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# ARCHAEOLOGY SOUTHWEST

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Lewis Borck and J. Michael Bremer

### **ONLINE EXCLUSIVES:**

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#### www.archaeologysouthwest.org/asw29-1

Cover image: Wall mural with plant/flower motif on the interior of a Gallina unit house. This image is one of many Frank Hibben included in his 1939 dissertation on Gallina archaeology (Harvard University). Image courtesy of the Hibben Estate and the Maxwell Museum of Anthropology, University of New Mexico.



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### Ordinary, yet Distinct: The Allure of Gallina

#### J. MICHAEL BREMER SANTA FE NATIONAL FOREST

*The heartland of the Gallina region* includes some of the least known and most rugged backcountry in northern New Mexico (see map on page 4). Its high-elevation landscapes encompass inaccessible mesas, finger ridges, hogbacks, sheer cliffs, and deep canyons.

From the early 1100s to the late 1200s, this forbidding landscape was home to a population of Ancestral Pueblo people. Although these inhabitants left dense and obvious evidence of settlement, archaeologists are still—even after almost a century of research—trying to understand the origin and demise of those populations, as well as changes that occurred over the nearly 200 years they lived in the region.

Further complicating such study is the apparent lack of continuity between the ancient people of the Gallina region (whom, throughout this issue, and for simplicity's sake, we refer to as "the Gallina"; see page 5) and modern Pueblo populations in the Rio Grande valley. At present, no Pueblo communities claim ancestral ties to the people who lived in Gallina country some 900 years ago (see pages 24–25).

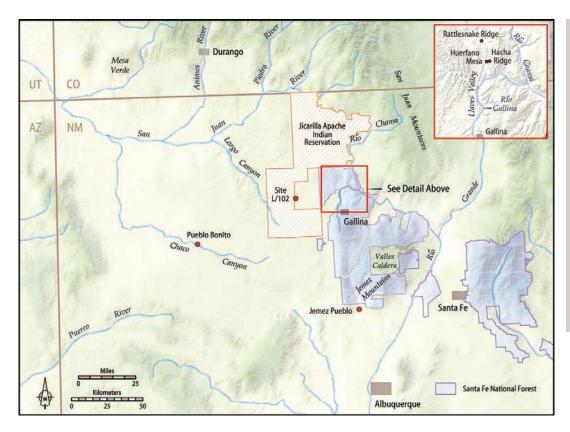
This relative lack of understanding, compared to what we know about other areas of the ancient Pueblo world, has contributed to the region's allure. Into this vacuum, many researchers have wandered and wondered about lifeways and cultural development in the Gallina region. Like Mesa Verde and Chaco Canyon, the Gallina region presents significant challenges to archaeological interpretation. Much of what draws us to study lesser-known areas and past populations are unanswered questions—a sense of the mysterious—about how they came to be and how they interacted with the world around them.

Some of the allure of Gallina results from early work conducted in the region. Paleontologist Edward Drinker Cope (1840–1897), a member of the Wheeler Survey, was one of the first to record remains in the Gallina region. (The Wheeler

Archaeologist Frank Hibben contemplates a Gallina tower. C. W. Ceram, author of popular archaeology books in the mid-twentieth century, titled his chapter on Hibben's Gallina research "The Towers of Silence." Authors in this issue are among those who are helping to break that silence and give voice to the Gallina. IMAGE COURTESY OF THE HIBBEN ESTATE AND THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO Survey was actually a series of surveys that took place between 1869 and 1879. Together with two other, contemporaneous expeditions, it became the United States Geological Survey in 1879). The local geology and the sheer beauty of what Cope saw astounded him. The topography was like nothing he—or the outside world—had ever seen. His reports from the west took readers on an exotic journey.

Renowned New Mexico archaeologist Frank Hibben (1910– 2002), who worked in the Gallina region from the 1930s into the 1950s, crafted an irresistible image of its ancient inhabitants.





Major places mentioned in this issue. Note the region between Chaco Canvon and the Gallina heartland: this then-vacant area was most likely a true no-man's land, a product of societal tension between residents of Chaco Canyon and those of the Gallina region during the limited period of their contemporaneity (early to mid-1100s). In general, no-man's lands are areas left unpopulated because of conflict between groups on either side, but they can also represent resource buffer zones between groups. To learn more about this no-man's land, visit archaeologysouthwest.org/asw29-1. MAP: CATHERINE GILMAN

remarkable in such a scenically stunning yet treacherously rugged place. Perhaps the relative impenetrability of the

His depiction of the Gallina in a 1944 article "The Mystery of the Stone Towers," published in the widely circulated *Saturday Evening Post*, made them sound like fascinating and terrifying people, able to live in a desolate environment by taking command of difficult country and crafting monumental architecture with their bare hands. Hibben's occasionally lurid yet captivating prose included statements such as "...this was a story of violence and bloodshed without a beginning and without an end," referring to skeletal evidence of fatal brutality and copious but ambiguous evidence of burned structures (see pages 10–11).

Our understanding of ancient lives in the Gallina highlands is limited primarily by the lack of comparative work within the region. Even so, what work has been done has fueled Southwestern archaeologists' curiosity about the Gallina region. The conundrum of Gallina led some past researchers to "strange" and "attractive" ideas about the area ("cultural backwater") and its people ("aberrant," "war-like") that have been perpetuated, but these tropes do not hold up to scientific scrutiny.

So, what is the allure of Gallina to those of us who seek to understand it today? First, Gallina sites are not consistent with archaeologists' long-held ideas about cultural ties and transitions between the Mesa Verde and Northern Rio Grande regions. If anything, the Gallina region appears to have been "in the way" of the orderly flow of culture process as we currently understand it. The distribution of sites across the Gallina landscape—as well as that distribution's conformance with local topography—seems region explains its apparent cultural isolation.

Moreover, Gallina does not have the *feel* of other regions in the northern Southwest, though by all indications, its inhabitants were an Ancestral Pueblo population. As my co-editor Lewis Borck once noted, Gallina's contradiction is that it is "ordinary, yet distinct." Gallina material culture—including their architecture and objects—seems bereft of the fine art works we associate with other Ancestral Pueblo communities. And yet, the locations of Gallina settlements may signify a different aesthetic, one that may only be appreciated after spending time in the area.

Of all the cultural phenomena in the Southwest, patterns in the Gallina area continue to confound archaeological understanding of what happened there, how its people lived, and the nature of their relationships to other parts of the Pueblo world in the centuries just before Europeans arrived. Ultimately, our present lack of understanding may not reflect a lack of study, but rather a pattern of inconsistent and incomplete work. Fortunately, we have seen a steady interest in the area since the 1980s, including a recent surge in research addressing many of the topics discussed in this issue.

#### **ONLINE EXCLUSIVE**

For Paul Reed's synthetic view of "Gallina: Between Pueblo Worlds," visit archaeologysouthwest.org/asw29-1

### Who or What is Gallina?

Gallina (guy-ee-nuh) means "chicken" (or "hen") in Spanish. It is also the name of a town, the name of a river near that town, and the name we use for a highland region about 90 miles north of Albuquerque through which that river runs. In this issue, we also discuss the Gallina as a people.

This is convenient shorthand: it is easier than continually writing about "the people of the Gallina region" or "the people of the Gallina Phase." We should explain, however, that for many archaeologists, there is a significant difference between talking about a phase or an archaeological culture as a collective of individuals and groups, and using such terms to imply that a culture or group views itself as a separate people. In other words, the distinction is anthropologically meaningful, but perhaps not practically so for nonacademic writing.

Traditionally, archaeologists have a suite of terms they use to describe and categorize the patterns they document. Researchers intend such terms to recognize the difference between the living culture of a people and the archaeological cultures research defines. Here are some of those terms and how archaeologists working in the U.S. Southwest have used them:

- **Phase** (for example, Gallina Phase): An archaeological unit defined by artifacts and traits that separate it from other archaeological units. Today, this is often used to describe an interval of time within a spatially discrete region. Archaeologists have also used it to delineate what they see as a distinct group of people.
- Tradition (for example, Ancestral Pueblo Tradition): The older definition of this encompassed a persistence of attributes, artifact types, or technologies in a given area over a given time. Emphasis was on time, not space. Today, we think of traditions as

A.D. 1125 4.0.1300 P.D. 1100 THECLOCK 1050 Gallina A.D. 200 A.D. 950 Arboles PIL Piedra Los Pinos 11148 A.D. 850 Rosa Sambrite 4.0.200 A.D. 500 TIMELINE OF PHASES

Lifeways in the Upper San Juan River region changed in archaeologically detectable ways between A.D. 200 and 1300. This timepiece can be read like a wristwatch, showing the relative duration of each phase. We start the clock with the beginning of the Los Pinos Phase at A.D. 200, or at 2:00 on the watch face. The Los Pinos culture ends around A.D. 500 (or 5:00) and the next phase begins. See page 6 for more. GRAPHIC: CATHERINE GILMAN

combinations of common technologies and sociocultural characteristics through time and space. So, in this issue, we are writing about the Gallina Phase of the Ancestral Pueblo Tradition.

• **Branch:** This older, but still occasionally used term is essentially a synonym for phase. It denoted a particular period within a larger temporal tradition (for example, the Chacoan Branch of the Ancestral Pueblo Tradition).

