



CENTER FOR
NEAR EASTERN
ARCHAEOLOGY
LA SIERRA UNIVERSITY

La Sierra Digs

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The 2019 Season at Khirbat al-Balu'a

Monique Vincent

The Balu'a Regional Archaeological Project (BRAP) returned to the field in 2019 to focus on continuing excavations from 2017. With a team of 51 American, German, Canadian, Swiss, and Jordanian staff, volunteers, and workers we made a great deal of progress on our long-term project goals (see image at right). While many of our questions were answered this season, we look forward to returning in 2021 to continue digging into the past.

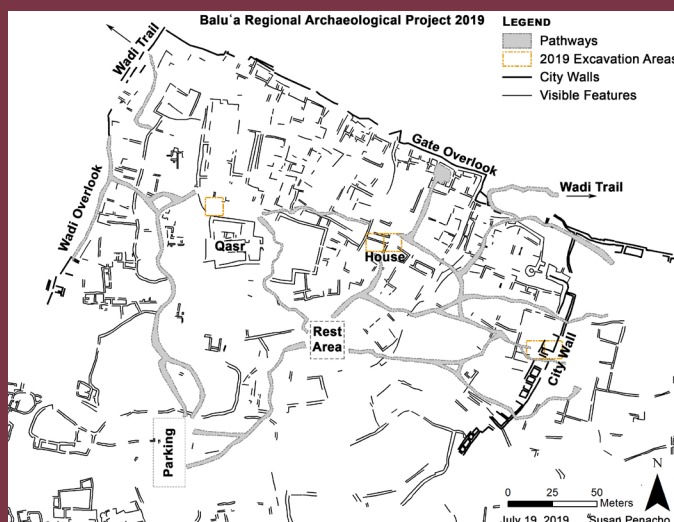
Dr. Susan Penacho carried out GPS surveys that updated previous surveys of water features and looting. Her systematic survey of looting documented the number and types of disturbances to provide a baseline for tracking future damage to the site. Dr. Douglas Clark led the Pathways to Presentation project and with the help of workers forged 1.4 km of paths across the site by joining and widening existing paths (see map below). These 2m-wide paths facilitate safe passage across a hazardous rocky terrain for both excavators and visitors. Dr. Adam Schneider launched the Paleoenvironmental Research Program (BRAP-PER) to collect samples for information on local diet, ecology, and climate in antiquity.



The Iron II Period (ca. 10th–6th centuries BC, the time of the Moabites) phases of occupation at Balu'a are characterized by a casemate wall system surrounding two parts of a 33-acre settlement. The interior of the settlement is formed of densely clustered, multi-phased domestic structures in the older part of the settlement and less dense, single-phased structures in a later, eastern extension. Work this season focused on the monumental Qasr structure, a house from the interior of the settlement, and the city wall that separates the interior and extension settlements (see excavations areas on map at left).

Dr. Craig Tyson supervised excavation of the monumental public building on site, "The Qasr," and with his team reached the building's foundations and determined a probable construction date in the early Iron II period. Exciting finds from later Iron II domestic structures near the Qasr included a Pataikos figurine and a complete late Iron II pithos buried under the floor of a house (see image page 7). This pithos was taken to ACOR and restored by Naif Zaban as part of the ACOR Conservation Cooperative and will eventually be set up in the local museum in Karak.

(story continues on page 7)



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CNEA Thanks You!

Douglas Clark, Director

A huge THANK YOU! to all who supported CNEA last year, especially the last half of last year, in response to the generous matching donation of \$35,000 by one of our long-time supporters and member of the La Sierra University Museum Board, Mr. Fred Cornforth. From July through December you exceeded the match by \$10,000! This, together with more limited contributions from the first half of the year, fulfills our annual budget goals and mission initiatives. We could not be more grateful!

