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Following the Kayenta and Salado Up the Gila

Jeffery J. Clark, Center for Desert Archaeology

AT THE CENTER FOR DESERT ARCHAEOLOGY, we view Salado as a new identity or religion that resulted from extended contact between ancestral Puebloan immigrants from the Kayenta region of northeastern Arizona and local groups in the southern Southwest. These socially distant peoples lived side by side in large communities for more than a century before the arrival of the Spaniards. The story of how we came to this view and the places we have investigated to test its validity has unfolded over more than a decade.

Our research began in 1998, in the San Pedro River valley of southeastern Arizona. The San Pedro turned out to be the ideal “laboratory” for studying the Salado phenomenon (see *Archaeology Southwest*, Vol. 17[3]).

Using knowledge gained in the San Pedro, we obtained National Science Foundation (NSF) funding in 2003 to examine adjacent basins and valleys (see *Archaeology Southwest*, Vol. 22[4]). This research indicated that our Salado model could be applied to at least some other valleys in southern and central Arizona, particularly the Safford Basin and Aravaipa valley (see *Archaeology Southwest*, Vol. 20[2]).

Artifact distribution patterns and data obtained through sourcing techniques led us to conclude that Kayenta immigrants and their descendants, a minority in a foreign land, had power disproportionate to their numbers. Part of this power derived from a social network that connected migrant enclaves. Although these enclaves were dispersed across southern Arizona, they were held together by shared heritage. We used a diaspora model to conceptualize this network. Powerful ideas about decorated pottery production and exotic goods, such as obsidian, moved from enclave to enclave along this network. Much of the obsidian originated in the Upper Gila, particularly the large Mule Creek source.

Beginning in 2008, with the support of a subsequent NSF grant, we turned our attention to the Upper Gila. Prior to the appearance of Salado, people living in these areas followed traditions that archaeologists call Highland and Mimbres Mogollon. Because fourteenth and early fifteenth century decorated ceramics from the Upper Gila and southern Arizona are similar, we thought that Kayenta immigrants might have also established enclaves in the Upper Gila.



Aerial view of the Fornholt site in the Mule Creek valley, southwestern New Mexico. This thirteenth century site is the focus of a preservation archaeology field school co-sponsored by the Center for Desert Archaeology and the University of Arizona.

Henry D. Wallace

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Places mentioned in this issue.

Previous research indicates that the Cliff Valley was the focal point of fourteenth century Salado settlement in the Upper Gila. Earlier work also suggested that much of the Upper Gila was depopulated after the Classic Mimbres collapse of the early twelfth century. As a result, we postulated that Kayenta groups migrated to a frontier where they could continue their culture and religion in relative isolation, unlike their relatives in the heavily populated Hohokam area to the west. Several seasons of fieldwork in Mule Creek (see pages 3–8) have led us to reconsider that model. We now have evidence that some areas of the Upper Gila were inhabited by substantial populations when Kayenta groups arrived.

Because late types of Salado pottery are found at several sites in the Upper Gila, we also think that displaced Salado groups from southeastern Arizona came to this region in the late fourteenth century. Their stay in southwestern New Mexico was brief, however, because many Upper Gila Salado sites were depopulated by the early fifteenth century. The large number of cremation burials, which was the common practice at Salado sites in

southeastern Arizona and southwestern New Mexico, and substantial amounts of Salado polychrome pottery at sites such as Hawikku suggest that some of the groups we have been tracking settled at Zuni in the fifteenth century.

Over the past three years, our field effort has focused on Mule Creek. Existing collections from several significant Cliff Valley sites, including Ormand Village and Dinwiddie, are incorporated in our study. Unfortunately, we did not receive permission to visit other important sites in the Cliff Valley, notably Kwilleyekia Ruin, a large Mimbres and Salado site that was intensively excavated in the 1960s.

Obsidian and intellectual curiosity, as well as personal and professional contacts, led us to Mule Creek. If Kayenta groups were tightly controlling obsidian exchange, we expected to find an enclave near the source. Robert Jones and Steven Shackley discuss this topic (see pages 8–9). Mule Creek was virtually unexplored by archaeologists before 2007, when Arizona State University graduate students conducted test excavations at the 3-Up site. In 2008 and 2009, in partnership with Hendrix College, the Center for Desert Archaeology conducted a field school at 3-Up under Brett Hill's direction. This combined work identified a large Salado settlement on top of an even larger Classic period Mimbres occupation (see pages 3–5). Test units around one of several room blocks produced pottery that is closely identified with Kayenta, suggesting we had discovered the enclave that supplied Mule Creek obsidian to Kayenta groups in Arizona.

Community contacts made in 2008 and productive research results led to an expanded field school effort in 2009. We completed our work at the 3-Up site and sampled two other sites, Gamalstad and Fornholt. The

unique construction and layout of the final occupation at Fornholt immediately drew our attention, as discussed by Katherine Dungan and Deborah Huntley (pages 5–8). This occupation fills the “gap” between the collapse of Classic Mimbres and the arrival of the Kayenta in the late thirteenth century. The potential for overlap between Fornholt and the Kayenta enclave at 3-Up raises interesting questions about multicultural interaction among Kayenta, local groups, and other immigrants who may have been attracted to the Mule Creek obsidian source.

