



New Mexico Archaeology

THE NEWSLETTER OF THE FRIENDS OF ARCHAEOLOGY

MUSEUM OF NEW MEXICO FOUNDATION

WWW.NMARCHAEOLOGY.ORG

FEBRUARY 2023

HISTORY OF THE GALISTEO BASIN

BY ERIC BLINMAN, PH.D.

Just a few minutes south of Santa Fe, the Galisteo Basin is a remarkably well-preserved landscape. Its pristine vistas are beautiful to drive through and are prized as movie locations, but the beauty and calm belie an active and important role in the multi-cultural history of New Mexico. An irony is that the cultural values of the Galisteo Basin have been preserved based on centuries of economic marginality. Its unadulterated existence today is the result of suitability for only ranching, the new economy of movie making, private property rights, and expressions of social responsibility. This mix of values has preserved a deep and remarkable record of human history.

Pre-agricultural adaptations

Although Archaic hunting presence is attested by dart points and rare rock art that may be pre-agricultural, there is no reason to discount a Paleoindian or earlier presence in the Galisteo Basin. In the greater Santa Fe area, Paleoindian points have been found around the margins of the Basin, and >10,000-year-old surfaces can be found less than 1 meter below the modern ground surface. Extinct Ice Age animals also turn up in Northern New Mexico, so finding evidence of early peoples is probably only a matter of time.

See **Galisteo**, on Page 6.



Hikers explore a portion of the Galisteo Basin. Photo by Scott Jaquith.

CHILES & SHERDS LITE

San Cristobal Pueblo and Rock Art Tours set for May 20, 2023

On Saturday, May 20, the Friends of Archaeology are returning to the Galisteo Basin to offer a day of tours of Pueblo San Cristobal and its world class rock art. This is a fund-raiser for the Friends of Archaeology of the Museum of New Mexico Foundation as well as for the research and education programs of the Office of Archaeological Studies.

The village of San Cristobal grew out of a pre-AD 1400 settlement, expanding over the next three centuries to include more than 1,600 rooms arranged around at least 14 plazas. A Spanish mission and convento were established at the Tano-speaking Pueblo in the early seventeenth century, and portions of the mission walls still stand today. A reservoir adjacent to the Pueblo was created

prior to Spanish arrival and was rebuilt at least once after colonization. San Cristobal Pueblo residents participated in the successful Pueblo Revolt of 1680, but by the time of the Spanish Reconquest in 1692–1694, the village was abandoned. During the period of the revolt, San Cristobal residents are credited with contributing to the construction of a new pueblo at the site of the Palace of the Governors in Santa Fe and with establishing other late seventeenth century villages north of Santa Fe.

In addition to building one of the most dramatic and best-defined of the Galisteo Basin Pueblos, village residents took advantage of the local geology to create one of the most

See **Chiles**, on Page 7.

MOLLIE S. TOLL: 1949-2023

OAS MOURNS TRAGIC LOSS

MOLLIE TOLL'S COMMITMENT TO EXCELLENCE LEAVES LASTING IMPRESSION ON FAMILY, COLLEAGUES, AND NM STUDENTS

BY ERIC BLINMAN

The Toll family, Office of Archaeological Studies staff and volunteers, and the education community of Northern New Mexico have suffered a tragic loss in the death of Mollie S. Toll, retired OAS botanist and educator. She died of complications from acute leukemia with her family by her side.

For all of you who knew and worked with Mollie, we can only hope to contribute as much to our communities going forward as she contributed to our community in the past. She will be sorely missed.

Mollie's involvement in archaeology began as an undergraduate while attending the University of Chicago, including a field school in Winchester, England, and a season with Dr. Cynthia Irwin-William's Anasazi Origins project, which brought her to New Mexico. On the path to an MA in Anthropology from Loyola University, she attended the University of Arizona field school at Grasshopper Pueblo.

