavation: The Iron Age Remains	Dr. Alexander Fantalkin Dr. Gabriel Barkay
Dror Segal	The Usage of Marble and Other Imported Stones at Hippos- Sussita and Hamat Gader (Gadara Thermae)	Prof. Moshe Fischer Prof. Ronny Reich
Nitsan Shalom	Changes in Settlement Patterns in Judah between the Persian and the Early Hellenistic Periods	Prof. Oded Lipschits
Yelena Sharon-Elgert	Settlement Pattern and Land Use Along the Upper Soreq Valley: A Long Term Perspective	Dr. Yuval Gadot
Jamie Tiano	The Ceramic Assemblage of Tel Gerisa during the Late Bronze IIB Period	Dr. Alexander Fantalkin Prof. Ze'ev Herzog
Yariv Tivon	Private Stelae of Low-Ranking Expedition Members at Serabit el-Khadem	Dr. Deborah Sweeney
Eilat Toker	Relationship between Sea, Land, Climate and Human Being along the Israeli Coastline during Ancient Periods in Light of Archaeological Evidence	Prof. Moshe Fischer Prof. Oded Potchter
Elisa Vanzetti	Persian-Period Jewelry in the Southern Levant: The Samaria Hoard (CH 9.413) and Nablus Hoard (CH 9.440) as a Case Study, 03	Prof. Oren Tal
Yitzhak Vassal	Archaeomagnetic Research of Ancient Near Eastern Fired Clay Tablets: The Hattusha Archive as a Case Study	Dr. Erez Ben-Yosef Prof. Yuval Goren Dr. Ron Shaar
Marc Wallace	The History of Settlement at Tel Shalaf and the Battle of Eltekeh	Dr. Alexander Fantalkin
Naama Walzer	The Intermediate Bronze Age in the Shephelah in Light of Site 248.1	Prof. Israel Finkelstein
Havah Ward	The History of Shiloh's Excavations in the City of David	Prof. Oded Lipschits
Yoav Weingerten	Synchronic and Diachronic Analysis of Ground Stones from Tel Megiddo	Prof. Israel Finkelstein Dr. Erez Ben-Yosef
Alexandra Wrathall	An Iron IIA-IIB Pit Assemblage at Tel Azekah: Analysis of Typology, Chronology, and Context	Prof. Oded Lipschits Dr. Yuval Gadot
Omer Ze'evi	The Amarna Age in the Shephelah: Analysis of a Late Bronze IIA Pottery Assemblage from Tel Beth-Shemesh	Prof. Shlomo Bunimovitz
Yu Zhang	Canaanite Cult Behavior Under Egyptian Political Hegemony: A View from the North of Israel	Dr. Yuval Gadot Dr. Shirly Ben-Dor Evian

EVENTS



'Aharoni Day':