In order to sustain CNEA and its campus, community, and global archaeological activities and outreach until our new museum is established, and then in modified configuration beyond that, we are proposing a new structure to our financing. Here are what we see as some possible funding (even named) options:

- The necessary salaries and benefits will remain in the budget virtually the same as before.
- Basic expenses for equipment and supplies and operation will remain the same.
- However, we recommend the following funding opportunities which are also part of our annual budget and which we would be delighted to name in your honor:
 - [YOUR NAME] Archaeology Discovery Weekend 2020—Funding for travel and expenses of world-class archaeologists to present cutting-edge results about the latest archaeological discoveries from around the eastern Mediterranean and the Middle East at what has become an internationally known and respected annual event (\$15,000)
 - [YOUR NAME] CNEA Publications Office Fund—Financial support for our CNEA Publications Manager (part time) who produces camera-ready print materials for published CNEA-sponsored archaeological reports and co-edits *La Sierra Digs* (\$10,000)
 - [YOUR NAME] *La Sierra Digs* Publication Grant—Support for printing and mailing our quarterly CNEA newsletter (\$5,000)
 - [YOUR NAME] CNEA Student Research Fellowships—Support for student research at CNEA which enables CNEA to publish its findings (\$5,000)
 - [YOUR NAME] CNEA Student Excavation Scholarships—Travel fellowships to support students in meeting fieldwork requirements in Jordan for their archaeology major or minor (\$5,000)

Let us know which of these special CNEA opportunities you would like to support by emailing us at archaeology@lasierra.edu.



La Sierra Alumni Homecoming Events

Douglas Clark and Dawn Acevedo

The spring of 2020 sees two La Sierra University alumni events, both on the CNEA calendar of activities for the year: Young Alumni and Families (15 February) and the regular Alumni Homecoming Weekend (17–19 April). For the former, CNEA sponsored a Kids Dig for 6–12-year-old children and their parents. This event included a short show-and-tell of biblical-era artifacts.

Homecoming Weekend in April will feature our regular weekend offerings of archaeological open house and displays at CNEA as well as the hospitality of our genuine goat-hair Bedouin Tent. In addition, our lecture program will include a presentation on ancient coins in the CNEA collection by Terri Shaw, a CNEA volunteer who has become a specialist in coins, and our CNEA Archaeology Awards presentations. This year's recipients are Suha and Gary Huffaker and Vera Kopecky.



New Collections at the CNEA

By Dawn Acevedo

Last year, 2019, at the Center for Near Eastern Archaeology brought the incredibly generous donation of privately-owned collections from the late Mrs. Shirley Macaulay and her daughter, Dr. Diane Macaulay, a former economics professor at La Sierra and the University of Michigan. The collections boast a number of Roman artifacts including bracelets, unguentaria, glass and ceramic vessels, pins, and amphorae. Several ceramic oil lamps, Hellenistic figurine heads, Egyptian ushabtis, faience

beads, and coins add substantially to the groups of artifacts that are currently being cared for, curated, and displayed at CNEA and will be in the new museum. Mrs. Macaulay's collection also brings in many new artifacts for the Center including some Crusader items, a wooden camel saddle, wooden Egyptian masks, and numerous ethnographic pieces from the Middle East.

An additional eighteen artifacts ranging from the Early Bronze Age to the Roman period came to us from Dr. Duane Bietz, a thoracic surgeon in Oregon and alumnus of La Sierra University and Loma Linda University. A Late Bronze Age lamp was donated by Mr. Gary Fisher, and a medieval Islamic lamp came to us via Dr. Bill Allen. (see image below right)

The year concluded with a beautiful collection of 21 gold coins, mostly Byzantine; 12 silver coins, mostly Roman; an or-



nate pair of ancient Parthian gold earrings, and two ceramic lamps from Dr. Ronald Geraty (see image below left). These coins are currently being researched by CNEA volunteer Terri Shaw. Dr. Geraty is an alumnus of Loma Linda University and is a retired psychiatrist in Marblehead, Massachusetts.

We are tremendously grateful to these patrons who have entrusted us with their treasured artifacts. Furthermore, we at the Center for Near Eastern Archaeology want to express our deepest gratitude to all of our donors, financial supporters, and volunteers—we could not do what we do without your continued backing!