Mollie's fieldwork through the early 1970s returned to New Mexico, and she worked in Dr. Vorsila Bohrer's ethnobotany laboratory at Eastern New Mexico University, contributing to both the Salmon Ruins and Puerco River Valley projects.

She received her MA in 1975 and began work with the National Park Service's Chaco Center. She enrolled in the University of New Mexico Biology Department, receiving an MS in plant ecology while still continuing her work as an ethnobotanist for the Chaco Center, the Castetter Laboratory of UNM, and a number of other contract archaeology programs.

Her husband, Wolky Toll, had joined OAS in 1987 to direct the La Plata Archaeological Project, the largest



We will try to live up to Mollie Toll's aspirations for the OAS education program in all of its richness and diversity.

project that OAS had ever undertaken. Mollie joined him in 1991 as director of the OAS Ethnobotany Laboratory, a position in which she continued to

serve until her retirement in 2022. She and her botanist collaborator, Pam McBride, managed both the move of the laboratory to the Center for New Mexico Archaeology and the planning and planting of the teaching gardens around CNMA.

As a parent of sons Nick and Spencer, Mollie was aware of the strengths and weaknesses of the public education system in Santa Fe. She took a leave of absence from OAS to serve as a science coach for the Santa Fe and Española public schools, obtained her teaching credential, and even stepped in as a classroom teacher when needed. She worked to build gardens at several schools, and she was recognized as Science Teacher of the Year in 2013 by the New Mexico Science Teachers Association.

After returning to OAS part-time in 2015, Mollie mixed ethnobotanical laboratory work with the role of directing the curriculum portion of OAS education outreach. Her focus was creating resources for using archaeology to teach critical thinking skills, building on the Bureau of Land Management's Project Archaeology curriculum offerings. She sought to use the exotic and rich historical content of archaeology as a vehicle to capture student and teacher interest, guiding the OAS program in support of literacy and broader human ecology understandings.

The final days of Mollie's illness prevented her from participating in a scheduled teacher training, and we thank Mary Howard and Mary Brown, retired teachers and Mollie's long-time friends and colleagues, for stepping forward with substantial support for the trainings.

We will try to live up to Mollie's aspirations for the OAS education program in all of its richness and diversity. ❖

Office of Archaeological Studies

The Office of Archaeological Studies was the first museum program of its kind in the nation. OAS staff conducts international field and laboratory research, offers educational opportunities for school groups and civic organizations, and works 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".

Mission Statement

The mission of 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

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**NOTHING USEFUL
EVER GOES TO WASTE**



Isaac Coan and OAS student intern Neena Vigil explore the use of turkey feathers in the creation of traditional Native dress. Here, Isaac explains that the feathers, still attached to the wing portion of the bird, are often used in the creation of headdresses and bonnets. Photos by Melissa Martinez

OAS IN SPOTLIGHT AGAIN

TURKEY FEATHER, RABBIT SHAWLS TO BE FEATURED IN MOVIE



Mary Weahkee sorts feathers used to make a turkey feather shawl that will be worn in the upcoming movie *Here*.

BY MELISSA MARTINEZ

Once again, the shining talents of the employees at the New Mexico Office of Archaeological Studies, and Friends of Archaeology volunteers, will be coming to a silver screen near you, this time in a whole new production brought to you by the likes of Tom Hanks and Robert Zemeckis.

Mary Weahkee, Mary's grandchildren, and a host of OAS employees, interns, and volunteers have been hard at work for the past several weeks creating a 6 x 2 foot turkey feather shawl.

An additional 8 x 2 foot rabbit fur blanket was constructed by Eric Blinman

OAS RABBIT FUR AND TURKEY FEATHER SHAWLS TO APPEAR IN THE FILM "HERE."

and a large team of friends and neighbors, many of them from the Eldorado area.

The pieces will appear as part of traditional costumes in an upcoming film titled *Here*, starring Tom Hanks, Kelly Ripley, Robin Wright, and Paul Bettany. Robert Zemeckis, best known for his work on the *Back to the Future* trilogy, *Forest Gump*, and *Contact* directs.