The Institute of Archaeology Annual Conference

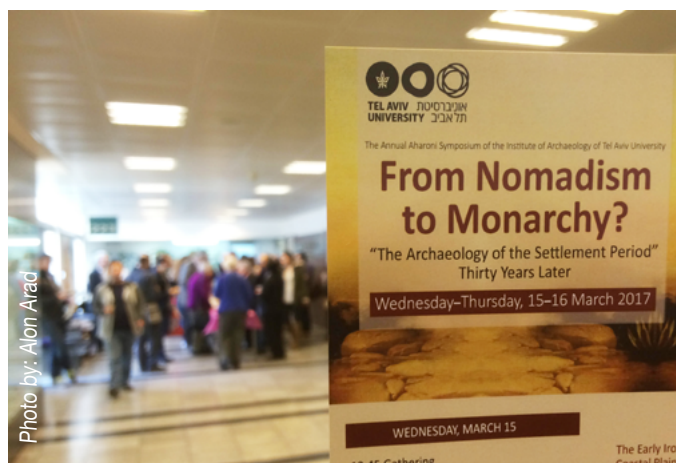
Ido Koch

March 15–16, 2017

This year The Institute of Archaeology devoted its annual conference to a celebration of the 30 years since the release of two publications, which later became cornerstone texts for the subsequent study of the early Iron Age in the southern Levant. In 1986 Israel Finkelstein published *The Archaeology of the Israelite Settlement* (English 1988), the first systematic study of the Iron I in the Central Highlands of the southern Levant, which reassessed the origins of the 'Proto-Israelites' and their kingdoms. Born of this initial text was Nadav Na'aman and Israel Finkelstein's book, *From Nomadism to Monarchy - Archaeological and Historical Aspects of Early Israel*. The text was the first volume to assemble the results of several intensive archaeological explorations (conducted during the 1970s and 1980s) from across the country, specifically in the Highlands.

Thirty years later and the time has come once again to reassess the various reconstructions presented in these volumes, in light of updated archaeological data and theoretical frameworks. Across the two-day conference,

21 scholars from, Israel, France, Germany, and the United States presented their insights into the archaeology of specific regions, trends in cross-regional aspects such as epigraphy, cult, iconography, metallurgy, and animal exploitation, as well as the biblical traditions that reflect pre- and early-monarchic Israel.



The Annual Conference of the Israel Prehistoric Society

Natalya Solodenko

December 29, 2016

The Annual Conference of the Israel Prehistoric Society was organized by Ph.D. candidates from the prehistoric lab of the Department, and hosted by Tel Aviv University.

The event brought together nearly 150 prehistoric society members, including scholars and students from universities and institutes from across the country, as well as researchers from the Israel Antiquities Authority.

Prof. Yoel Rak opened the conference with a lecture into new insights on the similarities and dissimilarities between *Homo sapiens* and Neanderthals. The lectures that followed addressed all of the prehistoric periods in the Levant, from the Lower Palaeolithic up to the Early Bronze Age. Central issues addressed during discussions included lithic typo-technological analyses and their meanings, archaeozoology research, new dating, use-wear analyses, studies in physical anthropology, and new and renewed excavations and aspects regarding usage of caves by prehistoric societies.

The collaboration between research institutions in Israel and abroad, which is one of the core goals of the Israel Prehistoric Society, was effectively reflected in the range of lectures presented. Furthermore, the conference provided a platform for young scholars to present research, and was an opportunity for scholars to learn about recent innovations in prehistoric research in the Levant and beyond.



Nebuchadnezzar: History, Archaeology, and Memory

Yoram Cohen

April 27, 2017

In April of this year, Tel Aviv University played host to an international symposium, with speakers from Austria, Spain, the United States, and Israel. The symposium topic was the famous Babylonian king, Nebuchadnezzar (ca. late 7th century – mid-6th century BCE).

The king is chiefly remembered (notoriously, one could add) as the person who sieged Jerusalem, destroyed its Temple, and put an end to the Davidic Dynasty. However Nebuchadnezzar's great achievements are sometimes overlooked. For example, Nebuchadnezzar and his father removed the Assyrian yoke over Babylonia, and he himself restored Babylon (developing its palaces and temples), and successfully controlled a sizable empire across the ancient Near East.

The symposium dealt with Nebuchadnezzar's memory in history (in the Hebrew Bible and other sources), his military campaigns in our region (the Lebanon, Ashkelon, and Jerusalem), and his administrative measures taken to rule his empire.



Call for Papers: Transcending Time Young Scholars of Archaeology Conference

Bar Efrati, Alexandra Wrathall, and Omer Ze'evi

November 2, 2017

The Tel Aviv Institute of Archaeology is pleased to announce an up and coming conference, *Transcending Time, Young Scholars in Archaeology*, Israel. This is the fifth year the conference will be hosted by The Institute of Archaeology.

The goal of the conference is to offer young scholars of a Masters or Doctorate research status, the opportunity to present their research in a public forum to fellow students, academics, and members of the wider Israeli public. The presentation will take the form of a 20-minute public speaking opportunity, with a 15-minute presentation (and 5 minutes for questions following). The conference language is English, and we request all accompanying power points and handouts also be supplied in English.