Display Case

Dawn Acevedo and Terri Shaw

According to the Merriam-Webster Dictionary, a coin is “a usually flat piece of metal issued by governmental authority as money.” In eastern antiquity, these flat pieces of metal began to be standardized and manufactured as early as the 7th century BC by the Greeks. Coins can tell us a lot about their region, political climate, minting process, dating, and more! All those details come with their own vocabulary quite different from what is used to describe other ancient artifacts. For example, the front of a coin is the “obverse” while the back is the “reverse.” The “relief” or main image may be human, animal, symbolic or ritual objects or phrases. The humans or animals face “left,” “right,” or “front.” The region surrounding the main subject of the coin is called the “field.” The area below the design, sometimes with a horizontal line above it, is called the “exergue.” Letters used to describe the governing official or commemorative event are referred to as the “legend” and run clockwise next to the rim starting at the lower left (but sometimes run counterclockwise facing away from the center of the coin). If a legend is separated by other parts of the design relief, the legend is termed “broken.” And, if the coin has no legend, it is called “anepigraphic.” And letters or symbols that refer to



where the coin was minted is the “mint mark” and usually is placed in the exergue. A design or ridge surrounding the coin content is called the “rim” or “border.” Occasionally, ancient coins also bear denomination marks, die engraver's marks, and mint official's marks or monograms, which are placed in the field. Furthermore, symbolism plays a significant role in many ancient coins with appearances of gods, goddesses, animals, and other images. These tiny treasures can teach us so much more than just their time periods!



The Madaba Regional Archaeological Museum Project (MRAMP)

Douglas Clark

The American-Italian-Jordanian Madaba Regional Archaeological Museum Project saw a productive year in 2019 and looks forward to an even more promising 2020 in its quest to establish a new regional archaeological museum in Madaba, Jordan. As one of the primary sponsors of MRAMP, La Sierra through CNEA joins Gannon University in Erie, PA; Perugia University in Perugia, Italy; Sapienza University of Rome; and the Department of Antiquities of Jordan (DoA) in this ambitious multi-year endeavor.



To accomplish its goals, MRAMP has long committed itself to sustainable “Community Archaeology,” which views archaeology as a public asset, placing “ownership” of cultural heritage in the hands of the community. From the beginning, the project has sought to preserve and safeguard Madaba’s considerable cultural heritage, develop economic opportunities for the region, and assure future sustainability through capacity-building and especially training.

As 2020 begins, MRAMP stands to make important progress. With grants totaling over \$600,000 from American and Italian sources, the project has accomplished goals related to archaeological excavation, stone wall consolidation, and artifact curation and conservation. Perhaps most important of all, MRAMP has built sustainable relationships with local, regional, national, and international governmental agencies; elementary through university (graduate and undergraduate) educational administrators, teachers, and students; businesses and business and industry organizations; academic research



institutions and excavation directors; private and public organizations, secular and religious; and local citizens and families. As part of “community archaeology” in Madaba, MRAMP has formed an Advisory Council, consisting of representatives from many of these stakeholder groups. The Council meets in early 2020.



