New Mexico Archaeology

The Newsletter of the Friends of Archaeology

Museum of New Mexico Foundation www.nmarchaeology.org May 2025

Time to define collaborative archaeology

John Taylor-Montoya
OAS Executive Director

Friends, before moving on to other topics I want to acknowledge a few changes in both OAS and FOA leadership. For OAS, the Director of Business Operations position has opened up. We are working diligently to fill that position as soon as possible. On the FOA side, Jerry Cooke and Marja Springer are stepping down from their roles as Officers of the FOA Board. Jerry deserves special recognition for his decades of involvement with the FOA. Marja has served as an exemplary Treasurer.

Prior to exiting the FOA board, Jerry asked me to dedicate an issue of the newsletter to our work with Acoma Pueblo and to expound on the concept of collaborative archaeology. Jerry is correct that it is timely to address the topic because collaborative archaeology has recently become a popular concept. But that hasn't always been the case. I can remember a time when mainstream archaeology held an aloof, sometimes hostile, attitude toward non-specialist knowledge and collaboration.

What is "collaborative archaeology" you may ask? Collaborative archaeology can be defined as a paradigmatic shift in archaeological practice that emphasizes working with local communities and other stakeholders in the

See **Director**, on Page 2.

Melissa Martinez

From left to right, OAS Laboratory Director Shelby Jones, OAS volunteer Gary Sanford, and OAS Laboratory Assistant Emma Kostecki work on the radiocarbon carbon extraction device.

OAS Analytical Lab gets some TLC

Marvin W. Rowe
OAS Research Associate

In November of last year, an intense cleanup of the OAS Analytical Laboratory, which includes the low-energy plasma radiocarbon sampling (LEPRS) laboratory, began. The laboratory has been in partial operation since the Center for New Mexico Archaeology opened, and the plasma laboratory has been operating full time since 2012, when I brought in mass spectrometry instruments and constituent parts gifted to me from the NASA laboratory operated under the supervision of Dr. Donald Bogard. From the original equipment, we were able to build the LEPRS machine. Since its original build, the machine has been altered several times, from a one-chambered system in 2014, to an eight-chambered system in 2023.

It's difficult to understand the amount of work necessary to clean and arrange a laboratory that has been in operation since before 2011, that has never undergone a serious concentrated cleaning. The cleaning project was undertaken by OAS Laboratory Supervisor Dr. Shelby A. Jones and OAS Laboratory Analyst Emma Kostecki, who were ably assisted by OAS volunteer Gary Sanford, a veteran and retired engineer; volunteers Bob Florek and Laura Reich, both retired geologists; and student volunteers from the Academy of Technology and the Classics here in Santa Fe.

See **Lab**, on Page 6.

Fall 2025

Mary Weahkee leads a tour to La Vista Verde, a Comanche petroglyph site in 2019.

Explore the Vista Verde Comanche Petroglyphs

This fall, Friends of Archaeology will host a tour of La Vista Verde, a Comanche petroglyph site, near Taos, NM. OAS archaeologist and Comanche tribal member Mary Weahkee will lead the tour.

The La Vista Verde site, discovered in 2008, offers a view of rare rock panels that emphasize the Comanche horse culture during the eighteenth and nineteenth centuries. Glyphs at the site include images of mounted warriors, horse herds, and the capture of horses.

This tour is rated as easy and consists of an approximately 2.5 mile, round-trip hike on flat ground. Four wheel-drive vehicles will not be required. Stay tuned to the OAS website and the OAS Facebook page for sign-up and registration info. ❖

Cultural Landscape of Caja del Rio/ Los Aguajes

Friends of Archaeology is planning an autumn tour of Los Aguajes Pueblo (LA 5), near Tetilla Peak south of Santa Fe. First identified by Adolph Bandelier in 1883, Los Aguajes, or "the water traps," was first referred to by Gwynn Vivian as a "frontier pueblo" dating between 1450 and 1500.