Karen Schollmeyer and Margaret Nelson have long-term research interests in the Upper Gila, Mimbres, and eastern Mimbres areas. Their regional overview of the

major changes that occurred after the mid-twelfth century (pages 9–10) shows that a relatively uniform cultural landscape became a complex cultural mosaic.

The final articles in this issue address key elements of the Center’s mission. Andy Laurenzi describes the Center’s site protection efforts in southwestern New Mexico (page 11), and William Doelle’s “Back Sight” essay considers the Center’s preservation archaeology field school partnership with the University of Arizona.

Our research in the Upper Gila and the field effort at Mule Creek are very much a work in progress. This issue of *Archaeology Southwest* presents the primary research questions we are currently exploring.

The research discussed here has been supported by NSF grants BCS-0342661 and BCS-0819657.

Test Excavations at the 3-Up Site

Deborah L. Huntley, Robert M. Jones, Katherine A. Dungan, J. Brett Hill, and Jeffery J. Clark
Center for Desert Archaeology

CENTER FOR DESERT ARCHAEOLOGY researchers began work at the 3-Up site in 2008, when we initiated the Mule Creek Archaeological Testing (MCAT) project. That year, we were joined by students from Hendrix College. The team excavated test units at 3-Up and two other sites. Our work provides new insights into the migration of people to this part of the Upper Gila River valley after A.D. 1200, and into settlement patterns across the region.

People lived at the 3-Up site for at least seven centuries, and perhaps even continuously. Ceramic evidence indicates the presence of people in the Late Pithouse period (A.D. 750/800–1000), the Mimbres Classic period (1000–1130), and the later Kayenta and Salado periods (1250–1450). Examples of pottery that can be dated to the early 1200s are rare, but we do have enough to confirm that people were living at the site at that time.

The 3-Up site was first recorded and mapped by the Mimbres Foundation in 1977, and subsequently tested by Arizona State

University (ASU). MCAT excavated nine test units and produced a detailed contour map. Our test units were located near room blocks in three areas of the site, designated Loci A, B, and C. At present, it appears that Locus A may have been occupied more or less continuously, while Locus B and Locus C were inhabited for more limited periods of time.

Locus A, the most deeply stratified deposit at the site, is positioned atop a natural hill that slopes down to the terrace above Mule Creek. Most of the site’s visible surface architecture is found at Locus A, and both cobble masonry and



Aerial view of the 3-Up site. Locus A is the broad hill just left of the center of the image, and Mule Creek is to the right of Locus A.

Henry D. Wallace

adobe construction are present. Three test units at Locus A (two by ASU, one by MCAT) produced ceramics from many periods and from a variety of regional traditions. Based on the quantity of ceramics dating to the period, Locus A may represent the largest Classic Mimbres settle-



Top: Decorated ceramics collected from the surface of Locus A at the 3-Up site document the long occupation of this locus and serve as indicators of changes in the cultural identities of past residents. Right: Perforated plate on the floor of a room with adobe walls in Locus C, the 3-Up site.

ment in the Mule Creek valley. The presence of pottery known as Tularosa Black-on-white indicates there were regionally indigenous residents in the 1200s. The latest evidence of settlement at Locus A dates to the Cliff phase of the Salado period (1375–1450). This late settlement was substantial.

Locus B is situated on another natural hill southeast of Locus A. Cobble and adobe wall alignments are visible on the northeastern part of the rise. ASU researchers excavated two test units in Locus B, which revealed deep deposits in an adobe room block on the eastern side of the hill. We excavated three additional test units in trash deposits associated with this same room block.

Ceramic evidence recovered from Locus B suggests the presence of a Kayenta migrant community in the period between 1250 and 1350. Locus B contained a much larger proportion of Maverick Mountain Series ceramics, decorated pottery associated with Kayenta groups in this time period, than either Locus A or Locus C. We found

evidence of Salado-affiliated groups in the form of Gila Polychrome pottery (1325–1400) at Locus B, but we did not find as much of the later types of Salado polychrome as we did elsewhere on the site.

Locus C is spatially isolated; it consists of two small natural hills topped with adobe architecture. ASU's team encountered deep midden, or trash, deposits in a test unit just north of an area of mounded adobe. We excavated three more test units in the same area. One of the units contained the well-plastered floor of a shallow room. On this floor, we found several crushed ceramic vessels and a portion of a perforated plate (see photograph). This is significant because perforated plates were only made and used by potters of Kayenta heritage.

Based on the ceramics found at Locus C, we believe that this area of the site represents an outlying late Salado community. The ceramics are dominated by late Salado pottery types, including late polychrome varieties Cliff, Tonto, Dinwiddie, and Nine Mile, which date after 1350. Taking the ceramic evidence together, then, we believe that Locus C was occupied after Locus B, and at the same time as the latest occupation of Locus A.



In our preliminary analysis of the tempering materials used by potters in preparing clay for the ceramics, we found that much, if not all, of the Maverick Mountain Series and Salado polychrome pottery was locally produced. This means Kayenta and then Salado potters were present at the site. Local groups did not import these pots from other, more distant places.