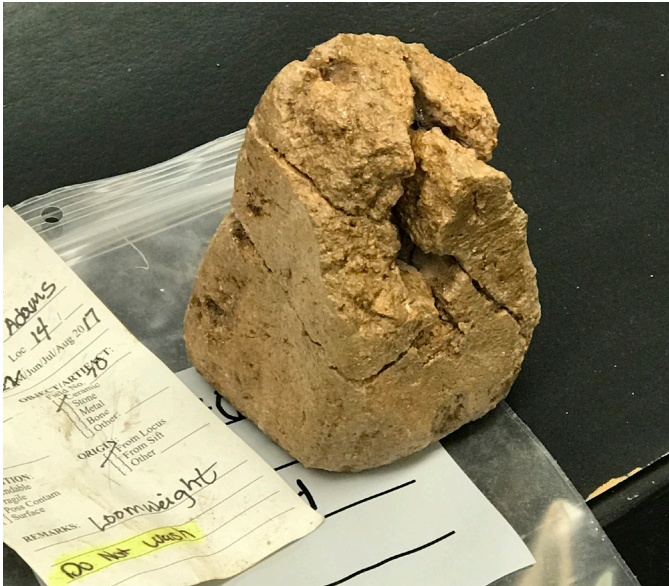
Conserving Ancient Clay Loom Weights

By Jaime Bennett

In the Spring 2019 issue of *La Sierra Digs*, I discussed the purpose of loom weights and the history of their origin. In this issue, I would like to discuss the conservation process for clay loom weights from Khirbat al-Balu’a and show the conservation done onsite as I presented in a poster at the American Schools of Oriental Research’s 2019 annual meeting last November in San Diego.

Because the unfired clay loom weights are quite fragile, they do not always come out of the ground in one piece and are often cracked even *in situ* (or in the original place they were found). The objective for my Master’s thesis is to conserve and describe the conservation process for the loom weights found within a casemate room of a wall at Balu’a, which were excavated over the course of the 2017 and 2019 seasons. Casemate rooms occur as double-walled rooms with crosswalls, using the town’s perimeter wall as the outer long side.

When I chose this as my thesis project, I began looking closely at the condition of the weights and deciding how to approach the conservation process. I decided to keep them contained in one space on a tray while working on them, so they would not get mixed up with other artifacts while I glued them using PB-72. This polymer comes in small transparent beads and is mixed with acetone to create an adhesive. For this project, I used two concentrations: the heavier 25% solution to glue the larger pieces together and the lighter 10–15% solution protectively to coat the outside of the weight.



During the conservation process, I utilized Sculpey polymer clay in order to mold it into the open spaces of the weights to hold the pieces in place while the PB-72 adhesive dried, solidifying them in place. In the lab, this process takes about a day to dry for each weight.

When the loom weights are dry, acetone is applied with paint brushes to areas of bubbling. This process cleans up the weight for a finished product; the weights can then be placed in protective bags and stored in the lab for future study and display. I weighed and measured each weight as part of the project as well in order to determine the possible textiles used with the weights.

For the 2019 dig season, we brought the PB-72 beads along with us in order to conserve the weights in the field, which worked out nicely as the warm weather helped with the drying process. We brushed the dirt off the weights with a light brush and then applied the PB-72 to the exposed areas and continued this process around the circumference of the weight and waited until it was dry and then lifted the weight from the ground. This process worked out quite well and we were able to conserve nine loom weights this season without any further damage to them.



By conserving the weights, now a total of 45 from the casemate room, we are able to get a better picture of the day-to-day activities of the people who were using them. We also hope our findings provide clues about the material woven on the looms, whether it be flax or wool, and thus what kind of resources they were growing or raising in this area.



The Casemate Room, Balu'a 2019



Annual Pilgrimage to Archaeology Conferences

Douglas Clark

Each November, immediately following Archaeology Discovery Weekend, CNEA faculty, administrators, and students make their annual trek to the conferences of the American Schools of Oriental Research (ASOR) and the Society of Biblical Literature (SBL), this past autumn in San Diego. And they typically attend not only to learn the latest about recent discoveries, but to participate actively in lectures, sessions, poster presentations, and workshops. This past November was no different, except with the pleasant addition of some honorifics.