Currently in production in the United Kingdom, the film is based on a graphic

novel written and illustrated by Richard McGuire. The work was published in 2014 and features the comings and goings of people throughout history, in a single location, over thousands of years, from 500 BCE to 2033 CE.

Staff and volunteers were given three weeks to complete the entire task. The turkey feather shawl required the creation of several hundred feet of yucca cordage, which Mary Weahkee and Eric Blinman wound, by hand, over the course of a few days.

"Our legs looked like hamburger meat," Mary laughed.

See **Spotlight**, on Page 5.

SPOTLIGHT

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Working off site, Eric wound more than 300 feet of yucca warp and weft cord.

"My fingers are almost too swollen (and painful) to type," he wrote in a recent e-mail.

Eric said the pelts of a least 28 rabbits had to be cut into narrow strips for the production of one shawl. The turkey feather shawl required the plucking of a large number of turkeys. Thousands of turkey feathers were used to create the other.

"Only one person can wind feathers at a time," Mary said. "I was only able to do maybe 10 to 15 feet a day. I was up until 4 or 5 o'clock in the morning winding cord, winding feathers."

Custom-made wooden frame looms were created for each piece and weaving began. The two shawls were completed in early March. Soon after, they were carefully packaged and shipped. The shawls arrived in the UK in near-record time. But not before several OAS staff and volunteers took a little time out to model these stellar creations.

When filming comes to end, the shawls will be returned to OAS, where they will be used in educational outreach programs.

Eric extends his personal thanks to Eldorado-area volunteers Andra, Paul, Susan, Denise, and Cathy. CNMA volunteers and staff who worked on the project included Isaac Coan, Neena Vigil, Ellen, and Mary B. ❖



Mary Weahkee, above, shows off the completed turkey feather shawl. Below, from left, OAS employee Isaac Coan in the rabbit shawl; OAS volunteer Rob Turner in the feather shawl; OAS intern Neena Vigil in the rabbit fur shawl; and OAS archaeomagnetic laboratory technician Jeff Cox in the feather shawl. Photos by Melissa Martinez.



GALISTEO

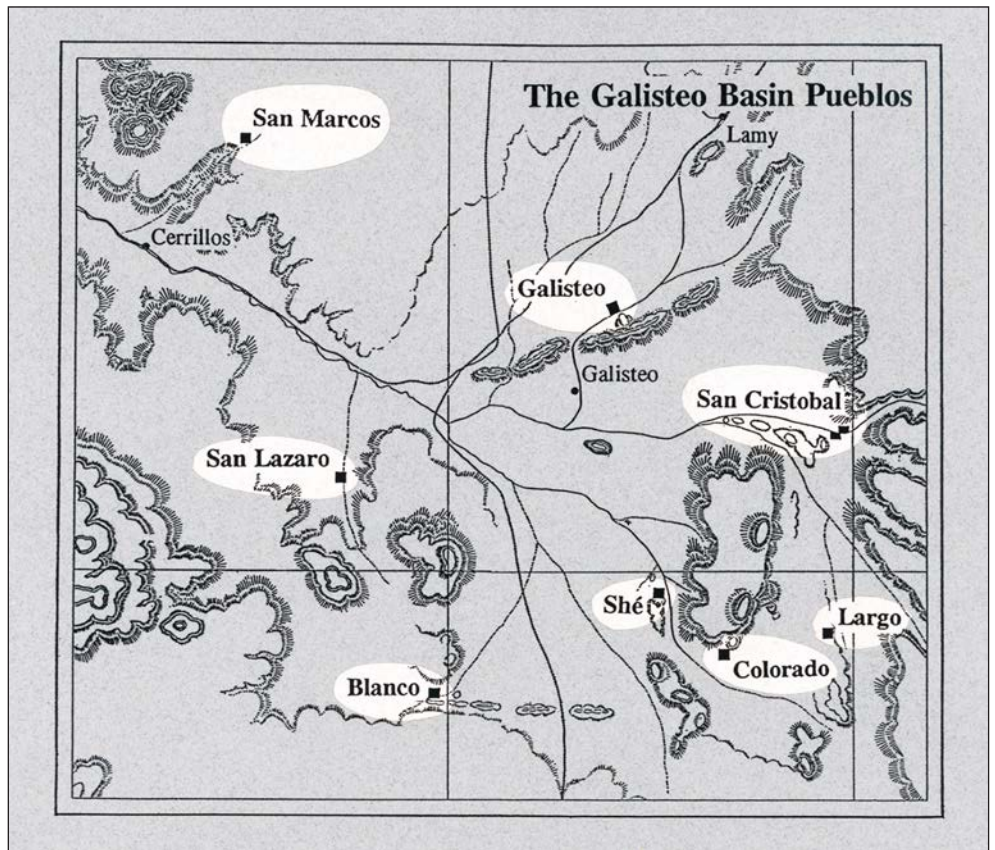
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Agricultural adaptations