Frequently, academic conferences are structured to address specific time periods, archaeological/historical phenomenon,

and methodologies. The goal of this conference is to connect and emphasise archaeological tools and perspectives from all periods, with speakers invited to present their research within periods from prehistory (2.6 ma) to the modern era (2017 CE). As students and scholars of archaeology, we aim to focus on the methods and approaches different fields have to offer one another. In doing so, we hope to explore the application of archaeological methods, techniques, and theories.

Those interested in submitting a paper for presentation are invited to do so following the call to papers, May 20th – June 20th. Details regarding the application process and requirements are available online at archaeology.tau.ac.il/.

Attendance at the conference is open to all students and members of the public. To learn more, contact conference organisers at youngscholarsTAU@gmail.com.

Open Day of the Department of Archaeology and Ancient Near Eastern Cultures

Alon Arad and Alexandra Wrathall

February 3, 2017

Each year the Department of Archaeology participates in the Tel Aviv University Annual Open Day. The goal of last year's Open Day was to introduce potential students to the range of opportunity the Department of Archaeology has to offer. Throughout the day, department scholars presented a series of short lectures. The lectures referred to topics such as: archaeozoology, the site of Ramat Raḥel, Egyptology, Assyriology, and general archaeological methods. The lectures provided members of the public with the opportunity to sample a few of the fascinating research topics from the Institute.

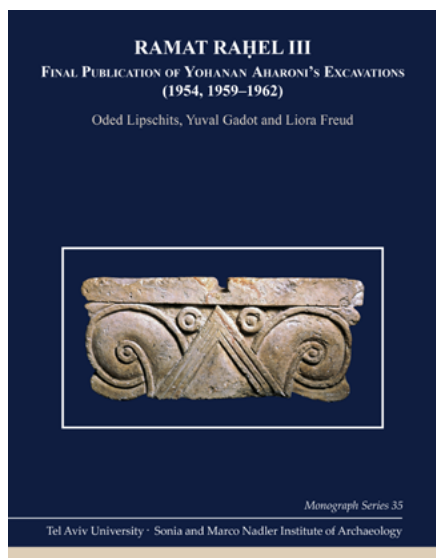
In addition to the regular information desk representatives (available for general questions), those interested in undergraduate and graduate programs were able to personally meet and interact with scholars, researchers, and students from a variety of research fields. Students and scholars from the department took the initiative to present the entire process of archaeological fieldwork to the public. The academic demonstrations began with a flint knapping demonstration, continued with a full-scale reconstruction of an excavation area, a tour of the restoration lab, and finally a guided summary of published articles, reports, and popular books. The Open Day was a great success, with particular thanks extended to staff and students who contributed their time, energy, and passion for archaeology.



All photos by Jacqueline Zaluda



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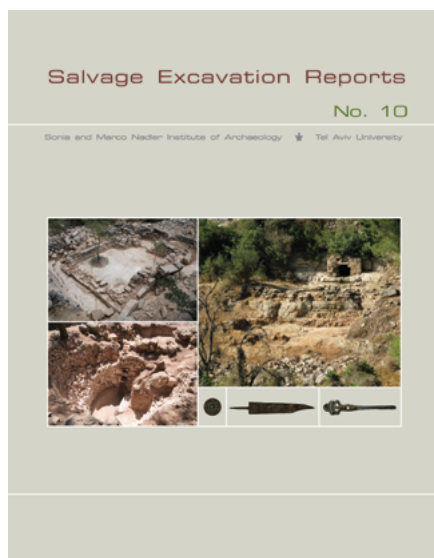
Ramat Raḥel III: Final Publication of Yohanan Aharoni's Excavations (1954, 1959–1962)

Monograph Series No. 35

Oded Lipschits, Yuval Gadot, and Liora Freud
2016

This two-volume report brings to full publication the results of Yohanan Aharoni's 1954, 1959–1962 archaeological excavations at the site of Ramat Raḥel. Volume I offers the reader detailed architectural plans and field photos as a base for a sound and meticulous evaluation of the site's stratigraphy and architecture. It poses an integrative approach that emphasizes well-contextualized pottery assemblages for the dating of the various architectural units.