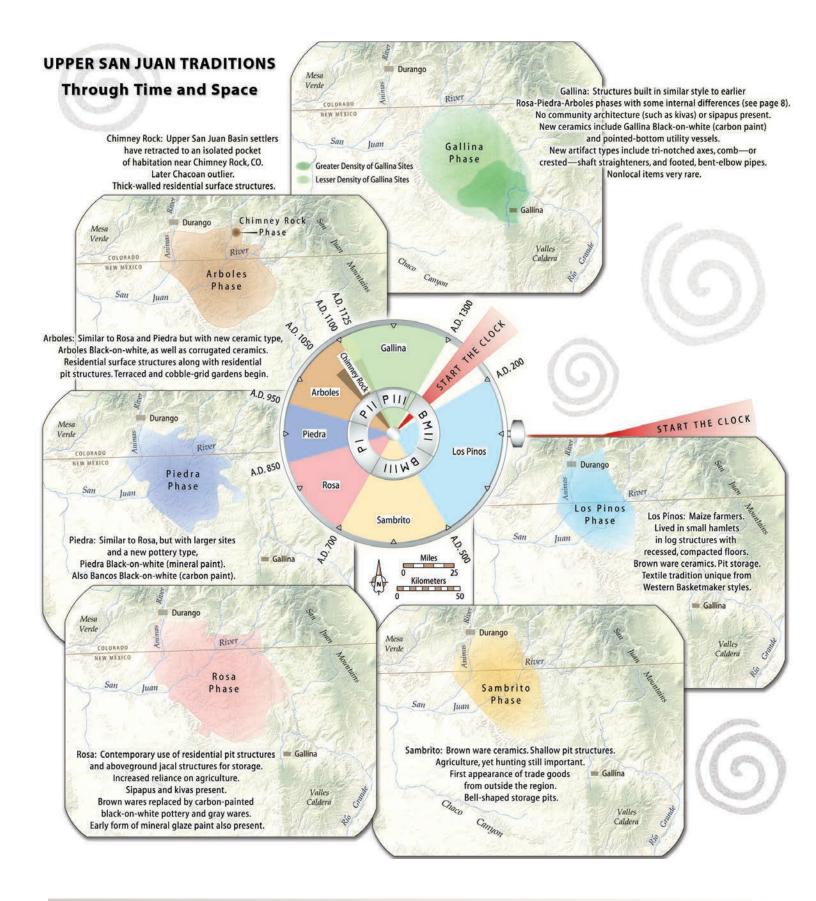
In academic writing, archaeologists generally refer to the Gallina as a phase (and sometimes a branch). Very early on (for reasons that can be understood by delving into the reading list included with online highlights for this issue), the Gallina were called "Largo," and subsequently "Largo-Gallina." Today, almost everyone uses "Gallina."

Depending on the researcher, though, "Gallina Phase" can denote the Gallina as a group of people distinct from their neighbors, or it can refer to a separate suite of material artifacts used by an otherwise similar people. Oftentimes, we use the material record to attempt to understand how the Gallina—the people living in the Gallina region—

would have thought about themselves. Because of this, many authors in this issue consider the Gallina to be the former: a group who considered themselves a distinct people—even though they all may not have come from the same place or even spoken the same language. An analogy might be groups such as the Amish, who consider themselves to be Amish, yet have ethnic connections to various European regions and countries.

> Other researchers see the Gallina Phase as the latter: a distinct set of objects used by a people who were not very

> > different from their neighbors. Neither view is an incorrect means of interpreting archaeological data—they just show the different ways that we do. —Lewis Borck



In the Pueblo world, as in many societies across the world, time is not linear, but cyclical. The structure of this visualization seeks to honor that, even as it conveys the linear ways archaeologists document change. The inner ring on the timepiece, "BM II" (Basketmaker II) to "P III" (Pueblo III), reflects the Pecos Classification. Visit archaeologysouthwest.org/asw29-1 to learn more. GRAPHIC: CATHERINE GILMAN

### An Introduction to Gallina Archaeology

#### LEWIS BORCK, ARCHAEOLOGY SOUTHWEST AND UNIVERSITY OF ARIZONA J. MICHAEL BREMER, SANTA FE NATIONAL FOREST

Although there is evidence that groups of seasonal foragers were in the Gallina region (see inset map on page 4) during the Archaic period (5000 B.C.–A.D. 1), much of the area appears "archaeologically empty" until the people we call the Gallina (see page 5) settled there in the A.D. 1100s. At first, researchers tended to interpret the region's settlement as immigration by groups from outside the Southwest. A wandering Plains tribe? Chacoans? Woodland peoples from eastern Colorado and western Nebraska, or from the Missouri valley? People from the Great Basin and Fremont areas? A mixing of Mogollon and Ancestral Pueblo groups? Wandering Towa-speakers drifting away from Mesa Verde toward their eventual homeland in the Jemez Mountains? All of these have been argued, yet subsequent research has shown that the Gallina region's inhabitants were definitely Ancestral Pueblo people.

Indeed, there is compelling evidence that the people who developed the Gallina archaeological culture were at the end of a long trajectory of populations who lived along the upper reaches of the San Juan River and a smaller tributary called the Piedra (see map on page 4). It is possible, though, that a portion of them was from farther afield (see pages 22–24).

#### Architecture and Settlement

Archaeologists have linked the Gallina to these local forebears in part because Gallina architecture resembles earlier structures in neighboring regions. Whereas other Pueblo groups made the transition from living in pithouses to dwelling in aboveground structures and pueblos around A.D. 900, the Gallina continued to build and dwell in pithouses until they left the region at around 1300. Often, residents within Gallina communities lived within two types of structures—a pithouse and a single-family surface house (called a unit house) that were usually located near each other. This suggests the choice to build above or below ground is not simply one of soil depth or environmental considerations. The unit houses were essentially slightly larger, square, aboveground versions of the circular pithouses (see page 8). In general, the internal layout of Gallina habitation structures, whether above- or belowground, is remarkably standardized.

In other parts of the ancient Pueblo world, as people stopped using the pit structure form for their habitation spaces, they began to (or continued to) use it specifically for ceremonial spaces (kivas)—but that never happened in the Gallina area. Archaeologists have not found kivas or typical internal kiva



The Rio Gallina was one of several watercourses that sustained the region's twelfth- and thirteenth-century inhabitants, whom archaeologists named after the river. The Gallina heartland comprises high-elevation landscapes with inaccessible mesas, finger ridges, razorbacks, sheer cliffs, and deep canyons. PHOTO: LEWIS BORCK

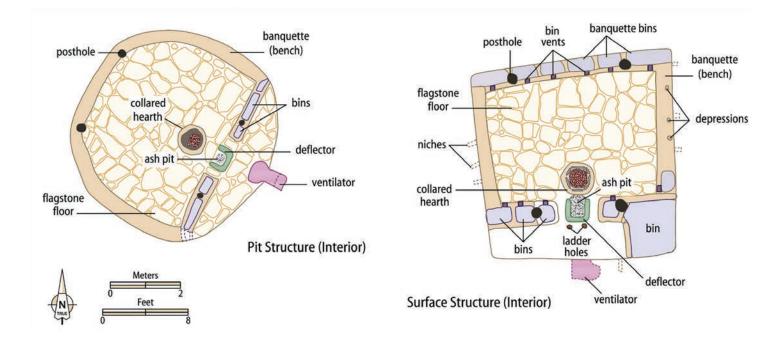
features in the Gallina region. (It is worth noting, however, that esteemed archaeologist and teacher Florence Hawley Ellis [1906–1991] uncovered a structure she argued was used strictly as a kiva.) Based on the presence of ceremonial features, such as murals, within their houses (which Ellis also recognized), it is likely that the Gallina maintained an earlier practice of using their living quarters as ceremonial structures. This suggests that, for Gallina residents, the sacred and the secular were not separate realms (see pages 15–18).

When they did create aboveground structures, the Gallina almost never built pueblos (apartment-like blocks with shared walls among rooms). In rare cases, Gallina sites *resemble* pueblos, in the sense that people constructed adjacent or bonded series of unit houses appearing to be room blocks, but with each room retaining the internal architectural layout common in the region. Cliff houses—usually with very few rooms—are the only apartment-like habitation structures. The Gallina did not build such cliff houses until the final decades of their time in the region, though. Gallina villages sprawled across a landform. They did not have the formal layout of contemporaneous villages in neighboring regions. Archaeologists have often documented stockades surrounding individual houses, both the surface unit houses and the pithouses (see page 16).

Large, collapsed towers are common in villages throughout the Gallina region (see map on page 13). These may have been part of a signaling system (see pages 12–13), but it is not clear at present whether such a system was defensive in nature, or for sharing other forms of information, or both—or neither!

#### Pottery and Foodways

Gallina pottery-making technology and design styles are consistent with Ancestral Pueblo ceramic traditions. What is unusual—given what we know about pottery in the Southwest at the time—is that Gallina pottery remained unchanged across a fair amount of time and space. This suggests that there were cultural rules enforcing stability within stylistic expression. (Although innovation and artistic beauty seem to go hand in



Comparison of composite interior floor plans of a Gallina pit structure and a unit, or surface, structure. The arrangement of interior features is the same despite outward differences in form and shape: compare the positions of the ventilator, deflector, hearth, and flanking "wing-walls" with inset bins, as well as the presence of a bench/banquette around the perimeter of the floor space. The consistency of this pattern across the region suggests that Gallina people had a "mental map" of how to organize their living space, and that this arrangement was an important part of who they were. Pit and surface structures frequently occur near each other and appear to be contemporaneous.