Today's climate will support only limited dry farming in the Galisteo Basin. Maize was the economic foundation of Native communities for the past >1,500 years, and without a conducive agricultural climate, the Basin had been a hunting and foraging preserve for adjacent peoples in the Rio Grande and Pecos valleys. There are small pockets of successful corn farming in the historic occupation of the Basin, remarkably coincident with pockets of ancestral Native settlements. However, successful Puebloan communities across the whole of the Basin have depended on climate change literally flipping a switch to allow periods of successful agriculture.

If we use farmers as a measure of climate change (circular, but true), the Basin as a whole was opened to maize agriculture around AD 1180. That positive situation persisted until sometime around AD 1500. Independent climate evidence comes from multivariate analyses of tree-growth patterns across the inland Southwest. A "normal" climate that had favored maize farming in the greater Four Corners region gave way to a "chaotic" tree growth pattern that prevailed in AD 1239–1489 analysis periods. A prolonged cold period with an onset in the late twelfth century appears in records from the Rocky Mountains and San Francisco Peaks, suggesting that our local tree-growth indicators were part of a continent-wide climate pattern. The northern Rio Grande region was stable during the chaotic tree-growth pattern, and the sudden, large-scale evidence for agriculturalists fits that timing.

The "Chaco drought" that lasted from AD 1130–1180 impacted all of the Southwest (including Mimbres and the northern Rio Grande). Tewa Basin farmers took advantage of greater rainfall on the northern Pajarito Plateau (moving up from the valley bottom), while refugees from San Juan Basin communities were coming into the Santo Domingo Basin and up onto the southern Pajarito Plateau. These San Juan Basin refugees crossed the Rio Grande shortly before AD 1200 and joined others who were homesteading the Galisteo Basin from other directions. Within the early decades of the thirteenth century, homesteaders appear to have entered the Basin from the Pecos Valley, the Santa Fe area, from the south and southwest, as well as from the west.



N. C. Nelson's map of the Galisteo Basin Pueblos.

FOA NEEDS MORE BOARD MEMBERS!

The Friends of Archaeology Board desperately needs your help to continue providing special events and activities like Chiles & Sherds, educational hikes, and our brown bag lecture series. If events like these are to continue, WE NEED YOUR HELP!!! Board membership has dwindled over time, and many of our current members have served more than 20 years. Visit our FOA board sign-up table at Chiles & Sherds on May 20 or send an e-mail to Jerry Cooke at cookenn@q.com.

steo Basin from other directions. Within the early decades of the thirteenth century, homesteaders appear to have entered the Basin from the Pecos Valley, the Santa Fe area, from the south and southwest, as well as from the west.

Dr. James Snead investigated this early period in the northern Galisteo Basin

as part of his Tano Origins Project. He documented a pattern of late thirteenth through fourteenth century settlements that ranged from just a few families to clusters of families. A common feature was that many of the sites were burned, far more than could be explained by anything other than low level conflict within at least the northern Basin. The relatively large fourteenth century settlement of Las Madres was also burned sometime after the 1380s, setting the stage for the formation of adjacent Galisteo Pueblo at the beginning of the fifteenth century.