Volume II is devoted to the full publication of thousands of finds from the diverse periods of settlement, which attest to the site's importance throughout history. Thus, this publication of Ramat Raḥel is a welcome addition to scholarly literature on the history and archaeology of Judah during the Iron, Persian, Hellenistic, Roman, Byzantine and Early Islamic periods.



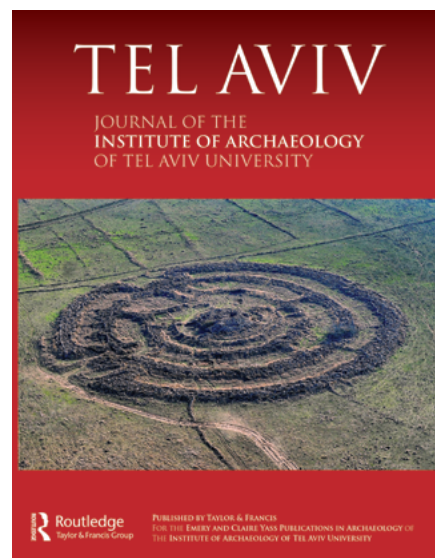
Salvage Excavation Reports No. 10

Editor: Efrat Bocher
2016

The tenth volume of *Salvage Excavation Reports* unites the final results of over 20 diverse salvage excavations. The excavations include material from a range of historical periods and sites from across of the country. All excavations were conducted by the Israeli Institute of Archaeology, under the auspices of the Sonia and Marco Nadler Institute of Archaeology at Tel Aviv University.

The tenth volume represents the importance and value of providing young scholars and researchers with the opportunity to gain professional experience as leaders of archaeological fieldwork and publication processes.

In recent years, studies have highlighted the contribution of quality salvage excavations for the reconstruction of regional settlement patterns, agricultural hinterlands, and the documentation and safekeeping of cultural heritage.



Tel Aviv: Journal of the Institute of Archaeology of Tel Aviv University

Volume 44, Number 1, 2017

The Judahite Temple at Tel Moza near Jerusalem: The House of Obed-Edom?
Nadav Na'aman

Rujm el-Hiri: The Monument in the Landscape
Michael Freikman and Naomi Porat

Non-Royal Women at Serabit el-Khadim: Fact or Fiction?
Nir Orlev

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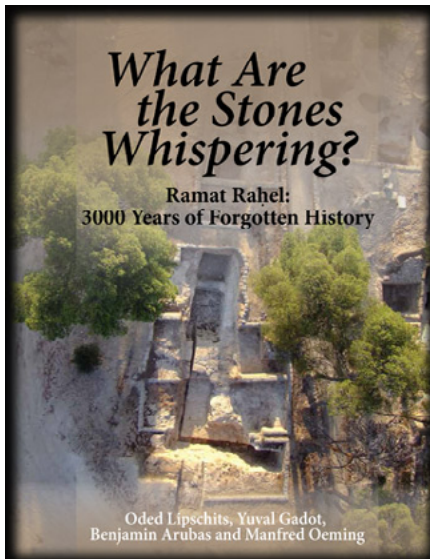
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Plant Domestication and the Beginning of Agriculture in the Near East