The roofs of pit and surface structures were also similar. The pithouse superstructure/surface structure roof was constructed with wooden cribbing that rose from the ground level (pithouse) or the top of the wall (surface structure). Poles set within the floor of the house (both kinds of structure) supported this cribbed roof. People covered the cribbing with adobe-like mud. Builders usually made the walls of unit structures from double-coursed large rocks with interior fill and adobe-like mud for mortar. In some cases, they used wood reinforcing (like rebar) in the walls. GRAPHIC: CATHERINE GILMAN, ADAPTED FROM PLANS PROVIDED BY ERIK SIMPSON (SEE ARCHAEOLOGYSOUTHWEST.ORG/ASW29-1 FOR REFERENCE).

Tri-notched (or pole-notched) axes are also characteristic of the Gallina. As with the pointed-bottom pot, however, their significance is not about their presence, but about their ubiquity. Lewis Borck and Melanie Medeiros are currently examining possible links between the Gallina pole-notched axe and the basal-notched axe used by people living in southwestern Utah and northwestern Arizona. PHOTO: LEWIS BORCK

hand in our modern minds, this does not have to be true. In the early decades of Gallina research, Vera Koehring noted that strict cultural rules do not have to negate artistic expression when she wrote, "...if a mind appreciates structural traditions, these austere bowls *were* and *are* beautiful.") In addition to decorated pottery, the Gallina ceramic assemblage includes fillet rims, a few corrugated vessels, white or gray pots decorated with black organic paint, and ubiquitous conical-bottom utility vessels. The latter are another hallmark of the Gallina.

Gallina people used their pottery to cook and store food, of course. Although they were sedentary farmers who tended terraced fields and stored a lot of corn, they did not seem to rely as heavily on jackrabbits and cottontails as neighboring farming populations did. Instead, the Gallina region's residents consumed a greater amount of large game, perhaps with an eye toward their distant ancestors' diets. This is not necessarily surprising, as evidence from other times and places around the world indicates that people often use pointed-bottom vessels to cook meat (see page 15). the middle San Juan Basin (see map on page 4).

Furthermore, many excavated sites in the Gallina area also contained the skeletal remains of individuals who had met a violent end. This was typically the result of acute cranial trauma, though archaeologists have also documented puncture wounds (projectile points embedded in bodies) and burning. Writing in 1949, Thomas Bahti even described a fossilized shark's tooth—apparently used as a projectile point—embedded in one victim's right hip. Based on a higher-than-normal proportion of males in the burial population, it is also likely that Gallina women were taken away as captives or slaves. Tree-ring dates from lumber used in structures near or bearing human remains indicate that most of the skeletal evidence associated

#### Violence and Its Causes

Many researchers have characterized the Gallina highlands as an area of extreme violence. Several patterns support an impression of a place of heightened tension: a lack of imported goods, especially pottery; the defensive locations of sites on steep ridgebacks, inaccessible mesas, and on almost any raised geographic feature; an apparent use of signaling or information exchange networks; and the presence of "no-man's lands" between Gallina and areas of



Artist's reconstruction of a unit house excavated by Florence Hawley Ellis and crew at Rattlesnake Ridge. Compare this with the composite floor plan of a unit house on page 8 by orienting your view from the ladder holes. The flagstone floor paving and the banquette, or bench, are typical of Gallina construction, as are the bins at either side of the ladder's footing. Archaeologists see some continuities between Gallina architecture and structures built by people in the earlier Rosa phase (see page 22). ILLUSTRATION: JOHN S. HAYDEN, SEE ARCHAEOLOGYSOUTHWEST.ORG/ASW29-1 FOR REFERENCE. COLORIZED AND CONJECTURAL MURALS ADDED BY CATHERINE GILMAN. COURTESY OF GHOST RANCH



Vessels with conical bottoms do occasionally occur elsewhere in the Ancestral Pueblo world during this period, even in Pueblo Bonito in Chaco Canyon. Yet they never occur in the proportions present in the Gallina area, where they were used in cooking. Anthropologist David M. Brugge (1928–2013) noted the similarity between later Athabaskan pointed-bottom vessels and those of the Gallina region. He believed the resemblance resulted from incoming Athabaskans copying pottery they discovered in caches and ruins. Frank Hibben proposed an Eastern Woodland connection, based on these vessels and his mistaken identification of evidence of Woodland pottery-making techniques. The evidence currently supports the idea that the form was an independent local invention. CATALOG NUMBER 48.3.7, MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO, PHOTO: JACQUELINE MARIE KOCER

with interpersonal violence leading to death occurred in the mid- to late 1200s.

Burned structures are very common in the region, as well. Archaeologists have argued that they are evidence of raiding, and the structures often held full food bins and sometimes the unburied remains of people who suffered violent deaths. Burned structures can result from numerous behavioral processes, however, only some of which relate to violence.

Explanations for the violence in the region run the gamut, from environmental stress, to witchcraft persecutions, to conflict among communities in the region, or conflict with groups from outside of the region that occurred as people left the Mesa Verde region. Contemporary research

### Migration Routes and Violence

Some of my previous research examined the oft-cited violence in the Gallina region. Evidence for violence ranges from indications of captive-taking and slavery (as inferred by significantly fewer females in the burial assemblage), to healed parry wounds on arms (which would have been broken while raised to protect the victim's own head), to multiple individuals murdered and left unburied within the same structure. I specifically isolated the worst acts of interpersonal violencethose that led to an individual's death-in order to see if there was a connection between the location of this violence and possible paths that migrants could have taken through or at the edges of the Gallina homeland in the mid- to late 1200s.

I found that the locations of two of these possible migration corridors (primarily those from the central Mesa Verde area and from western Mesa Verde, each heading into the greater Santa Fe region) statistically predict the locations of most of

the cases of deadly violence in the Gallina region. Migrants were rapidly leaving the Four Corners region for destinations throughout the greater Southwest, including, but not limited to, the Rio Grande Corridor. This eventual largescale depopulation of the Four Corners region by Ancestral Pueblo groups resulted not from a single process, but from multiple processes interacting in a complex web of social, demographic, and environmental factors. People were leaving social situations with increasing levels of violence and places where deteriorating environmental conditions were negatively affecting food supplies for points farther south and east, where better conditions existed. This situation would seem to engender violence, and in at least twelve cases in the Gallina region, it appears to have done just that.

The pattern of violence that emerges in the Gallina highlands is far too complex for any single explanatory

indicates that violence in the Gallina region was a complex phenomenon that resulted from a number of these factors.

#### Leaving Gallina

Around 1300, people left the Gallina region. Their material remains are not clearly visible in subsequent eras (see pages 24–25). Yet it is unlikely that the Gallina simply died off.

Instead, they may have let go of the social rules that governed their unique lifestyle, migrating to neighboring regions or joining other communities. Did the economic and social costs of living in their homeland become too high? Did they decide their particular brand of egalitarian Ancestral Pueblo was no longer working? These are issues we hope new research will explore.

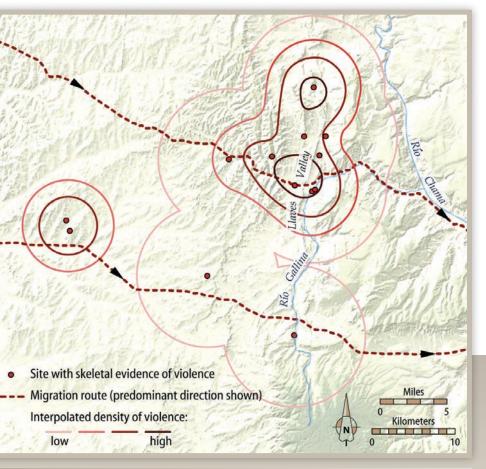
As archaeologists, we try to remember that saying "Group A went to Region C" is not always enough. When we make those pronouncements, we marginalize past choices, days of fatigue, anxiety, and fear

model. Internecine (withingroup) conflict between Gallina communities likely occurred psychologically (through fear, in other words) and physically (as Florence Hawley Ellis argued had happened at Rattlesnake Ridge, a site of deadly violence far from possible migration paths). Conflict with external agents materialized through at least two corridors in the Gallina heartland, which

appear to be migration corridors to the Lower Rio Chama and Northern Middle Rio Grande from the greater Mesa Verde and Upper San Juan regions. Simplistic black-and-white arguments about internal-versus-external sources of violence in the Gallina region fail to capture this complexity, and can only explain a portion of the human experience that created this portion of the archaeological record.

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that preceded and followed hard decisions. In the dry dust of Gallina archaeology, we see the tamped fires of difficult choices, broken families, and sweeping social movements. With a group as distinctive as the Gallina, we have an opportunity to explore these past lives at many different scales, from a single household to aggregate patterns resulting from similar and repeated human decisions.