Obsidian nodules are abundant both on the surface of the 3-Up site and in nearby Mule Creek. In addition, the site is less than a day's walk from an important obsidian exposure. We recovered nearly 6,000 pieces of debitage, or debris from the making of flaked stone tools. About half of that material is obsidian, and almost all of the projectile points we recovered are made from obsidian.

There are differences in the density of obsidian debitage among the three locations we studied. These differences likely reflect change over time. Locus A, the earliest and longest occupied area, has the least obsidian. Locus C, the late Salado room block, has the most. Finally, Locus B, where we found most of the Maverick Mountain Series pottery that we associate with Kayenta migrants, falls between the two.

This pattern suggests that obsidian use at the 3-Up site increased through the 1200s and 1300s and peaked in the late 1300s, at the height of Salado polychrome production. This is consistent with our current interpretation of the site, in which a Kayenta enclave at 3-Up developed into a Salado settlement that distributed obsidian from the Mule Creek area to other Salado communities in southern Arizona.

Based on our investigations at the 3-Up site, we hypothesize that there were at least two waves of migration into the Mule Creek area: one that brought Kayenta immigrants in the late 1200s, and another that brought Salado-affiliated groups from southeastern Arizona after 1350. Evidence for the first wave comes in the form of the Maverick Mountain Series pottery we recovered from Locus B.

At first, and based upon previous scholarship that had suggested this area was an empty frontier in the 1200s, we hypothesized that the initial Kayenta migrants to this region may have formed small colonies where they continued to practice their traditions in relative isolation. After our work at 3-Up and the nearby Fornholt site (see pages 5–8), however, we see things differently. And we

have more questions. Because evidence from the 3-Up site suggests people were living there in the 1200s, and because evidence from Fornholt indicates a sizable, probably culturally distinct population there at the same time, we now believe that local groups were present when the migrants arrived.

The second wave of migration is attested to in our data from 3-Up, and more generally, in the substantial population increase in the Upper Gila River valley after 1350. Archaeologists see this population increase in both the number and sizes of sites dating to this period. We believe that migrating groups from southeastern Arizona were comprised of Kayenta descendants who had settled there and people with Hohokam connections who would have been their neighbors.

In the generations prior to this migration, after living essentially side by side, these two groups were integrated into a new social identity that we now call Salado. When they came to this region, these hybrid migrant groups joined previously established Kayenta enclaves, such as the one we have evidence of at Locus B, to form the large, late Salado sites found along the Upper Gila and its tributaries.

Fornholt and the Tularosa Frontier

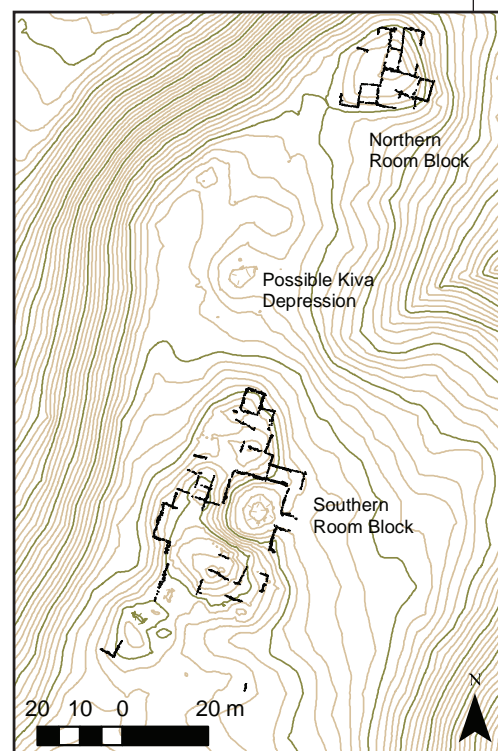
Katherine A. Dungan, Center for Desert Archaeology

AS OTHER AUTHORS HERE CONVEY, thirteenth century southwestern New Mexico was a patchwork of traditions and relationships, some with strong contrasts and obvious borders, others blending at the edges. After the region-wide Classic Mimbres period collapse in the mid-1100s, it seems that a border between various cultural traditions developed in the Mule Creek area. This apparent boundary may have affected community relationships and the exchange of goods and information.

The Tularosa phase is a name archaeologists have given to a thirteenth century cultural complex known from sites in the Mogollon highlands along the San Francisco and Blue rivers. Tularosa phase sites contain relatively compact masonry room blocks and rectangular kivas. The pottery found at these sites is primarily corrugated brown ware pottery, along with black-on-white and polychrome painted vessels that would have been imported from farther north.

There is another, essentially contemporaneous tradition known from areas south and east of Fornholt, in the Gila and Mimbres river valleys and the eastern Mimbres region. We believe that these valleys were more thinly populated at the time. Known to archaeologists as the Black Mountain phase, this tradition is characterized by a mix of ceramic traditions and architectural styles, including adobe construction.

The Fornholt site is particularly interesting because, based on the evidence we have found so far, it seems to represent a Tularosa phase site. Thirteenth century sites in the surrounding area, however, show the Black Mountain phase



Map of the final occupation at the Fornholt site. The southern room block was two stories high and was built around a probable kiva or plaza. There is a smaller northern room block. The date of the possible kiva depression between the room blocks is not yet known.