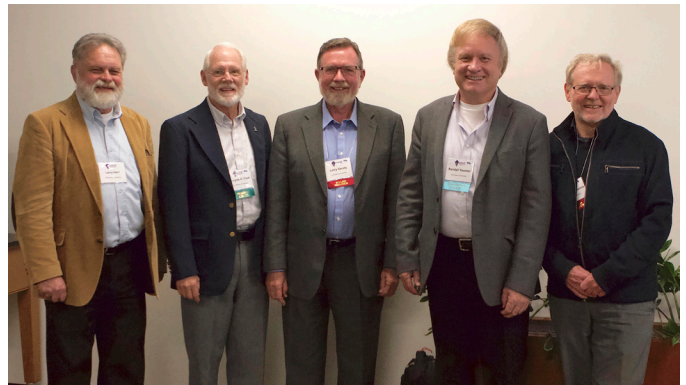


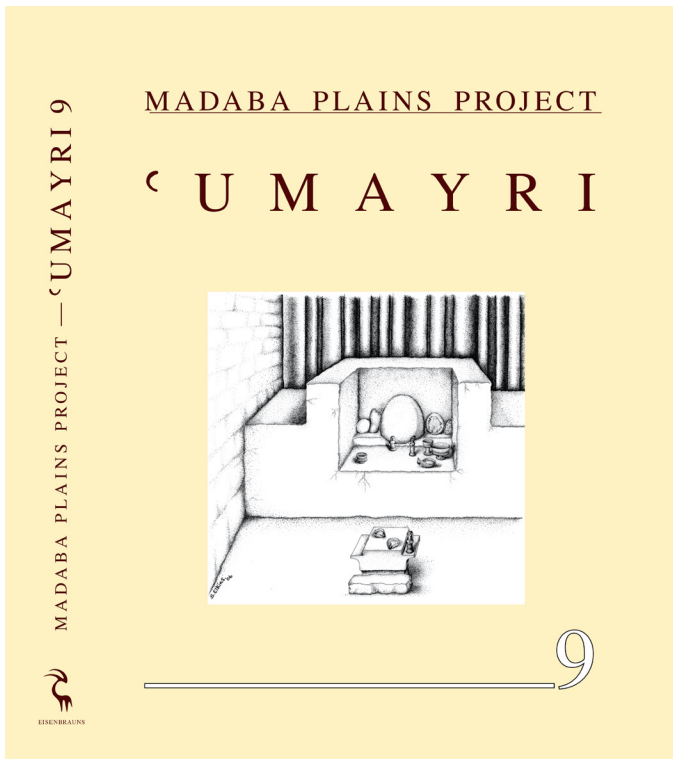
At the ASOR conference (20–23 November), CNEA participation took the following forms:

- Workshop—Madaba Regional Archaeological Museum Project (MRAMP), co-chaired by Douglas Clark, Suzanne Richard, Andrea Polcaro, and Marta D’Andrea
- Workshop—Balua Regional Archaeological Project (BRAP), co-chaired by Kent Bramlett, Friedbert Ninow, and Monique Vincent
- Lecture—“I Made the Road across the Arnon”: The Moabite Road System in the Region of the Wadi Mujib and Dhiban Plateau, by Chang-Ho Ji and Chaim Ben-David
- ASOR Luncheon in Honor of Lawrence Geraty for his contributions to Near Eastern archaeology over the past 50+ years (see images accompanying this article)
- Madaba Plains Project Consultation, chaired by Lawrence Geraty
- Lecture—Khirbat Ataruz in Iron Age IIB-C: Ceramic and Architectural Finds and Their Implications for Moabite Archaeology, by Chang-Ho Ji and Aaron Schade
- Lecture—The 2019 Season of Excavation at Khirbat al-Balu’a in Central Jordan, by Kent Bramlett, Monique Vincent, and Friedbert Ninow
- Academic Workshop—Preserving the Cultural Heritage of the Madaba Region of Jordan, chaired by Douglas Clark, Suzanne Richard, Andrea Polcaro, and Marta D’Andrea, with participation by Douglas Clark and Chang-Ho Ji, among several regional archaeological dig directors.
- Poster Presentation—Conservation Process of Loom Weights Found at Khirbat al-Balu’a, by Jaime Bennett, MA archaeology student.
- ASOR Charles U. Harris Service Award, given in recognition of long-term and/or special service by an ASOR officer or Trustee, to Lawrence Geraty.