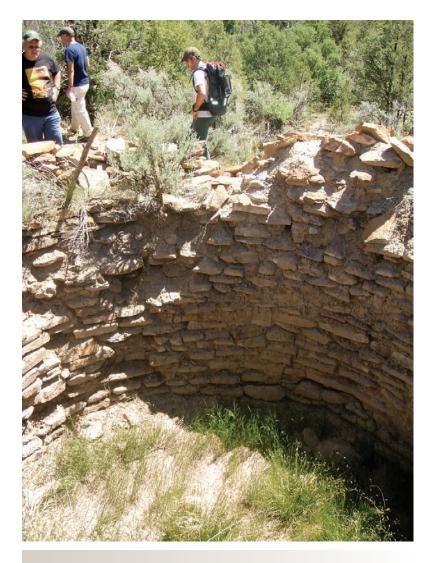
Two migration corridors from western and central Mesa Verde to the Rio Grande valley are associated (to a high degree of statistical significance) with Gallina sites where fatal interpersonal violence occurred. Other documented acts of violence in the region are similar to within-group violence seen in other areas of the world, indicating that there was also tension among Gallina factions. GRAPHIC: CATHERINE GIL-MAN, ADAPTED FROM FIGURES PREVIOUSLY PUBLISHED BY LEWIS BORCK

In view of all of that, it is clear that there is no singular source of conflict and violence in the Gallina region. What the spatial pattern of violence I examined makes clear, though, is that there were social, psychological, and physical costs associated with episodes of migration-costs that were levied not just at the source or destination areas, but also at areas in between, and not just among the migrants and the destination communities, but also among groups encountered en route. - Lewis Borck

### Gallina's Enigmatic Towers

#### ADAM BYRD STATISTICAL RESEARCH, INC

**Distinctive towers** sit on ridgelines and promontories throughout the Gallina region. Today, we know of towers at 136 sites, some of which have more than one. Although they usually stand among other residential structures, towers do occur in isolation. Builders typically constructed them of double-coursed masonry



Archaeologists Jim Retzer, Mark Martin, and Patrick Mullen (1982–2012) visiting a Gallina tower. Note that the current ground surface in the image is the result of backfilling earth around the tower to stabilize it. The plant-filled surface at the base of the image is a better approximation of the ancient floor and ground surface. PHOTO: LEWIS BORCK

walls (two horizontal blocks thick), and the level of expertise reflected in the towers is usually far superior to that of other contemporaneous masonry structures in the region. These are often massive buildings, some originally standing just over 30 feet high, with diameters almost as wide.

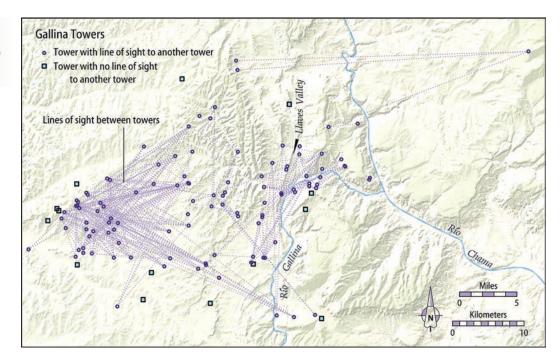
> The exact function of Gallina towers remains an open question, however. Initially, archaeologists thought that they were defensive structures. Based on the large amounts of maize archaeologists found in some excavated towers, we know that storage was a secondary function for some. Excavated towers have also yielded evidence of human remains, burning, and defensive features. But there is scant evidence indicating people used them for ceremonial purposes or prolonged habitation.

Most towers offer a commanding view of the surrounding landscape, leading some researchers to suggest Gallina residents used the towers for communication. Theoretically, people could have relayed a message across a network of towers in a matter of seconds, whereas it would have taken a messenger several hours to travel the same distance across the region's rugged terrain on foot.

A number of field studies and Geographic Information Systems (GIS) analyses have put this idea to the test. Teams of researchers conducting signaling field tests between tower sites determined that signals could be effectively conveyed across almost 5 miles. Previous GIS-based studies have also demonstrated lines-of-sight between towers. My own GIS viewshed analysis determined that 112 (more than 80 percent) of the 136 documented tower sites are visible from another tower site, and 101 are connected within one visibility network. When I considered visibility between towers within about 5 miles of each other, 99 tower sites almost 75 percent—were visible from another one.

Although these results do not prove that Gallina residents used the towers for communication, they demonstrate that it would have been possible. Because violence is evident in the region, some archaeologists have suggested that communication towers were part of a region-wide defensive strategy. Still, people could have conveyed signals just as effectively from the roofs of their houses, so there could be other intentions Towers across the Gallina heartland. GRAPHIC: CATHERINE GILMAN, BASED ON DATA PROVIDED BY ADAM BYRD.

behind the building of these towers—whether or not they served as signaling stations. It is interesting that their height not only afforded unobstructed views, but also ensured that the towers themselves could be seen from long distances. Their size and visibility may thus have signaled an inherent message. Regardless of the towers' intended function or functions, it seems that people used them for a number of activities.



### How Far Would You Go? Resource Selection in Dangerous Times

#### CONNIE CONSTAN UNIVERSITY OF NEW MEXICO

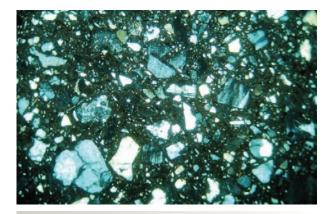
*My research explores* whether people in unspecialized societies those in which households make most or all of what they need individually, rather than specializing their labor—alter resource use in response to social violence. In particular, I examine whether conflict influences the distance to which people in such societies will travel to collect the materials they need to make pottery. The Gallina area is an ideal place to study this question because evidence of violence and conflict is plain, even though its causes are not well understood (see pages 10–11).

A rough analogy might help explain what I mean by "altering resource use in response to social violence." Imagine that each year, at a specific time, you make a recipe that has been passed down through your family for generations. The recipe requires a special ingredient that is available in a market nearby, in a neighborhood that has recently become very dangerous, or you must travel for about an hour to another store that carries it, or at least something very similar. (Obviously, you must also imagine that this scenario is happening before the advent of Internet shopping.) Will you go out of your way, or not?

Clay, temper, and water are required for forming pottery. (Temper is crushed rocks, sherds, minerals, or organic material, or combinations thereof, that potters add to their clay to make it more workable and to prevent it from cracking during drying and firing.) Normally, people collect these materials from areas near their settlements. Clay is heavy, so for many potters, distance is the determining factor in clay selection. A study of more than 100 traditional societies found that, for both clays and tempers, people prefer to travel less than a mile, but they will go up to two-and-a-half miles, if necessary. Following my analogy, potters might alter their resource selection and collection strategies if their ability to travel safely is restricted in the face of increased risk of interpersonal violence. Conversely, potters might not alter their strategy if performance characteristics of pottery ingredients, aesthetics, or tradition are more important, and worth the risk.

For my investigation, I chose two sites in the Gallina area, one located in a defensible setting with defensive architecture (a cliff dwelling with a tower), and one with an open site plan and no defensive structures. I examined pottery found at each site, and I collected clay resources near each site, in order to determine whether conflict affected where people obtained necessary materials. I then applied several complementary archaeometry analyses to characterize the pottery and the clay samples (see *Archaeology Southwest Magazine* Vol. 26, No. 2 to learn more about archaeometry).

X-ray diffraction (XRD) determined the clay mineralogy of the ceramic sherds and the collected natural clays. Petrography identified the non-clay minerals in the sherds and the collected clay samples. Inductively coupled plasma-mass spectrometry (ICP-MS) provided the chemistry of the ceramics and the natural clays. Numerous field and laboratory characterizations provided more information about the qualities of the available clays and the ceramics themselves.



Petrographic microscope slide from a Gallina utility vessel showing irregularly shaped sand temper grains. IMAGE COUR-TESY OF CONNIE CONSTAN

The petrographic analysis showed that potters residing at the defensible location did not use the clays from within one-half mile of their homes to make utility pottery (such as cooking pots and some storage vessels). Potters might have used clays located near the open site to create the utilitarian pottery found at both sites. People did not make painted ceramics with the clays available near the open site, but the clay in such vessels may have come from the canyon encompassing the defensive site, or from another area at a greater distance. I could not definitely demonstrate use of the clays from within one-half mile of either site based on the XRD or ICP-MS data.

The combined results of the laboratory tests, mineralogical studies, and chemical comparisons suggest that Gallina potters used preferred traditional sources, presumably for specific performance characteristics (thermal shock resistance, for example) or for aesthetic reasons (such as fired color), or both. There is no apparent difference in the diversity of raw materials used at either site. Gallina potters may indeed have risked violence to collect clays with specific qualities; safety concerns do not appear to be the overriding factor in their resource selection.

This is not entirely surprising, when we consider how often people may need to obtain the necessary materials. Unspecialized, household-level pottery production almost certainly does

not (and did not) occur on a daily basis. People in those circumstances probably make pots once or twice a year. This may represent an acceptable level of risk in order

> to procure clays with known performance characteristics and cultural aesthetic value.



 Left: Gallina Black-on-white (unslipped) olla (jar), catalog number 40.2.408. PHOTO COURTESY OF THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXI-CO. Above: Karen Charley collects clay near Keams Canyon, northeastern Arizona. PHOTO: HELGA TEIWES. COURTESY OF ARIZONA STATE MUSEUM, C-28203

### What They Made and Used: Initial Clues to Gallina Identity

#### JACQUELINE MARIE KOCER UNIVERSITY OF NEW MEXICO

Although the Gallina must have been well aware of the socially diverse populations living in neighboring regions, there is little evidence of trade between Gallina and those neighbors. This suggests that cultural or economic "buffer zones" were in place. Exploring some of the typical items the Gallina made and used and how those compare to examples from neighboring regions should shed light on how different Gallina groups were from one another and from other populations. There is much work yet to come, but here are some avenues I am examining. At present, the patterns suggest that although the Gallina did some things differently, they were not wholly disconnected from surrounding populations.

#### Pottery and Foodways

The Gallina made and used three kinds of cooking pots: conical-bottom vessels, short, wide-mouthed vessels, and restricted-neck vessels with rounded bottoms. We can tell how cooks positioned pots during cooking by examining the occurrence and density of soot on the surface of the pot. Based on patterns showing more soot on the upper parts of the conical-base pots and the short, wide-mouthed pots, it appears that Gallina cooks nestled these two kinds of vessels in a hearth. The occurrence of an oxidation patch (un-sooted area) near the base of the majority of such vessels also supports this interpretation. People seem to have used vessels with restricted necks in a different manner. The majority of those vessels exhibit more soot on the bottom of the base, which indicates that cooks placed them over a flame. Future research will clarify whether these cooking methods vary within the Gallina region, and how they may compare to contemporaneous populations in the northern Southwest.