Katherine Dungan

pattern. Thus, our test excavations at Fornholt can contribute to two separate avenues of research.

The first avenue is comparative, and examines the Fornholt site in relation to sites in the Blue and San Francisco river valleys. These drainages are relatively well studied: Walter Hough led a Smithsonian expedition to the region in the first decade of the twentieth century, and his descriptions and sketch maps were supplemented some fifty years later by Edward Danson's large-scale survey for the Peabody Museum, as well as by a number of excavations conducted by the Field Museum. Based on our work at Fornholt (pages 6–8), we make comparisons to three of these sites: WS Ranch, Foote Canyon Pueblo, and Higgins Flat.

Although Tularosa phase settlements seem fairly similar to each other when compared with the diverse traditions to the south and east, careful comparison reveals significant variability in size, layout, and the positioning of ritual architecture at Tularosa sites. The amount of work done in the mid-twentieth century makes this area amenable to reevaluation. A preservation-based approach fo-

cusing on existing artifact collections and project archives is ideal for meeting our goals.

The second avenue of research considers Mule Creek as part of a boundary or frontier. Fornholt is not alone at the apparent southern edge of Tularosa phase sites. Perhaps the best-known site located along the "Tularosa frontier" is Gila Cliff Dwellings National Monument, north of Silver City, New Mexico. Other settlements were built in New Mexico's Black Range and, perhaps, near Safford, Arizona. Because there is a great deal of variability among these settlements, it is important to determine whether they represent the edge of a single, coherent tradition, or if they are part of a more complex border zone where various traditions were being combined and reassembled.

A further question to consider is if people living in these "frontier" sites were immigrants from the Mogollon highlands or local groups experimenting with and adopting traditions from their northern neighbors. Our work at Fornholt should increase understanding about the subtle variation within the Tularosa heartland and the more obvious flexibility seen at sites along its southern edge.

Ongoing Investigations at the Fornholt Site

Deborah L. Huntley and Katherine A. Dungan
Center for Desert Archaeology

LOCATED ON A RIDGE overlooking Tennessee Creek, the Fornholt site provides good evidence that people were living in the Mule Creek area in the A.D. 1200s, contrary to what we and other archaeologists expected. Ceramic evidence suggests that the ridge had been previously occupied over the course of several hundred years. Subtle depressions, which probably indicate the presence of Pithouse period structures, provide additional evidence of early occupation.

We began investigations at the site in 2009 as part of the Mule Creek Archaeological Testing (MCAT) project. In 2010, a crew of Center for Desert Archaeology staff and volunteers returned to the site. To produce a detailed site map, we cleared walls that were visible on the surface of the site. This low-impact strategy involved scraping a few centimeters of topsoil and removing weeds and debris around the surface wall remains to improve their visibility.

There are two slab masonry room blocks at Fornholt within a stone's throw of one another. Together, they contain about sixty rooms. The southern room block appears to have been two stories high. It surrounds a large, rectangular depression that may have been a ceremonial structure known as a kiva, or a plaza. Interestingly, these room blocks



Overview of the southern room block at the Fornholt site. The large kiva or plaza in the center of the photograph is bounded on three sides by two-story room blocks.

Henry D. Wallace

were built essentially on top of an earlier Mimbres Classic period (A.D. 1000–1130) settlement; the builders used stones from the earlier room block to construct the later pueblo.

The detailed map of Fornholt's architecture and layout (see page 5) allows us to compare it with other, generally contemporaneous settlements to the north along the San Francisco and Blue rivers. These comparisons also help us to interpret the depression in the southern room block. Given its depth, it seems likely to represent a large kiva, rather than a small plaza.

One example supporting this possible interpretation is a kiva excavated at Room Block C of WS Ranch, a site in the San Francisco River valley that also dates to the 1200s. Both the WS Ranch kiva and this area of Fornholt appear to be large, rectangular, semisubterranean rooms with elaborate east-facing entrances. These large areas are enclosed within room blocks.

Another large, rectangular, roofed area surrounded by a room block was recorded by the Field Museum at Foote Canyon Pueblo, a thirteenth century site in the Blue River valley. Unlike the kiva at WS Ranch, the Foote Canyon Pueblo structure had no floor features, other than several large postholes. The excavators interpreted this space as a plaza. Small, enclosed plazas have been recorded at other sites in the area that date to the Tularosa phase (1180–1300).

In addition, large kivas separate from room blocks appear at some sites in the region, such as Higgins Flat. Here, a Tularosa phase kiva was built over an earlier kiva located in the open space between the site's two room blocks. There is a large depression between the two room blocks at Fornholt; future work could determine if this represents another large Tularosa phase kiva like the one at Higgins Flat, or if it is a large structure associated with an earlier Pithouse period occupation.

The pueblo at Fornholt was built primarily of minimally shaped blocks of local conglomerate material, along with some irregular cobbles of finer-grained volcanic rock. There is some variety in wall construction: in several places, tabular stone and large sherds were used as chinking (placed between larger stones to fill gaps or to help support



Last day of the 2010 season, working late to finish clearing at the northern room block at the Fornholt site.

the weight of the wall), and parallel courses of upright cobbles formed part of the northern wall of the kiva or plaza enclosed by the southern room block. Many walls in the northern room block show evidence of burning.