Avi Gopher and Shahal Abbo
2016

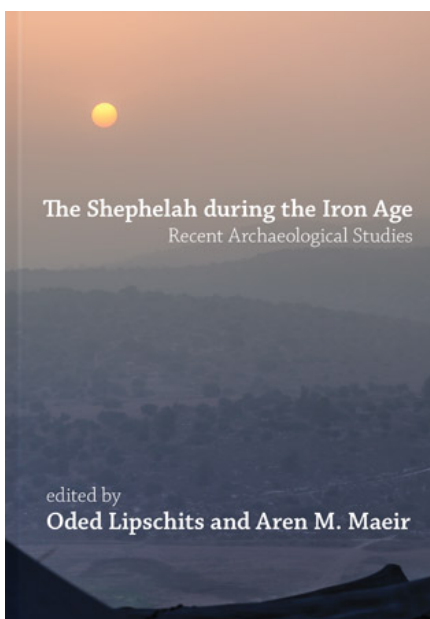
Following decades of extensive research, a summary of the work generated by Prof. Shahal Abbo and Prof. Avi Gopher was published in 2016. The publication is an exploration of plant domestication and the origin of agriculture in the Near East, as major components of the 'Neolithic' or 'Agricultural' Revolution. The book examines fundamental questions associated with plant domestication in the Near East such as: which species were domesticated? When did it happen? Where did it happen? How (by what evolutionary mechanisms) did it happen? And what was the role of human ingenuity in the process? In answer, the book discusses the rise of a renewed human-nature relationship in general, and the new human-plant relationship in particular, which developed as a consequence of plant domestication. Furthermore, the text presents a theoretical background and offers the view that the transition to agriculture (plant domestication included) was a conscious, knowledge-based, cultural decision. The book is in the process of being translated and published in English.



What Are the Stones Whispering? Ramat Rahel: 3000 Years of Forgotten History

Oded Lipschits, Yuval Gadot, Benjamin Arubas, and Manfred Oeming
2017

The excavations at Ramat Raḥel, 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 stamped impressions were stored at the site. The findings cast new light on the late First Temple period and on the Second Temple period. During these periods, Ramat Raḥel was the administrative contact point between Judah and the ruling empires. This system enabled independent Judean control of Jerusalem and the Temple, and the ability to maintain Jewish identity within Jerusalem almost without outside intervention or supervision. All this came to an end during the Hasmonean revolt.



The Shephelah during the Iron Age: Recent Archaeological Studies

Edited by: Oded Lipschits and Aren M. Maeir
2017

The Judean Foothills (the biblical Shephelah) has in recent years become one of the most intensively excavated regions in the world. Due to the large number of recent and ongoing excavations in this region, it appears that the study of this area and its ancient cultures can move beyond the standard baseline of current archaeological research, and deal with broader, and ultimately more interesting and significant issues. No less important is the recurring role of the Shephelah (throughout several historical periods), as a transitional zone between regions, cultures, and polities. This is especially clear during the Late Bronze and Iron ages. Time and again, the region was the transition zone between cultures and polities in the Coastal Plain and the Central Hills.

This book provides both succinct reviews of the Late Bronze Age and Iron Age archaeological remains of major sites in the Shephelah, while facilitating several archaeological debates and discussions. As demonstrated in various chapters within the book, and while much is debated and not all agreed upon, the lively and dynamic discussions are evidence of the cutting edge archaeological research that is currently being conducted in this region.

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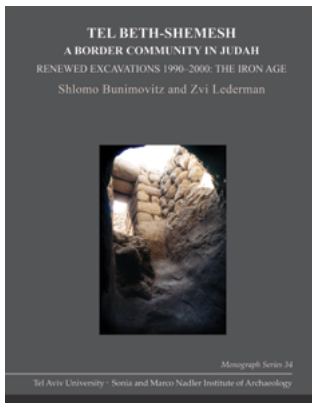
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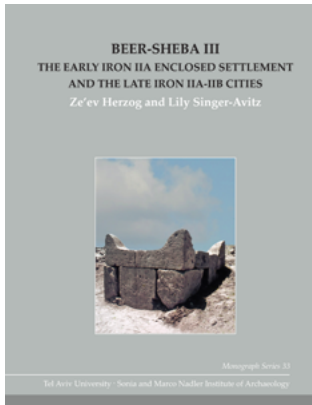


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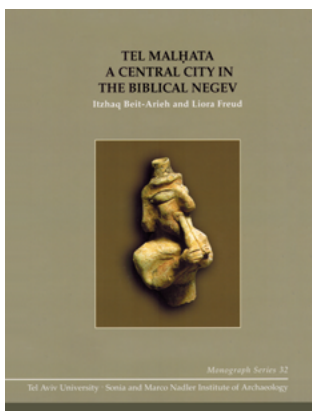


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