Several years ago, FOA members Bill Davis and Jerry Cooke worked with Mike Bremer, then-archaeologist for the National Forest Service, to identify and map more than 35 km of trails in the area. Additional information on Los Aguajes can be found in the book *Landscapes of Pueblo Archaeology* by James Snead.

The 3-mile easy-to-moderate trip hike includes views of the pueblo, along with field houses, agricultural features, shrines, petroglyphs, and lithic fields dating from the Archaic to the Aguajes periods. Stay tuned to the OAS website and the OAS Facebook page for more info. ❖

Director

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planning, execution, and interpretation of research. It is also called community-based archaeology. Both of those terms, "collaborative archaeology" and "community-based archaeology," sound a bit like marketing or regulatory jargon. Nonetheless, "collaborative archaeology" is useful shorthand for a practice that can be relevant and rewarding, when it's done right. If it's done right, then it is ethically sound and equitably polyvocal, while satisfying the scientific and/or regulatory requirements of the project that is being undertaken.

My journey with "collaborative archaeology" began over a decade ago, and by embracing it, I became one of a very small minority of archaeologists at the time. It started with a project involving the Pueblo of Acoma and those of us who were instrumental in that effort called it the "Acoma method." In my view, the Acoma method goes beyond collaboration. In practice, the Acoma method is immersive, intensive, and cannot be done in half-measures. It takes courage and commitment by all parties in addition to cooperation. In a future issue of the newsletter, my goal is to write a collaborative article about that project with one of our colleagues from Acoma.

For now, I'd like to direct your attention to our 2025 Distinguished Lecture, which featured the collaborative archaeology program of Dr. Kelly Jenks, Associate Professor and Museum Director at New Mexico State University. In keeping with the theme of this issue, Kelly's talk featured her collaborative archaeological excavations with land-grant communities on Spanish Colonial sites in central and northern New Mexico. The talk was June 5 at the MOIFA auditorium and featured live music from award-winning local musician, Nacha Mendez. Hopefully, you were one of the many who enjoyed this amazing talk and experience.

Before closing, I want to make sure I mention some additional news. Cameron Turley recently joined the OAS team in a field director role. He has jumped in with both feet and is already making a positive impact. We're thrilled to have him on board! ❖

Office of Archaeological Studies

The Office of Archaeological Studies (OAS) was the first museum program of its kind in the nation. OAS staff conduct international field and laboratory research, offer educational opportunities for school groups and civic organizations, and work to preserve, protect, and interpret prehistoric and historic sites throughout New Mexico.

Friends of Archaeology

The Friends of Archaeology is an interest group within the Museum of New Mexico Foundation that supports the OAS. To join the FOA, you need only become a member of the Museum of New Mexico Foundation and sign up. Visit www.nmarchaeology.org for information. We're also on Facebook, at www.Facebook.com/FriendsOfArchaeologyNM. Friends of Archaeology's e-mail address is: Friendsofarchaeologynm@gmail.com

Mission Statement

The mission of the Friends of Archaeology is to support the Office of Archaeological Studies in the achievement of its archaeological services mandate from the State of New Mexico through participation in and funding of research and education projects.

FOA Board

Board Members: Barbara am Ende, Margaret Armstrong, Donna Coleman, Greg Dove, Susan McMichael, Tom Morrison, Tom Noble, and Sherill Spaar

OAS welcomes new field director: Cameron Turley

The Office of Archaeological Studies would like to welcome our new hire Cameron Turley!

Cameron will be working as a field director/lead archaeologist. Cameron's archaeological experience spans more than 15 years across five countries. His practice has taken him to northern Tuscany, where he supervised student excavators at the Etruscan acropolis Poggio Colla, to Iceland, where he excavated Norse to Early Modern period sites across the country, and to southern Greenland, where he and his colleagues studied regional Norse settlement and abandonment patterns, and where he performed his graduate work in launching excavations at the more recent Alluitsoq (Lichtenau) Moravian mission, the largest settlement in the country dating back to the nineteenth century.