Pottery recovered from Fornholt not only helps us date the site, but also gives us clues about regional connections in the thirteenth century. Most of the ceramics we found are brown wares with a variety of surface treatments, including corrugated vessels and Tularosa Fillet Rim bowls. These are characteristic of Tularosa phase sites to the north and west. We also found decorated ceramics that came from areas farther north and west, including Cibola White Ware (such as Tularosa and Pine-dale Black-on-white) and St. John's Polychrome, a White Mountain Red Ware. Because some of these non-local decorated wares have been dated through dendrochronology, we can infer that the last community at Fornholt dates from about 1200 to 1325.

Significantly, we also found pottery that probably came from areas to the south and southeast: El Paso Polychrome and Playas Red Incised. Although this mix of "northern" and "southern" pottery types occurs at other thirteenth century sites in southwestern New Mexico, it is not common in the Blue and San Francisco river valleys. To us, this mix suggests that Fornholt existed in a "frontier zone" (pages 5–6).

Although the thirteenth century community at Fornholt would have existed at the same time as one at the nearby 3-Up site, the striking contrasts between the two pueblos imply that there were significant social differences between the two settlements. First, there is no evidence of adobe architecture at



Linda Pierce

Wall clearing in 2010 involved very limited disturbance to the site and allowed a map to be made.

Fornholt, but there is extensive use of adobe at 3-Up. Differences in site layout are also apparent: Fornholt seems more compact, with a more formal layout, in the sense that one of its two room blocks was constructed around a plaza or kiva. Based on more limited architectural data, 3-Up seems to have grown by accretion, with several room blocks scattered across the site.

Second, both Maverick Mountain Series and Salado polychrome ceramics are absent from Fornholt, suggesting that interactions with Kayenta immigrants at the 3-Up site and elsewhere were limited. Although we do not currently have enough data to make a strong argument, we hypothesize an ongoing tension between two settlements with slightly different occupation histories and cultural affiliations, a tension that was exacerbated by Kayenta immigration to 3-Up during the late thirteenth century.

One source of tension may have been related to obsidian. Although obsidian is abundant in Mule Creek itself (pages 8–9), access to its sources and control of its circulation may have been contentious, given that occupants of the 3-Up and Fornholt sites seem to have shared many of the same long-distance trading partners to the north and south.

Both 3-Up and Fornholt are persistent places on Mule Creek, places where people lived for many centuries. Although the community at Fornholt ended by the early fourteenth century, the community at 3-Up developed into a substantial village during the fourteenth century, and probably continued for another hundred years, until people left the region in the early fifteenth century.

At present, we can only speculate about the circumstances surrounding the depopulation of Fornholt. We presume that the burning observed in the northern room block coincides with the end of residence there, but we cannot yet distinguish between a respectful act of closure and violent destruction. The residents of Fornholt may have been absorbed into the growing settlement at 3-Up, or they may have left the area entirely.

Notably, when Salado-affiliated people settled near Fornholt sometime in the mid-1300s, they reoccupied Gamalstad, an earlier Mimbres site on a low rise at the confluence of Tennessee and Mule creeks, rather than Fornholt. Our continuing work at Fornholt should help to clarify its relationship to 3-Up, as well as its connections to other thirteenth century settlements in southwestern New Mexico.

Tracing the Movement of Mule Creek Obsidian

Robert M. Jones, Center for Desert Archaeology
M. Steven Shackley, University of California, Berkeley

SEVENTEEN MILLION YEARS AGO, a series of volcanic eruptions brought ash, rhyolite, and silica-rich magma to Mule Creek, New Mexico, or, in geological terms, to this part of the Mogollon-Datil volcanic field. The consequences of these volcanic events are still apparent: the rolling, picturesque hills are comprised primarily of eroded tuff, the creek itself carries plenty of rhyolite, and the domes of magma have long since cooled into obsidian. Known scientifically as marakenites and popularly as “Apache Tears,” the obsidian nodules that have eroded into local creek beds are the most unique aspect of Mule Creek geology.

Obsidian is a volcanic glass. People in the past prized obsidian because of its flaking properties and its ability to form an extremely sharp edge. The most common, easily recognizable obsidian artifact in the Southwest is the small, triangular arrow point, although other tools were also made of obsidian.

Sources of obsidian are chemically distinct; that is, we can identify which source a nodule came from based on a constellation of trace elements unique to that source. There are at least three chemical groups that comprise the Mule Creek obsidian: the Mule Mountains group, the North Sawmill Creek group, and the Antelope Creek group.

Obsidian recovered from the Mule Creek Archaeological Testing (MCAT) excavations (pages 3–8) was chemically sourced at the Geoarchaeological XRF (x-ray fluorescence spectrometry) Laboratory at the University of California, Berkeley. Not surprisingly, the three sites MCAT investigated, 3-Up, Fornholt, and Gamalstad, showed evidence that residents used local obsidian almost exclusively. This makes sense, as it would have been readily available in creeks adjacent to these sites. However, we also found that most of the obsidian at these sites comes from the Antelope Creek group.