**Above:** Two examples of Gallina-made projectile points that are unlike any made in contemporary neighboring regions. (LEFT) CATALOG NO. 47742/11. LA 11633. COLLECTIONS OF THE BUREAU OF LAND MANAGEMENT AT THE MUSEUM OF INDIAN ARTS & CULTURE/LABORATORY OF ANTHROPOLOGY, SANTA FE, NM. (RIGHT) CATALOG NO. 39842. LA 11850. COLLECTIONS OF THE MUSEUM OF INDIAN ARTS & CULTURE/ LABORATORY OF ANTHROPOLOGY, MUSEUM OF NEW MEXICO, SANTA FE, NM. **Right:** Conical-bottom pot, a hallmark of Gallina. Cooks probably prepared meats in these vessels. CATALOG NUMBER 40.2.151. COURTESY OF THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO. PHOTOS: JACQUELINE MARIE KOCER

Interestingly, archaeologist Barbara Mills and others have examined people's use of various common vessel shapes across cultures. Their work suggests that conical-bottom pots are often used for cooking meats and fats, and for meat-and-plant stews. Experiments have shown that conical-bottom pots yield consistent boiling times. Globular vessels, on the other hand, are more conducive to prolonged boiling of corn and beans over a fire.

#### Tools and Their Uses

Gallina toolmakers produced small side- or cornernotched projectile points typical of the northern Southwest, as well as much larger points. Although the Gallina may have occasionally recycled and reworked very ancient Archaic period points they found on the landscape, many of these larger points are unlike known Archaic styles and appear to be of Gallina manufacture. Gallina hunters may have used these larger projectiles to target locally abundant large game, such as the

Archaeology Southwest

People made these ornaments of gypsum, in imitation of shell. These pieces came from a site known as Rattlesnake Ridge. CATALOG NUMBERS 49.3.13 AND 49.3.7. COURTESY OF THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO. PHOTO: JACQUELINE MARIE KOCER



to other



elk, deer, and bighorn sheep whose remains we find in Gallina sites—where residents probably cooked them in conical-bottom pots.

Toolmakers preferred obsidian, chert, and chalcedony. The chert and chalcedony came from Cerro Pedernal near Abiquiu, New Mexico, and geochemical sourcing shows that almost all of the obsidian came from quarries in or near the Jemez Mountains (see map on page 4). Comparing styles of points across the broader Ancestral Pueblo culture area should help us understand whether the Gallina and any of their neighbors made tools with the same specific series of steps to achieve the same results.

#### **Ornaments**

Ornaments excavated from Rattlesnake Ridge, a village site near Gallina, New Mexico (see map on page 4), provide a clue as to how Gallina people may have seen themselves in relation populations. Although ornaments made of marine shell from the Pacific Ocean and the Gulf of California are present in the sites of Gallina's neighbors, little marine shell is known from Gallina sites. The Rattlesnake Ridge examples are "counterfeit" shells made of a kind of gypsum common to the area (see above). The person or people who made the look-alikes paid careful attention to mimicking shell, even down to the small bumps along the hinge base. Such emulation suggests that the maker(s) and wearer(s) were borrowing nonlocal status symbols, or manipulating them for other purposes. At the very least, it indicates that they had seen such ornaments and had some understanding of their value or meaning.

### Household Activities in a Gallina Settlement

#### PAULA A. MASSOUH

*When archaeologists study households*, they examine not just a dwelling space, but also material clues to who shared that space or spaces and what sets of activities they undertook to make a living. Put another way, the household is a concept we use for interpreting what the associated structures, artifacts, and animal and plant remains tell us about the people who left those traces and how they worked together to put food in the pot, clothes on their backs, and raise children, among many other tasks.

Although there have been many studies of ancient Southwestern households, there have been almost no such investigations in the Gallina region, where household archaeology has much to offer for strengthening our understanding of Gallina daily life and dispelling the notion of aberrance that has become attached to the Gallina. To begin to fill this gap, and to demonstrate the interpretive value of existing collections (see *Archaeology Southwest Magazine* Vol. 26, No. 1 on the use of existing collections as a tenet of Preservation Archaeology), I studied artifacts and excavation records from a Gallina site known as L/102 (LA 11633). Archaeologists Albert Mohr and Laetitia Sample excavated the site with University of Toronto field school students in 1972 and 1973. Records and artifacts from that project are included in the Mohr-Sample Collection housed at the Museum of Indian Arts and Culture/Laboratory of Anthropology in Santa Fe, New Mexico.

L/102 comprises six structures, assigned letters A–F (see site plan). One (Structure B) is a surface storage structure; two are unit (surface) houses (Structures C and D); one (Structure E) is a pueblo-like structure of masonry; and one is a pithouse (Structure F). Excavators also found a stockade partially encircling Structure F. Structure A was not excavated. Sample and Mohr inferred that Structure A, part of Structure E (Rooms 1–4), Structure F, and the stockade were the earliest, followed by Structures B, C, and D. The builders appear to have reused stones from Structures A and E. Structure F appears to be associated with the stockade.

I examined architectural attributes of each structure and spatial relationships among the material remains within each structure to identify likely household activities. I found evidence of habitation (dwelling, sleeping, working, taking shelter, being together in an enclosed built space), storage, hunting, gathering, the plant foods people gathered, and remains of these occurred throughout the site. Some of the plants L/102's residents gathered were probably also used as medicines and in rituals.

The abundance of corn in Structure B and squash remains in Structures C and F show that people grew food, as well. Residents—most likely women—of Structures D and E may have used indoor mealing bins in certain rooms to process corn. These rooms may have had a distinct social or ritual purpose.

preparing and eating food, making tools and ornaments, processing wood and animal hides, rituals, and possibly childbearing. (The latter is suggested by human organic and cacti residue identified on a globular vessel with lateral spout recovered from Structure D, as well as an infant burial found in the same structure.)

#### Habitation and Storage

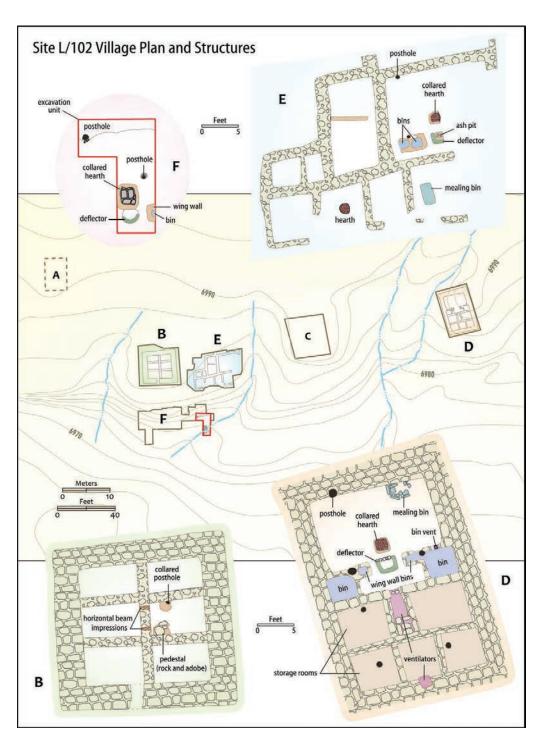
I inferred that structures with fire pits or hearths (Structures C, D, E, and F) were residences inhabited by people. Structure B did not have a hearth or a fire pit. It did contain a large amount of corn, however, implying that its primary function was storage. People most likely used the bins found in Structures D and E for storage.

#### Foodways

Residents hunted cottontail rabbit and deer, among other animals. Rabbit bone was found at all excavated structures at the site, along with deer bone at Structures B and C and squirrel and turkey remains at Structure D. It seems that people consumed what meat was available, and rabbit was most common.

Goosefoot, ricegrass, dropseed, sagebrush, saltbrush, pine nuts, and prickly pear cactus were among

GRAPHIC: CATHERINE GILMAN, ADAPTED FROM SAMPLE AND MOHR (1975) AND SIMPSON (2008)



Manos found in Structures C and F and metates found in Structures C and D may have been used to process corn for everyday food.

#### Ritual

But life was not simply about food. Possible effigy figures found in Structures C, D, and F seem to indicate that the residents were concerned with esoteric matters, as well. These objects included a possible female figure (Structure C), a soapstone foot (Structure D), and a ceramic duckfoot (Structure F). People dwelling in Structure C had a perplexing red-painted slab. Bird remains, including red-tailed hawk, emerged from Structures D and E, suggesting that residents may have used feathers in rituals.

#### **Tool and Ornament Production**

Structure D contained the largest amount of fabricators tools used to make other tools. Other items associated with tool-making included utilized flakes, a scraper, cores (rocks from which people struck flakes to make tools) and projectile points (Structure B); abraders (Structure C); pebble hammers and cores (Structure D); pecking stones, blanks (not-yet-tools), projectile point, and core (Structure E); and projectile points, an obsidian flake, an obsidian blade, and pecking stones/blanks (Structure F).

Beads and pendants found at the site may suggest that residents made such ornaments. Excavators found partial white bone beads and a pendant in Structure B, and they recovered a drill that someone could have used to make beads from Structure E.