Cameron has also conducted cultural resource management work in Texas and has worked on Saladoid sites on Barbuda in the Caribbean. In addition to field archaeology, Cameron spent seven years as a lecturer at the City University of New York's Lehman and Brooklyn Colleges, where he taught an array of introductory to advanced anthropology courses. He holds a Bachelor of Science in anthropology from Southern Methodist University, a Master of Philosophy in anthropology from CUNY, and is presently writing dissertation chapters.

In 2021, Cameron and his partner left New York City for Santa Fe. Upon returning to the Southwest, where Cameron was raised and received his initial archaeological training, he spent time working for the Santa Fe National Forest. He is now a proud member of the New Mexico Office of Archaeological Studies.

Cameron Turley

When not on the job, Cameron enjoys tending to his flock of chickens and his garden, foraging for mushrooms, cooking (with special emphasis on Tuscan cuisine), indulging in Formula 1 fandom (44!), playing video and board games, and consuming science-fiction media of all types. He also enjoys attending metal concerts and the Santa Fe Opera. ❖

FOA Board Members Needed

Friends of Archaeology is seeking new members to join the board! We are looking for volunteers with an interest in Southwest archaeology to join this dynamic group's board and support the OAS through educational and cultural archeology-focused activities such as field trips, lectures, and research. If you're interested, we would really love to hear from you! Please call Lauren Paige at (505) 982-2282, or send a short statement of interest to lauren@museumfoundation.org ❖

Student Visit

This spring, OAS had a visit from the Mountain Club, a service organization made up of students from the Academy for Technology and the Classics here in Santa Fe. About 20 middle and high school students, along with their history teacher and group leader, Joaquin Martinez, spent the day helping with projects around OAS. They prepared education outreach materials, digitized files, assisted with the inventory of OAS laboratories, and helped clean up and organize labs, work spaces and libraries. Thank you to the Mountain Club!

Lab

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In my 65 years as a scientific researcher, I have never before found myself in such a well-cleaned and well-organized laboratory. I offer my sincere gratitude to all these dedicated workers.

I am nearly 88 years old, or I will be on July 6 of this year. Five years ago, one of my physicians said to me, "Marvin, you are not ancient, but you are pretty fricking old!" Since then, I have indeed progressed to ancient.

There are relatively few advantages to getting very old, and somewhat decrepit. There is, of course, the usual: "It is better than the alternative." However, many people have treated me with increased concern as I have aged. In particular, OAS Graphic Designer Scott Jaquith and OAS Editor Melissa Martinez often see me approaching the OAS back entry door and rush to open it so that there's no need for me to awkwardly punch in an admittance code to enter the building. They and others in the Center for New Mexico Archaeology often rush to pick up items I have dropped—usually getting to them before I can retrieve them—recognizing that the act of bending over has become increasingly difficult for me.

In the vein of needing help and being helped, after the in-depth cleanup of the lab, it was decided that we would update the low-energy plasma oxidation radiocarbon carbon extraction device yet again in order to streamline its design. With only vocal encouragement from me, three of my colleagues—OAS Laboratory Director Shelby Jones, OAS Laboratory Assistant Emma Kostecki, and OAS volunteer Gary Sanford—performed a full overhaul on the instrument. The three of them are captured in the photo on Page 1, in a few of the many positions in which they worked for several days.

The list of chores deemed necessary to upgrade the LEPRS device is listed here. The items in italics have been achieved at the time of writing. I am grateful to my three colleagues for their dedication to accomplishing these goals.

1. *Adjust the locations of the vacuum forepumps. This is needed to comply with fire marshal and OSHA lab safety standards.*

Shelby Jones

OAS Laboratory Assistant Emma Kostecki, left, and OAS Editor Melissa Martinez, right, disassemble constituent parts of the LEPRS system.