Obsidian arrow point from the 3-Up site.

Mat Devitt

This is interesting because 3-Up is closer to the North Sawmill Creek source, and because obsidian from the Mule Mountains group appears to be higher quality material. Further study should help us better understand the implications of this pattern.

Evidence from fourteenth century sites throughout the southern Southwest shows that circulation of Mule Creek obsidian expanded in the 1300s. Ceramic and architectural evidence recovered as part of the MCAT project has underscored the existence of social ties between

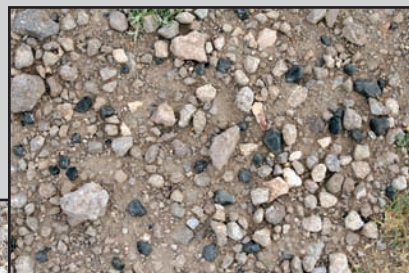
fourteenth century communities in the Mule Creek valley and those in other areas of the southern Southwest at this time. Information gained through chemical sourcing of obsidian also helps us see those connections, in the sense that we can determine where obsidian from the Mule Creek source group ended up. Understanding what Mule Creek obsidian meant to people in the past, the role it played in social connections among them, and what those connections actually meant requires a holistic approach that includes all available lines of evidence.

Mule Creek Obsidian in the Time of Salado

Robert M. Jones, Center for Desert Archaeology

ARCHAEOLOGISTS HAVE LONG sought a comprehensive explanation for the broad distribution of Salado polychrome ceramics and the community-level changes associated with the introduction and use of this pottery. As a Center for Desert Archaeology Preservation Fellow, I am examining this “Salado Phenomenon” from a new angle—the circulation of obsidian.

To understand the movement of Mule Creek obsidian across the southern Southwest, I am examining collections recovered during MCAT investigations, as well as existing collections from sites across the region that date to the A.D. 1250 to 1450 interval. Chemical sourcing of selected specimens will yield information coming from and where it was going. This will allow me to determine patterns of obsidian exchange in this time period. I will also consider other archaeological evidence to interpret the meaning of these patterns, thereby contributing new insights into the Salado phenomenon. For more on the Center’s Preservation Fellowship program, visit www.cdarc.org/who-we-are/preservation-fellowship/.



Obsidian nodules are abundant on the current ground surface, and collections like this will provide refined information about the materials that were readily available to residents of the 3-Up site.

about where obsidian was

The Complicated Social Landscape of the Twelfth through Fifteenth Centuries in Southwestern New Mexico

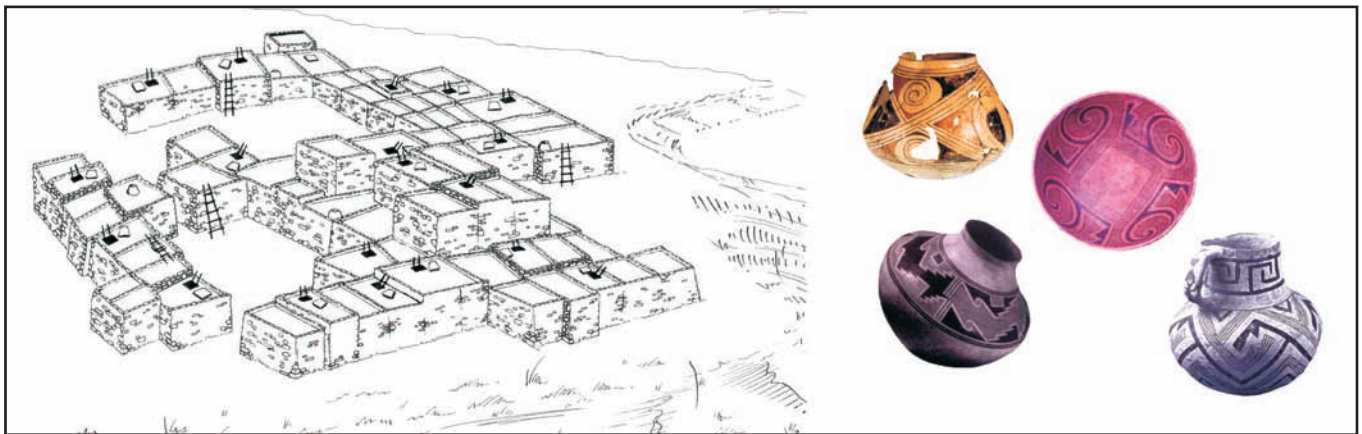
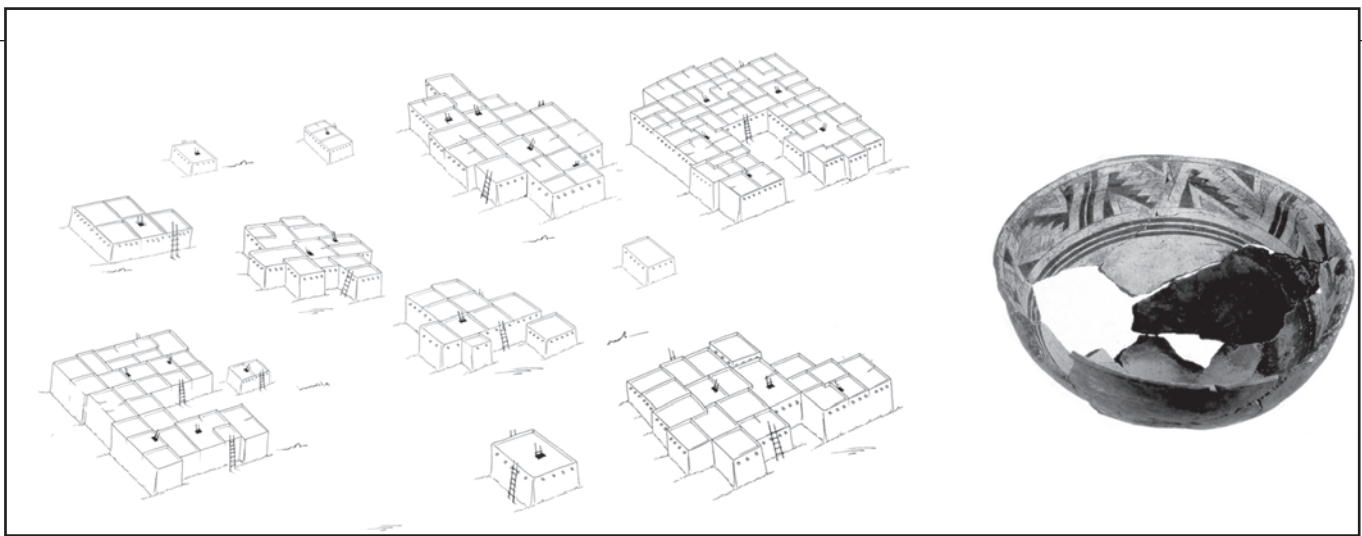
Karen Gust Schollmeyer, Simon Fraser University and Arizona State University