#### Wood and Hide Processing

Evidence of wood production and hide production is rather limited. The notched axe in Structure E suggests that people had used it to fell trees or cut limbs. Certain deer remains and bone awls in Structure B may indicate hide production.

### Herbert Dick's Gallina Collection

*Dr. Herbert Dick* excavated thirty-two Gallina pit and unit houses on the Santa Fe National Forest between 1971 and 1980. The resulting collection, returned to the Forest in the 1980s, consisted of 235 Hollinger (archival document) boxes. Material from various sites had been comingled without regard for fragility, and many pieces had been removed.

In addition to more than 62,000 sherds and pottery items, flaked stone and bone tools remain with the collection. Specialty items—such as chalk-shaped mineral specimens rubbed on all surfaces, and powders and crinoids—enhance the assemblage. Human remains repose at

Colorado State University. Wood samples



Necklace components.

from both pit and unit houses are under analysis (see pages 19–20). Regrettably, Dick's field notebooks and excavation records are missing—but fortunately, field labels accompany many artifacts. Extant documentation comprises a few dozen Adams State College artifact labels and student field notebooks.

> Between 2002 and 2009, I catalogued the collection, with significant assistance from Lee and Candi Borduin. The artifacts, together with their original labels (when present), were bagged in labeled zip-top bags. Today, the collection is organized by site, and the catalog is available from the Santa Fe National Forest.

> > — Denver Burns, Santa Fe National Forest

Comb shaft straightener.

## New Insights on Settlement and Mobility in the Gallina Heartland

#### RONALD H. TOWNER, GALEN L. MCCLOSKEY, BENJAMIN A. BELLORADO, AND REBECCA R. RENTERIA LABORATORY OF TREE-RING RESEARCH, UNIVERSITY OF ARIZONA

The 1970s were a decade of intense archaeological activity in the Gallina heartland. Excavations by James Mackey and Sally Holbrook and by Herbert Dick (1920–1992) documented hundreds of Gallina sites and structures in the Llaves valley alone (see map on page 4). Unfortunately, analysis and publication did not always follow fieldwork, particularly in Dick's case. He submitted preliminary reports to the U.S. Forest Service, but his unexpected death left much of his excavated material in disarray, including a massive amount of charcoal samples—more than 20,000—that he had not yet submitted for tree-ring analysis.

This situation left archaeologists wondering about the specific timing of settlement and residential abandonment at many of the sites Dick had excavated. Were people living at all the sites contemporaneously? Did they build new settlements

and then leave "older" settlements? Ideas about the residential mobility (how long people stayed at a particular site) of the Gallina have also played a role in interpretations of warfare and violence in the region (see pages 10–11). For example, if all the Dick sites were founded in the same year, it might suggest a rapid response to sudden conflict, whereas if the sites were founded over decades, it would suggest generational growth.

Fortunately, through the efforts of several individuals and institutions, Dick's treering samples now reside in the collections of the Laboratory of Tree-Ring Research in Tucson. Since their accession, we have synthesized all existing dates from Gallina sites and, more importantly, we have been able to analyze (with support from the National Science Foundation) more than 2,000 of Dick's samples, generating hundreds of new dates.

Previously known dates from the Llaves valley were mostly collected from sites where Mackey and Holbrook worked. The newly derived dates are from Dick's excavations at the Hacha Ridge and Huerfano Mesa locales (see map on page 4). Among the "old" and "new" dates are cutting dates (the year the tree was cut for use as lumber) and near-cutting dates (cases where the latest or outermost rings that would have yielded cutting dates have been removed for architectural modification).

Within the Llaves valley, the Mackey and Holbrook dates show Gallina house construction in the late 1230s, the mid-1240s, and again in the early 1260s. This distribution suggests that people lived in their pithouses and surface rooms for a



The Llaves valley is an inviting place in the Gallina heartland. PHOTO: RONALD H. TOWNER



An interior support pole in a Gallina surface (unit) structure. Some dendrochronological samples come from architectural wood such as this. IMAGE COURTESY OF THE HIBBEN ESTATE AND THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO

decade or so, and then moved to a new area in the valley—perhaps because of changing farming conditions, threats from outsiders, or other factors.

The Dick samples from Hacha Ridge and Huerfano Mesa—two higherelevation areas—generally date to the early 1230s, mid-1240s, and late 1250s. They almost, but not quite, fill the gaps in the thirteenth-century date distribution known from the sites Mackey and Holbrook examined. There is significant overlap in the mid-1240s, when people were building on the valley floor and on the higher mesas.

This date distribution raises some interesting questions. Did the Gallina in the Llaves valley live in pithouses and surface rooms for more than a decade, or for fewer than five years? Did they move from the valley to the mesa top—not seasonally, but for other logistical reasons—for most of the mid-1200s? What was the level of population growth during the 1200s? As we continue our analysis, we will explore these questions in much finer detail, with more dates and better information about the sites themselves.

The research reported here was supported, in part, by a grant from the National Science Foundation (BCS-1322579).

### Origins of Gallina Identity

#### ERIK SIMPSON SALMON RUINS MUSEUM, DIVISION OF CONSERVATION ARCHAEOLOGY

*Researchers have long conceived* of the Gallina identity (see pages 15–16) as unique, and even crude, when compared with the social identities of neighboring groups in the Chaco Canyon and Mesa Verde areas. Instead, the Gallina identity of the 1100s and 1200s reflects an enduring legacy of *resisting* those panregional norms.

This pattern of behavior originated in the Upper San Juan region of southwestern Colorado and northwestern New Mexico (see map on page 4). An "Upper San Juan identity" emerged as something distinct from that of adjacent areas as early as 400 B.C., but we have a better understanding of the circumstances motivating its evolution after A.D. 700 (see page 6). By then, we can document how the relative strength of the Upper San Juan identity fluctuated with external pressures.

But how do archaeologists document the formation and strength of a social identity? Generally speaking, "social identity" refers to a sense of self that comes from belonging to a specific group. Archaeologically, we say that people broadly shared a social identity when we have evidence that they did, built, and made things in the same ways. We infer the relative *strength* of an identity through its consistency, longevity, and resistance to change or outside influence.

We see the formation of a strong identity among Upper San Juan populations in the 700s in response to dramatic social and cultural transformations occurring to the west in the Mesa Verde area. These transformations include the development of large villages (300 or more people) with a new architectural form (the pueblo), and associated revolutionary ideas about how to organize a community (see page 22). These villages and the ideological changes they represented quickly spread across the region, but not into the Upper San Juan area. Indeed, populations in that area—joined by possible dissenters who left the Mesa Verde area—became less diverse and continued earlier traditions.



This strong, uniform identity began to relax by the late 800s as the cultural phenomenon occurring to the west collapsed. When the large villages in the Mesa Verde area began to fail and their populations began to disperse, the physical and ideological tensions that Upper San Juan residents had been feeling weakened. This allowed multiple cultural trajectories to develop over the next century.

An example of this is what happened in the Chimney Rock area after 1050 (see map on page 6). The again-diverse Upper San Juan populations came to the area to be close to the famed natural astronomical observatory of the Chimney Rock spires. This important place also attracted the attention of Chacoan astronomers, however, and in association with the lunar standstill of 1076, Chacoans built the clearly Chacoan-designed Chimney Rock Pueblo.

The nature of relations between Upper San Juan and Chaco populations in that era is debatable, but appears to have been friendly enough in the late 1000s. Things might have soured shortly after the 1093 lunar standstill, though, and the Chimney Rock area has not yielded architectural tree-ring

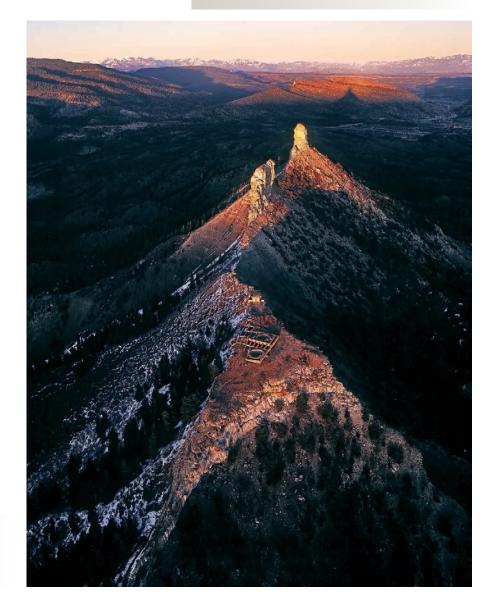


Patterned finger marks in a plastered wall. IMAGE COUR-TESY OF THE HIBBEN ESTATE AND THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO

dates after that time. This apparent lack includes the date of the next lunar standstill (ca. 1111), around which we would have expected people to remodel Chimney Rock Pueblo, just as they had for previous standstill events. Deterioration of relations is also supported by possible evidence of violence in the Chimney Rock area, and by the large-scale movement of at least some Upper San Juan populations south, across the San Juan River into the region that became the Gallina homeland.

The strong, uniform identity recognizable as the Gallina of the 1100s and 1200s may have formed (or regrouped) in response to the collapse of short-lived relations with Chacoans. Their relative physical separation and resistance-based identity (see pages 22-24) served the Gallina well for two centuries before the onset of violence in the late 1200s. Indeed, their old adversaries from the Mesa Verde area may have perpetrated the fighting as the latter traversed the Gallina homeland to reach the Rio Grande and Rio Chama. This time, the disruption of an identity separate from Mesa Verde or Chaco resulted in the dispersal of people who were unable to maintain that identity in an archaeologically perceptible way.