The Tano Origins pattern of conflict appears to have catalyzed the formation of "super pueblos" at about AD 1400. These eight large villages of hundreds to thousands of rooms are the focal points of our modern perception of the Galisteo Basin. Each appears to have one or more smaller earlier sites within their vicinities, and each appears to have taken advantage of springs or creeks as reliable water sources. Nels Nelson systematically investigated seven of these sites in 1912 and reported his findings in 1914. Later but smaller

See **Basin**, on Page 7.

BASIN

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investigations at some sites have improved our understanding of chronologies and interactions, but most of what we know comes from Nelson's work.

These Classic Period Pueblos of the Galisteo Basin are associated with a florescence of religious expression that is usually attributed to the adoption of Katsina ceremonialism. A polychrome aesthetic of Rio Grande Glaze Ware replaces the black-on-white ceramic traditions of the preceding centuries. Vessels consist of black lead-based glaze lines and outlines on red, yellow, and orange background colors. Initially geometric, by the end of the fifteenth century the designs include stylized birds and motifs associated with Katsina religion. Rock art also becomes an abundant medium for expression, and Galisteo Basin sites are world famous for the abundance and variety of their images.

The climate change that had allowed farming in the Galisteo Basin began to reverse itself around AD 1500. The four southern pueblos appear to have been abandoned by the time Coronado's men first traveled through the Basin in 1540. Archaeological population estimates suggest that the first half of the sixteenth century witnessed the death of eight-out-of-ten Native residents of northern New Mexico (probably due to disease but complicated by the economic impact of the climate change).

The very early seventeenth century Spanish Colonization efforts included the establishment of missions or *visitas* at the four northern then-inhabited Galisteo Basin pueblos. San Marcos Pueblo was characterized by the Spanish as Keres-speaking, while San Lazaro, Galisteo, and San Cristobal pueblos were described as Tano-speaking (southern Tewa-speaking). The Spanish appropriated the landscape and labor of the Galisteo Basin pueblos for ranching and wheat in service to both the religious and secular colonists. Tribute was also demanded in the form of piñon and woolen textiles. Secular and religious authorities were often in



Portions of the Galisteo Basin are often used as movie sets.

conflict over access to Native labor and resources, and oppressive treatment (economic and religious persecution) set the stage for the Pueblo Revolt.

Galisteo Basin residents participated in the 1680 Pueblo Revolt, some moved to Santa Fe, and by the time of the Reconquest the Galisteo Basin Pueblos were abandoned by Native populations. Post-Reconquest, a "new" Native settlement of Tano-speakers was established at Galisteo Pueblo, but the remainder of the Galisteo Basin became part of the sustaining area for the Spanish Colonial authorities of Santa Fe.

For more information on the Galisteo Basin and its history:

Kessell, John L.
1979 *Kiva, Cross, and Crown: The Pecos Indians and New Mexico 1540-1840*. National Park Service, US Department of the Interior, Washington DC. (available in reprinted editions)

Lippard, Lucy R.
2010 *Down Country: The Tano of the Galisteo Basin, 1250-1782*. Museum of New Mexico Press, Santa Fe.

Mednick, Christina Singleton
1996 *San Cristóbal: Voices and Visions of the Galisteo Basin*. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

Nelson, N. C.
1914 *Pueblo Ruins of the Galisteo Basin, New Mexico*. Anthropological Papers of the American Museum of Natural History, Vol. XV, Part 1. ❖

CHILES

Continued from Page 1.

remarkable rock art sites in the Southwest. Literally thousands of petroglyph images were carved into weathered sandstone surfaces overlooking the pueblo, and in a few protected places, multi-colored pictographs have survived. Although some images are believed to predate the fifteenth century, most were created within the AD 1400–1700 period.