Margaret C. Nelson, Arizona State University

PEOPLE LIVING in southwestern New Mexico along the Upper Gila and Mimbres rivers and the Río Grande in the eleventh and early twelfth centuries shared a common way of life. They lived in single-story masonry pueblos laid out much the same way across the region. They made only one kind of painted pottery, the well-known Classic Mimbres Black-on-white. This relative uniformity in the materials of daily life contrasts sharply with the traditions that followed. By the mid-twelfth century, many people had left the region. The remaining population organized their settlements differently and

used new painted pottery types. Over the course of the next two centuries, southwestern New Mexico became very diverse. People built homes of adobe, cobbles, or shaped stone. Some villages were single story, and others were multiple stories. Some had rows of rooms, and others had large blocks of rooms enclosing plazas. People made and used many kinds of painted pottery, as many as a dozen different types in a single village.

At times, we find that neighboring villages show very different architectural styles and pottery traditions. Because we know that architecture and pottery express



Top: Artist's reconstruction of a typical Classic Mimbres village and a Classic Mimbres Black-on-white bowl. Bottom: Artist's reconstruction of a late thirteenth century village and some of the pottery types found in villages from this period. (Reconstructions by Will Russell.)

aspects of identity and, at the same time, influence the formation of those identities, we believe that the social landscape of the twelfth to fifteenth centuries in this region was a complicated mix of identities and traditions.

This diversity presents a great challenge to archaeologists. What processes shaped the dramatic shift from a single, shared tradition to a patchwork of diversity in material culture?

Evidence from the southern Mimbres valley, Deming Plain, and the Seco and Palomas drainages shows some continuity with Classic Mimbres villages. Some people seem to have remained in or near Classic Mimbres villages, but changed their building techniques and pottery styles to resemble those of neighboring regions, especially areas to the south and southeast. Material culture that was rare but not unknown in Classic Mimbres villages, adobe buildings with foundation stones, cremations, and imported pottery, became common in the A.D. 1200s. Later in that century, sites with adobe architecture were built adjacent to abandoned Classic Mimbres villages.

Other evidence, however, indicates that changes in material culture after the mid-twelfth century involved significant population movements. In southwestern New Mexico, there are substantially fewer sites dating to the

thirteenth century than are known from previous or subsequent centuries; many people must have moved. The formerly iconic Classic Mimbres pottery was replaced entirely by other pottery traditions. Archaeologists working in the Cañada Alamosa link thirteenth and fourteenth century masonry and pottery styles with immigrants bearing northern traditions. Some villages there incorporate older Mimbres building styles, and others do not. Likewise, sites in the Upper Gila also show evidence of possible continuity and significant population movements during these centuries.

Recent research has produced many new ideas about continuity and replacement, migration and exchange, and the ebb and flow of cultural traditions. When multiple styles coexist, multiple processes may account for their presence. Further, the same style may appear in different areas across a region for a number of reasons, as part of the material culture of immigrants in some areas and emulated or traded into others.

Archaeologists from several institutions are tackling these difficult questions, sharing data and ideas. Open collaboration among researchers working in southwestern New Mexico brings us all closer to understanding the complicated picture of this intriguing time period.