The SBL conference (22–26 November) featured a full session (Archaeology of the Biblical World) on Tall al-‘Umayri, part of the Madaba Plains Project, entitled: Architecture, Domestic Culture, and the Cult at Tall al-‘Umayri, Jordan in the Late Bronze and Iron Ages. Presenters and presentations included:

- Douglas Clark, Signature Research Objectives at Tall al-‘Umayri: From Biblical History to Social Structures ... and Beyond
- Kent Bramlett, Late Bronze Age Temple Architecture and Cultic Activity at ‘Umayri
- Monique Vincent, Early Iron Age Settlement and Social Identity at ‘Umayri
- Gloria London, Iron Age Cookware and Cooking at ‘Umayri
- Craig Tyson, Iron Age Religion and Religious Practice at ‘Umayri





The 9th volume of the seasonal publications of Tall al-'Umayri will be available March 2020!

*The 2019 Season at Khirbat al-Balu'a
(continued from front page)*

Dr. Stephanie Selover supervised excavations of “The House,” which has been excavated since 2012. Our goal this season was to continue defining the phasing and extent of this large Iron II period domestic structure (see image below at left). Three doors between rooms were found with intact stone lintels, which provided a great deal of excitement. Copper slag found in parts of the house point to previously-unknown metal processing at Balu'a. The excellent preservation of the house is due to a thick destruction layer, likely caused by an earthquake in antiquity.

Dawn Acevedo and Betty Adams supervised excavations at “The Wall,” a part of the fortification system that separates the two halves of the Iron II settlement. We can now reconstruct the phasing of construction. The earliest phase consisted of a single, large wall, to which was added later a parallel wall and interior stub walls to form a casemate system over 23 ft wide and preserved to a height of 10 ft. More clay loom weights were found inside the room between walls, indicating people lived in and used this space.



**Balu'a
Regional
Archaeological
Project**

For more news and photos from the 2019 season, check out the *BRAP Beat* weekly newsletters from the field archived at lasierra.edu/cnea/lasierra-digs-newsletter/



La Sierra Digs

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2020 Calendar of Events

17–19 April 2020
La Sierra Alumni Homecoming Weekend

May 2020
MRAMP project in Madaba

22 June–14 July 2020
Ataruz Excavations

14–15 November 2020
Archaeology Discovery Weekend 2020:
Southwest Turkey: Famous Cities, Churches,
and Synagogues

SUPPORT CNEA!

As this issue of *La Sierra Digs* makes clear, the Center for Near Eastern Archaeology at La Sierra University is on the move! And it needs your support for student travel scholarships, the new university museum, and ongoing operations. Please go online at <https://lasierra.edu/donate> and click on “Center for Near Eastern Archaeology” to make your contribution. Or contact the Office of University Advancement at (951) 785-2500. Thank you!

Recent Discoveries

Assembled by Dawn Acevedo

Gold-Lined Tholos Tomb Discovered at Pylos

Archaeologists from the University of Cincinnati excavated two Bronze Age beehive tombs at the site of Pylos, Greece believed to have been lined with gold leaf. The tombs contained significant amounts of engraved jewelry and artifacts, including objects from Egypt and other parts of the Mediterranean.

<https://www.uc.edu/news/articles/2019/12/n20880507.html>

Roman Garum Factory Found in Ashkelon

A 1st century cetariae or garum factory was found two kilometers northwest of Ashkelon, Israel. “It is one of the only identified industrial sites for production of the ubiquitous odorous sauce that has been found in the Eastern Mediterranean,” reports The Times of Israel. In addition to being a foodie favorite in Roman and Byzantine times, the fermented fish sauce was also used for medicinal purposes, such as the treatment of dysentery, dog bites, and earaches.

<https://www.timesofisrael.com/factory-for-romans-favorite-funky-fish-sauce-discovered-near-ashkelon/>

Assyrian Reliefs at Faida, Iraq

Ten relief panels have been uncovered in an ancient irrigation channel in northern Iraq. The canal is believed to date to the time of the Assyrian ruler Sargon, dating the panels to ca. 720–705 BC. Archaeologists hope the site will soon qualify as a UNESCO World Heritage Site.

<https://www.archaeology.org/news/8361-200117-iraq-assyrian-reliefs>