A natural astronomical observatory, Chimney Rock was an important place for peoples of the Upper San Juan region. PHOTO ©ADRIEL HEISEY



### The Rosa Roots of Gallina Farming

*Over the past ten years*, I have been studying the archaeology and agriculture of an Ancestral Pueblo population living west of the Gallina heartland, in the Animas River drainage (see map on page 4). Throughout the Basketmaker II to Pueblo I periods (400 B.C.–A.D. 900; see page 6), people whom archaeologists associate with the Rosa tradition (Los Pinos, Sambrito, and Rosa Phases) inhabited portions of what became the northwestern part of the region settled by the Gallina. Rosa settlements have been found throughout the Upper San Juan region, extending as far to the northwest as the modern town of Durango, Colorado.

Throughout this area, Rosa people established some of the patterns or traits that archaeologists recognize in later Gallina phase developments. These traits include dispersed village layouts, periodic violence (perhaps associated with local perceptions about the causes of shifting climate), and a commitment to sometimes risky farming strategies on high-elevation alluvial fans and floodwater settings in fields with short growing seasons.

My recent research has shown that the roots of Rosa (and thus probably Gallina) agricultural practices likely germinated out of a mix of eastern Basketmaker II highelevation farming techniques using special, locally adapted maize varieties. After about A.D. 775, their farming methods were augmented by other highly adapted varieties of corn and by new ways of farming introduced by western migrants from drier areas of the Mesa Verde region. Although earlier Rosa traits may have formed the foundation of some aspects of Gallina society, the Gallina people developed along a trajectory all their own.

> — Benjamin A. Bellorado, University of Arizona

### Gallina as a Social Movement

#### LEWIS BORCK ARCHAEOLOGY SOUTHWEST AND UNIVERSITY OF ARIZONA

When you think about acts of resistance, do you envision protestors with bandanas hiding their faces, Molotov cocktails revealing their intent? Such imagery is typical, and has been common through much of human history, though the clothing and weapons of choice change. Yet not all acts of resistance are violent and apocalyptic attempts to brutally alter the pathways of power. Many are soft whispers that slowly infiltrate and transform the social landscape.

In fact, a wide array of social science research shows that some of the most effective dissent-based social movements are quiet ones. In the American Southwest, though, much of our archaeological research into resistance has focused on obvious and often cataclysmic events. This focus, usually directed at understanding the Pueblo Revolt or other acts of colonial resistance, may have skewed our understanding of how dissent might appear in the archaeological record.

To examine these subtle, oft-forgotten revolutionary social movements, I looked at patterns in spatial organization and architecture, and I employed network analyses. Together, these helped me explore potential patterns in the archaeological record—patterns that archaeologists might miss when studying landscape-scale spatial analyses or when zeroing in on individual sites. My focus on patterns *within* and *between* communities has enabled me to highlight previously unexplored diversity within the Gallina region.

#### Settlements and Social Organization

First, I examined Gallina settlements through time and across archaeological cultures. From that perspective, the structure of Gallina settlements looks like the structure of earlier Basketmaker II and III settlements (400 B.C. to A.D. 700; see page 6), more so than any northern community's spatial organization since (see page 23, top). In fact, the incredible social reorganization that must have occurred as peoples of the northern Southwest ultimately ceased living in pithouses and began living in pueblos is startling when compared across the Basketmaker III to Pueblo I divide (ca. A.D. 700). Even the aggregation of populations into a few, very large pueblo settlements at the beginning of the Pueblo IV (ca. 1300) period—a time archaeologists often talk about as one of the most dramatic reorganizations of people and community space in the precontact history of the U.S. Southwest—fails to produce such a scale of difference.

When viewed in this manner, this pithouse-to-pueblo transition reflects something of a societal rupture in how people organized social space—and their communities. On one side of the chasm, people shared control of society and ritual; on the other side, select knowledge-holders controlled social and ritual power within communities. Some groups were not willing to cross that divide and become less egalitarian. The Gallina were one such group.

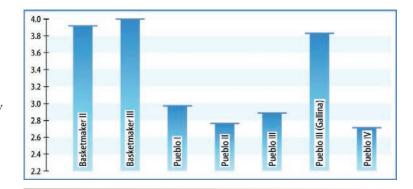
#### **Pottery and Memory**

For the second part of my study, I examined the origins of nonlocal pottery using network analyses. Unlike many of their distant neighbors, the Gallina owned few pieces of "foreign" pottery. The shortage of pottery made elsewhere according to other traditions is conspicuous, yet such pottery does exist, often as something like an heirloom—what archaeologists call "curated objects"—that are *older* than the households where we have found them. Why were those pieces of pottery there?

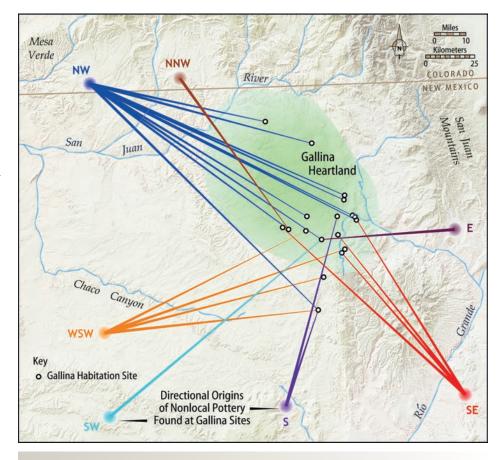
When we think of them as pieces of *inscribed memory*, however, these orphaned sherds become much more than pottery. Where they occur, the foreign sherds in Gallina pithouses tend to originate from only one of several directions, suggesting that they may very well reveal the ancestry of the households in which they appear—the regions from which they, or their ancestors, emigrated to the Gallina highlands. If so, the pottery sherds show

that these households looked to their pasts for a sense of who they were, for a sense of history and connection—not unlike the license plate from my home state of Wisconsin hanging on the wall in my Tucson garage. Much like within the modern Pueblo world, space becomes time. The foreign ceramics in the Gallina region may very well be an archetype of this worldview.

The Gallina highlands may have been a refuge for people who felt displaced by and uncomfortable with the changes sweeping across the northern Southwest-people who would not cross, or stepped back across, a growing divide between those with power and those without. Thanks to exceptional work, most recently by Erik Simpson and Mike Bremer, we know that many Gallina residents were descendants of documented groups nearby (see page 6 and pages 20-22). The directionality and keeping of the foreign pottery pieces, however, suggest that at least some Gallina groups had historical connections to more spatially and temporally diverse areas and people. Thus, the people that we think of as Gallina may have come together as a multiethnic social movement that rejected the increasing inequality occurring in other regions of the Colorado Plateau.



This shows Room-Contiguity Indices for Ancestral Pueblo settlements through time. The index measures whether settlements tended to be organized into discrete dwellings, such as individual one-room houses (higher score), or agglomerative dwellings, such as apartment-like room blocks (lower score). Gallina residents organized their settlements much as their ancient ancestors had, which was unlike the Gallina people's neighbors, who were typically residing in pueblos. GRAPHIC: CATHERINE GILMAN, ADAPTED FROM A FIGURE PREVIOUSLY PUBLISHED BY LEWIS BORCK



Gallina residents seem to have kept older pieces of pottery that may reflect where they or their ancestors emigrated from in order to join the new social movement happening in the Gallina highlands. GRAPHIC: CATHERINE GILMAN, ADAPTED FROM A FIGURE PREVIOUSLY PUBLISHED BY LEWIS BORCK

#### A Complicated Place

It is even possible that some of the internal violence in the Gallina region resulted from this diversity. In this view, the Gallina region suddenly looks like a much more complicated place—a collection of determined people creating a community at the edges of their previous worlds, a social movement operating at the margins of the Pueblo world. They formed a new community with clear antecedents alongside new objects and changing types of architecture that were based on previous forms.

By appropriating the past for their own intentions, they became temporal colonists. What becomes important then is not simply how the Gallina interacted with their neighbors, but also *how they interacted with their own past*. By highlighting the parts of the Gallina archaeological record that were the least changed—for example, community layout and decentralized control of ritual space—or the most similar to earlier groups, particularly in the Basketmaker periods, we begin to see what followers of this movement may have valued.

#### **ONLINE EXCLUSIVE**

Explore "What Architecture Tells Us about a Society" at archaeologysouthwest.org/asw29-1

### Appraising the Gallina-to-Jemez Migration Model

MICHAEL L. ELLIOTT JEMEZ MOUNTAINS RESEARCH CENTER

*The Pueblo of Jemez* is a federally recognized sovereign tribal nation northwest of Albuquerque, New Mexico (see map on page 4). The *History* section of the Pueblo of Jemez's website states that the Jemez people migrated to north-central New



A two-story Ancestral Jemez fieldhouse. The silver material is wrapped around the architecture to protect it during prescribed burns. PHOTO: CONNIE CONSTAN

Mexico from the Four Corners region in the late 1200s, and that the people of Pecos Pueblo joined them at Jemez Pueblo (*Walatowa*, meaning "this is the place" in the Towa language) in 1838.

Archaeologists have long speculated that aspects of Jemez material culture may indicate that Gallina residents moved to the Jemez area. In 1938, archaeologist Paul Reiter (1909–1953) commented on similarities between architectural features in certain rooms at Jemez sites and those in the Gallina area, writing "...we may tentatively postulate a relationship between the adjoining districts." The features of note included symmetrically paired bins with deflectors, vents, and firepits, the combination of which Reiter thought occurred only in the Jemez and Gallina areas. The set comprising deflector, vent, and firepit is standard in most ancient Southwestern dwellings of the Colorado Plateau, but the addition of the bins to the configuration is what caught Reiter's attention.