2. Balance component amperages. This is needed to protect electronic components from damage during electrical outages.

3. Improve radio frequency plasma electrodes. This will provide us more stable plasma operation.

4. Check the regulator compatibility. Different gases need different pressure and volume regulators.

5. Count the device's hardware pieces and calculate the system's volume. This allows us to measure the weight of carbon produced by a particular plasma carbon extraction, using the ideal gas law PV=nRT

6. Change tip seals for vacuum forepumps #1 and #4. This is a maintenance procedure necessary for good dryscroll vacuum operation.

See **TLC**, on Page 7.

TLC

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7. Examine vacuum forepump #2. Determine whether it is ready to change the tip seals.

8. Rotate the Pfeiffer pressure gauge #6. In the current design, the pressure gauges # 5 and 6 are too close for optimal, accurate operation.

9. Change the angle of the Pfeiffer pressure gauge #5. See No. 8.

10. Build a 'testing area' for valves. A 1.33-inch and a 2.75-inch all-metal vacuum valve portal will be added to achieve easy ability to easily check for leaks in vacuum valves not currently used on the device.

11. Set up the residual gas analyzer (RGA). We occasionally need to utilize the RGA to understand the gaseous processes occurring in the LEPRS. It needs a convenient location for inserting and removing from the rest of the device.

12. Paint the LEPRS table. Provides a clean, visual improvement to the system.

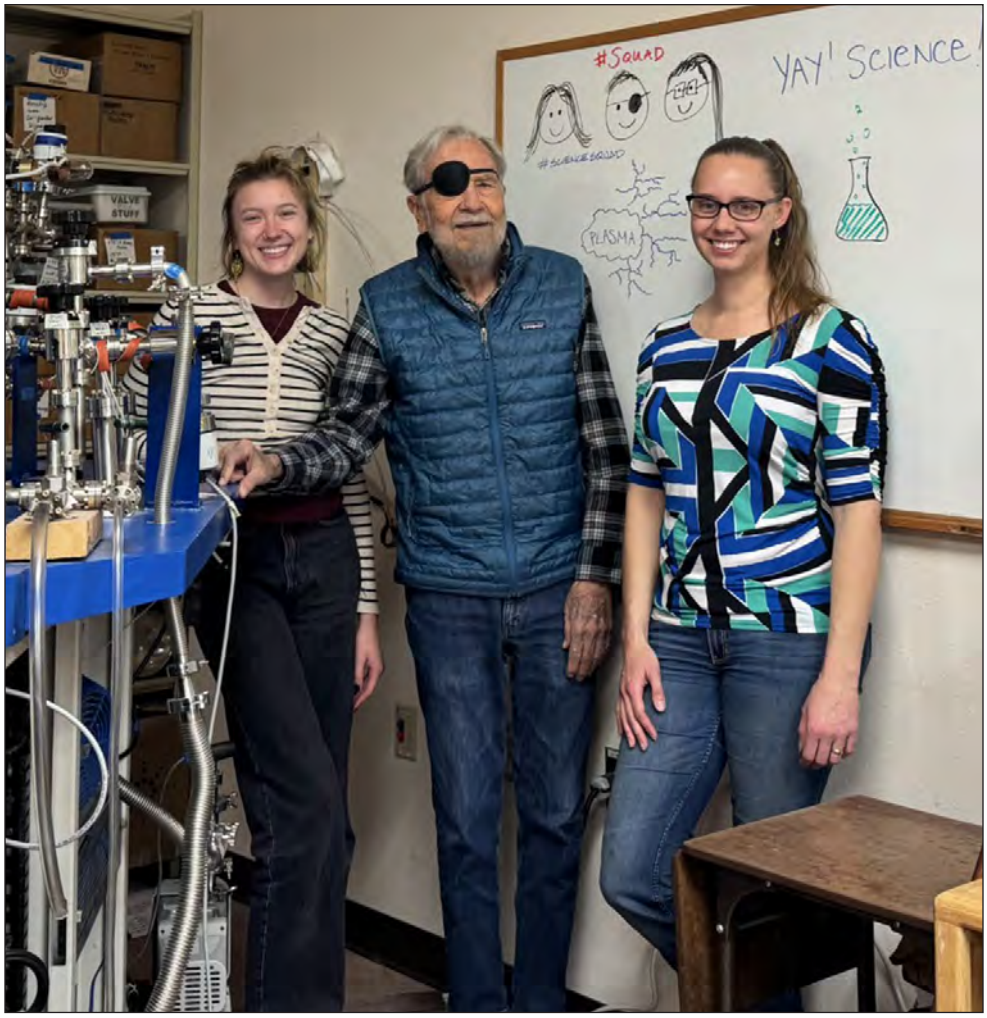
13. Replace small all-metal vacuum valves numbers #7 and #12. These are known to have developed leaks during previous operations and thus need to be replaced.