Site Protection in the Upper Gila

Andy Laurenzi, Center for Desert Archaeology

AS **ARCHAEOLOGISTS** working in the region can attest, piecing together the rich stories of these special places in the Upper Gila and Mimbres valleys has advanced gradually over many years. In interpreting this record of the past, archaeologists plainly benefit from previous research and from ongoing advances in technology. For Native Peoples, these places have strong cultural and historical values. Growing pressures from development and ongoing natural processes, such as erosion, are clear threats to these scientific, cultural, and historical values. Long-term protection of archaeological sites and collections is, therefore, an indispensable element of preservation archaeology.

Through our partnership with the National Trust for Historic Preservation, we have significantly expanded the Center for Desert Archaeology's capacity to protect archaeological sites. Using tools ranging from regular landowner communication to outright purchase of land, the Center is working to protect the places of our shared past. The Upper Gila is currently a focus of ours. Protection begins, and continues, with close collaboration between our researchers and our site protection staff. For the Upper Gila and the Mimbres valley, the Center's research team provided my protection team with information about large habitation sites.

Next, we determined the land ownership of the nearly thirty sites identified by the research staff. Twenty-five of these sites are privately owned by twenty different landowners, who range from long-time residents, mining corporations, non-profit conservation organizations, and real estate developers. Over the past year, we have been contacting these landowners and asking their permission to visit the sites. When we visit a site, we assess its condition and size, and we examine surface architecture and artifacts. Unfortunately, all of the sites we have visited have been vandalized or inadvertently damaged by farming, mining, or residential development at some point in the past.

After we complete our assessments, we prioritize sites for long-term protection. We also commit to an ongoing relationship with the landowner. Understanding the landowner's needs and concerns is fundamental to developing mutually agreeable, case-specific strategies that protect a site over the long term.

During this year-long process, we were pleased to learn that three Salado sites partially excavated by the Mimbres Foundation have changed little in the nearly forty years since those investigations took place. One of the sites is owned by the Mimbres Foundation, another is on a large ranch protected from development by a conservation easement, and one remains in the proud ownership of the landowner who provided access to the Mimbres Foundation. This landowner's reasons for protecting the site in his lifetime are straightforward and instructive: he does not want anyone digging in his ancestor's graves, so he feels the same should apply to the prehistoric site under his care.



Our researchers and site protection staff work closely together—here, planning a day of site visits in the Silver City area.

William Doelle

Supplementary online material for this issue is available at: www.cdarc.org/asw-24-4.

See the Center for Desert Archaeology website for more information: <http://www.cdarc.org>

AT THE CENTER FOR DESERT ARCHAEOLOGY, we envision a society in which the places of the past are valued as the foundations for a vibrant future. As such, it is our mission to preserve the places of our shared past. A private 501(c)(3) organization, the Center is supported through donations, memberships, and grants from individuals, foundations, and corporations. Center members receive an annual subscription to *Archaeology Southwest* and a host of other benefits. For more information or to join, contact Membership Coordinator Kate Sarther Gann at 520.882.6946, ext. 16, or kate@cdarc.org.

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Back Sight

IF AN ARCHAEOLOGICAL SITE is a nonrenewable resource, then why are we conducting a preservation archaeology field school at Mule Creek? Does this support our mission to *preserve* the places of our shared past? We think so, but our reasoning merits further discussion.

First, the Center for Desert Archaeology's research in the Mule Creek area is part of a project that encompasses the Upper Gila region. And the Upper Gila project fits into an even larger, long-term research initiative that extends across much of the southern Southwest. These big picture questions about what happened to southwestern peoples in the centuries just before the arrival of the Spaniards are outlined in the introduction to this issue.

Second, the current landowners of Fornholt, the site where we will work this summer, are committed, responsible stewards, as were their predecessors. The site has been so well protected that only recently was it recorded in the New Mexico site files. Our work will rely on low-impact methods: surface collection, wall clearing, detailed mapping, and limited test excavation. The outcome will contribute to a doctoral dissertation. We made the final commitment to the field school only after we had secured funding for excavation, analysis, reporting, and permanent curation of the artifacts and records. We also are fortunate that previous work done in nearby valleys provides a larger context for the new data our field school will recover. Thus, at every step, we seek to minimize damage and maximize what we learn.

Consider another perspective: limited excavation today can serve as an insurance policy against unforeseen damage or destruction. Our holistic, yet limited, sampling of the Fornholt site will ensure that materials are conserved for future researchers in case the site is ever destroyed.

Because the local community is an ongoing part of our field school, we hope to continue to engage them in the preservation efforts. We think of community members as donors and partners. They give access to something that they have a stronger claim on than we do, that is, the right to explore places that make their community special. We have an obligation to leave behind a bigger story than was there when we started.

Fieldwork yields important information—and it is even fun—but it comes with significant responsibilities. The preservation archaeology field school at Mule Creek seeks an optimal balance. The outcome should increase knowledge of the

past, teach students new skills, and enrich the local community through sharing in the discovery of its past, our shared past.



The 2010 field crew that carried out wall clearing and mapping at the Fornholt site.

Linda Pierce

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 the Center for Desert Archaeology's mission.

*William H. Doelle, President & CEO
Center for Desert Archaeology*