Event logistics

Tours of no more than 16 participants will be scheduled at 45 minute intervals throughout the day, beginning at 8:15 a.m. Cost will be \$95 per person for MNMF members and \$105 per person for non-members. Any optional bag lunch selections will be additional. Sign-ups and bag lunch orders will be through Eventbrite, (at <https://chiles-and-sherds-2023.eventbrite.com>) with tour times available on a first-come, first-served basis. Waivers and maps will be provided as part of the Eventbrite sign-up process.

The hike through the rock art is strenuous, equivalent to climbing six flights of stairs, and an optional hike to the "watch tower" overlook is equivalent to another 12 flights of stairs. All hiking segments will be over uneven ground, with all of the normal risks of encountering dangerous plants and animals in undeveloped back-country landscapes.

Participants should check in at least 15 minutes before their scheduled tour time and will be asked to sign a San Cristobal Ranch waiver as a condition of participation. Participants should dress for the weather of the day, with hiking boots and long pants. All participants should bring snacks and at least 1 liter of water. There will be water-bottle refill opportunities along the trails. The full tour of the rock art, pueblo, and optional "watch tower" overlook can take as long as three hours.

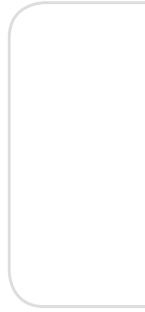
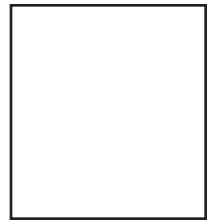
Unlike past Chiles and Sherds events, this event will include a sack lunch (Hikers can choose from gluten-free, vegetarian, and meat-eater options.) and lunch-time beverages. Several shade canopies will be set up, but there will be NO big tent. Portable toilets will be provided. ❖



MUSEUM OF NEW MEXICO FOUNDATION

P.O. Box 2065

Santa Fe, NM 87504-2065



BROWN BAG LECTURE

MAY 10, 2023: ROADSIDE GEOLOGY AND GEOGRAPHY AROUND SANTA FE

Have you ever wondered why northern New Mexico has such an amazing and varied landscape, from red mountains to black canyons? It can largely be attributed to multiple geological processes from the past and present; the creation of rocks from volcanoes and sediments that became structurally uplifted and warped to only be eroded and washed away to lower elevations.

Laura Reich, geoscientist and OAS volunteer, will take us on a virtual tour of the geology of our local region, what you see from your car window every day while driving around town. Her 45-minute lecture, followed by a special Q&A session, will lead us through over 1.5 billion years of Earth's history, from the PreCambrian bedrock of the Sangre de Cristo Mountains to the more recent Rio Grande Rift and Cerros Del Rio Volcanic Field.

This talk, which will be available both online and in-person, will be held in the OAS library at the Center for New Mexico Archaeology. Talks are informal (and you can bring your bag lunch). Seating is available on a first-come, first-served basis. This talk begins at noon on Wednesday, May 10, 2023. The lecture will also be provided in an online format, either on the Friends of Archaeology Facebook page or the FOA Youtube channel. Please look for special announcements regarding this and other talks on the FOA Facebook page or on the New Mexico Office of Archaeological Studies website.

OAS staff members are encouraged to reprise professional talks at our bag lunch events. We also encourage visiting scholars to update us on their research. Please visit www.nmarchaeology.org to catch any additional spur-of-the-moment talks. ❖

MAKE YOUR MARK ON NM ARCHAEOLOGY!

Please consider supporting the Office of Archaeological Studies by making a gift to education or research by check, credit, stock, IRA rollover, or planned gift. Your tax-deductible donation through the Museum of New Mexico Foundation will have a lasting impact. One hundred percent of your donation will be directed to the OAS. No administrative fees are charged. Give online: museumfoundation.org/give/. For questions, or to donate, contact Lauren Paige, at (505) 982-2282, or via e-mail at lauren@museumfoundation.org.