To my mind, a "tentative postulation" could also be termed a "guess." Even to Reiter, apparently, the evidence he saw was not exactly a ringing endorsement for the Gallina-to-Jemez hypothesis.

#### But Once Published...

However tentatively Reiter viewed this postulation, subsequent researchers reified it, and it became dogma regarding Jemez origins. Gallina connections to Rosa traditions meant that Rosa, too, was a probable, though distant, forebear of Jemez culture. In 1977, archaeologist James C. Mackey published an article in which he inferred that Jemez and Gallina were related based on cranial measurements from osteological collections (archaeological human skeletal remains).

By the 1990s, though, many researchers began to question these assumptions—archaeologist William J. Whatley (who then worked for the Pueblo of Jemez) most emphatically. And recent scholarship has continued the debate. In 2006, two scholarly conferences on Jemez archaeology resulted in some papers suggesting that the rapid peopling of the Jemez region in the 1300s was due to migration from a number of places, combined with a baseline of indigenous residents.

In response, New Mexico archaeologist Regge N. Wiseman presented an excellent summary of the arguments for a Gallinato-Jemez migration in a series of publications that included numerous diagrams showing floor plans and floor features of rooms in both areas. His basic argument is that there were many sites in the Gallina region with wing-wall bins, firepit, vent, and deflector dating up to the mid-1200s, and then inhabitants (or at least the agriculturalists) permanently left the

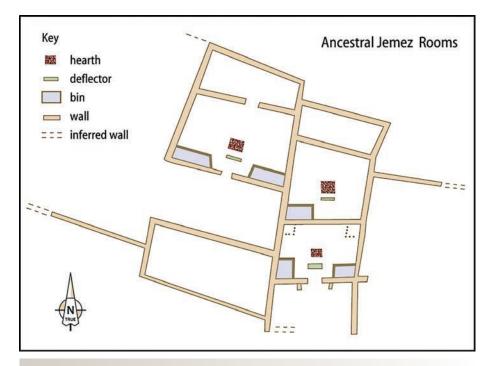
area. Then, some 75 years later, people were building pueblos—not Gallina-like towers, cliffhouses, pithouses, or surface houses—in the Jemez region, forty-some miles to the southeast, and these dwellings have corner bins, firepits, vents, and deflectors. But those corner bins are not wing-walled. Moreover, the seven decades past and the distance involved rather ruin this explanation for many archaeologists.

#### An Archaeology of Respect

One way to think about a possible Gallina-to-Jemez migration is to "reverse engineer" it, and make it a Jemez-to-Gallina question. This is not just some abstract argument among archaeologists, after all. We are not talking about Gallina bins migrating to the Jemez region to become Jemez bins, but about actual individuals, families, and villages of yesterday and today. Therefore, a more reasonable approach is what I have termed "an archaeology of respect," or indigenous archaeology.

The basic element of such an approach is to *actually consult with Native Americans* if we want to know about their history. The Jemez people are real and they have their own perspectives on their past—they own it, not us. They are not "wrong" just because their traditional history is oral. Moreover, oral history is not static, linear history; it is far more complex and beautiful than that. It embodies the collective memories, cultural traditions, geography, songs, art, and belief systems of an entire culture, accrued over many centuries. Archaeology and documentary history should *complement* these ethnohistorical views, not *dictate* them. As archaeologists and anthropologists, we can help the people of Jemez Pueblo learn more about the material remains of their ancestors, but our efforts must be collaborative, not determinative.

Ultimately, the people of Jemez will define their own history in their own terms. Should they choose to investigate their past in such ways, DNA and other genetic testing should help them determine their physical relationship—if any—to the Gallina people with finality. Until then, we should at least consider other plausible explanations for the fate of the Gallina, such as their absorption into another pueblo group or groups, drought-related adaptation into a less archaeologically visible lifeway based on hunting and gathering, or even a longer-range migration beyond the Southwest.



Rooms at the Pueblo of Nanishagi, an Ancestral Jemez site. Paul Reiter noted (1938), and Regge Wiseman expanded upon the idea (2007), that the floor plan is very similar to how the Gallina arranged their interiors; compare with the graphic on page 8. Others see this plan as more generally Ancestral Pueblo, and some argue that because these are corner bins, rather than wing-wall bins, and because the rooms are much smaller than Gallina habitation rooms, this lessens the likelihood of a direct association. GRAPHIC: CATHERINE GILMAN, ADAPTED FROM REITER ET AL. (1940) AND WISEMAN (2007). VISIT ARCHAEOLOGYSOUTHWEST.ORG/ASW29-1 FOR REFERENCES.

### PRESERVATION SPOTLIGHT

#### THIS PLACE IS THREATENED

Gallina country. When Edward D. Cope passed through the region in 1874 (see page 3), he noted the relatively intact remains of Gallina villages. He was astonished by the number of sites and by their presence on prominent topographic features. Of serious concern to him was the notable absence of running water and the lack of waterstorage features on the sites. Suffice it to say, at the time of Cope's visit, the area was sparsely inhabited, yet gave every indication of having been populated in the past.

The area remained only sporadically inhabited throughout the early part of the 1900s. Frank Hibben

and his students traveled to the region from the University of New Mexico over the course of several days, first by horse and wagon and eventually by truck. Up through the 1970s, when Herb Dick directed the Adams State College field school, access was still difficult: most of the roads on the north end of the Jemez Mountains were at best all-weather dirt roads and frequently dirt two-tracks that functioned poorly when wet.

It was not until the 1970s and 1980s, after the construction of the Abiquiu and El Vado Reservoirs, that paved roads became a reality and access to the margins of the Gallina region became easier. Oil and gas development and logging are largely responsible for the network of roads across the area at present. Even so, accessing Gallina remains

difficult, especially in the middle of winter and during the summer monsoon season.

In many ways, this remoteness has served to preserve the large number of Gallina sites in the region. Within the last forty years, however, there has been a noticeable increase in the deterioration of sites. This is in part due to the roads that accompanied oil and gas development, and due to the ability of ordinary people to acquire and use all-terrain vehicles. The increase in accessibility, growth of metropolitan Albuquerque, flow of information over the Internet, allure of the sites themselves, and curiosity of the American public about the lands they own have all resulted in impacts to Gallina sites on all land jurisdictions.

Impacts to these sites are subtle and additive, unlike dramatic episodes of looting and destruction. High site visitation and lack of knowledge about how to visit with respect result in cumulative impacts that may not be visible after one visit or even ten, but are noticeable after a decade or two. The Santa Fe National Forest and the State of New Mexico have active site stewardship programs that track and monitor impacts to sites; twenty years of monitoring show that front-country sites tend to sustain most of the effects.

It is a testament to their strength of construction that many Gallina sites still have standing walls and intact features. Active management, continuous monitoring, and visitor education are vital to the preservation of these sites. We will never be able to recapture the sense of place the Gallina felt or Cope experienced, but by sharing the value of these sites with the public, we can impart some of that sense through historical perspective.

Archaeology Southwest

- J. Michael Bremer



J. MICHAEL BREMER









The Nogales Canyon site in Hibben's time, and today. TOP IMAGE COURTESY OF THE HIBBEN ESTATE AND THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO. BOTTOM PHOTO COURTESY OF LEWIS BORCK



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We are rapidly approaching our 30th volume of Archaeology Southwest Magazine. We are also deeply engaged in strategic planning that considers Archaeology Southwest's past, present, and future. This magazine has been, is, and will remain integral to our Preservation Archaeology mission.

In the Fall of 1986, when we put together our first issue of what was then called the *Archaeology in Tucson Newsletter*, we included a photo of our "charter members"—a group of nine persons who had toured a local archaeological site with us. Today, displaying our nearly 1,200 members requires a map of North America. That map shows members in all but seven U.S. states, highlighting that we now serve a national audience, not just a local one in Tucson, or even the Southwest.

Another map of the geographic centers of our magazine topics shows only a few "empty zones" that we have not featured. This issue on the ordinary, yet distinct ancient inhabitants of the Gallina highlands fills a formerly unexamined zone on the map.



Standing walls in one of the few Gallina cliff structures still preserve plaster on their interior some 700 years after they went out of use. Unfathomably, modern visitors felt compelled to deface this ancient place. Note the large spray-painted spiral, as well as the word "Happy" on the wall in the right, mid-ground. Educating backcountry travelers about how and why to visit with respect is a never-ending challenge, and an important part of Archaeology Southwest's mission. PHOTO: LEWIS BORCK

In the preceding pages, Mike Bremer conveys clearly that the Gallina area was long protected simply by its virtual inaccessibility. Today, however, the Internet, off-road vehicles, and new roads make these formerly hidden

**back sight** (băk sīt) n. 1. a reading used by surveyors to check the accuracy of their work. 2. an opportunity to reflect on and evaluate Archaeology Southwest's mission. places widely known and much easier to access. The quiet wilderness that Gallina once was is now a threatened place. We recognize that sharing this place and its special story on these pages could make such threats even worse. But ongoing education, expanding site-steward programs, and reducing direct road access in some cases are the few practical options to achieve protection. *Archaeology Southwest Magazine* embodies our long-term commitment to encouraging and informing rich, respectful experiences—whether armchair or direct—that are grounded in the Preservation Archaeology ethic.

Willow Z. Doelle

See our maps of membership and Archaeology Southwest Magazine issue topics at archaeology southwest.org/asw29-1.