14. Tesla coil/heat gun storage. A convenient and safe place is needed to store the Tesla coil and the heat gun between usages.

15. Heat lamp storage on the LEPRS table. A convenient and safe place is needed for the storage of eight heat lamps when not in use.

16. Wrap heat tapes on stainless steel components. Elevating the temperature of the LEPRS device permits lower vacuums to routinely form.

17. Connect the heat tapes to the variable voltage supply. The application of a variable voltage to the heat tapes permits a desired temperature to be achieved.



Esther Peramune

From left to right, OAS Laboratory Assistant Emma Kostecki, OAS Research Associate Marvin W. Rowe, and OAS Laboratory Director Shelby Jones in the Analytical Lab. Note that, in the drawing behind us, Emma sketched my eye patch over the wrong eye. In her defense, I do wear the patch over different eyes from time to time.

Analytical Lab audit, at a glance...

Recent clean-up activity in the OAS Analytical Lab included a lab-wide audit of all equipment and materials. Here are a few of the things we found:

The lab has 31 4½-inch CF copper gaskets, 19 6-inch CF copper gaskets, and six 7-inch CF copper gaskets.

The lab has one extra large-chamber, one hand vacuum, and four table-top heat lamps on Shelf A5.

A truly astounding variety of nuts, bolts, washers, and spacers can be found throughout the lab stored in gelato jars, and tackle boxes.

18. Gary Sanford to Train Emma Kostecki on the supercritical fluid (SCF) instrument. The SCF instrument may provide a nondestructive precleaning regime that is routinely needed for virtually all specimens to be radiocarbon dated. After SCF treatment, specimens will be ready to insert into a plasma chamber for carbon extraction for radiocarbon dating.

I finish with a photograph of the #team or #squad—Emma, Shelby, and me, above. Emma is keeping me young by introducing me to and teaching me the fine art of using hashtags. ❖

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Now on Facebook

Lab assistant's 'Day in the Life'

Taking advantage of a warm week at the end of March, OAS Laboratory Assistant Emma Kostecki prepared archaeomagnetic specimens collected from the Acoma Pueblo site for analysis and measurement. Emma's work has been documented in a short film, “Day in the Life of a Lab Analyst,” which was created by her and recently posted on the OAS Facebook page.

In September and November 2024, Laboratory Director Shelby Jones and Kostecki met the OAS field crew at Acoma to collect rock samples from two hearths uncovered during excavation. The samples were brought back to OAS for further investigation.

Over the next few months, with help from grad student Mark Harvey, Emma prepared the samples for analysis, aligning north arrows to each and also leveling the samples themselves.

Prior to determining the samples' magnetism, the rocks had to be fully encased in plaster and transformed into small cubes measuring 1 inch by 1 inch by 1 inch in size.

Each rock sample started out as a large slab with a small plaster cube glued to its top. The samples were cut apart with a special saw and trimmed down to the appropriate size. Once trimmed, the specimens went into molds and wet plaster was added to each.

Magnetic analysis requires the spinning and rotation of samples. Having the samples encased in a plaster cube makes them easier to orient during analysis and also aids in the preservation of the encased archaeomagnetic samples. An archive of 35,000-plus archaeomagnetic samples currently in storage at OAS were prepared in plaster using the same, or very similar, methods and have survived several decades of storage and transport. ❖

Make your mark on NM Archaeology!

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