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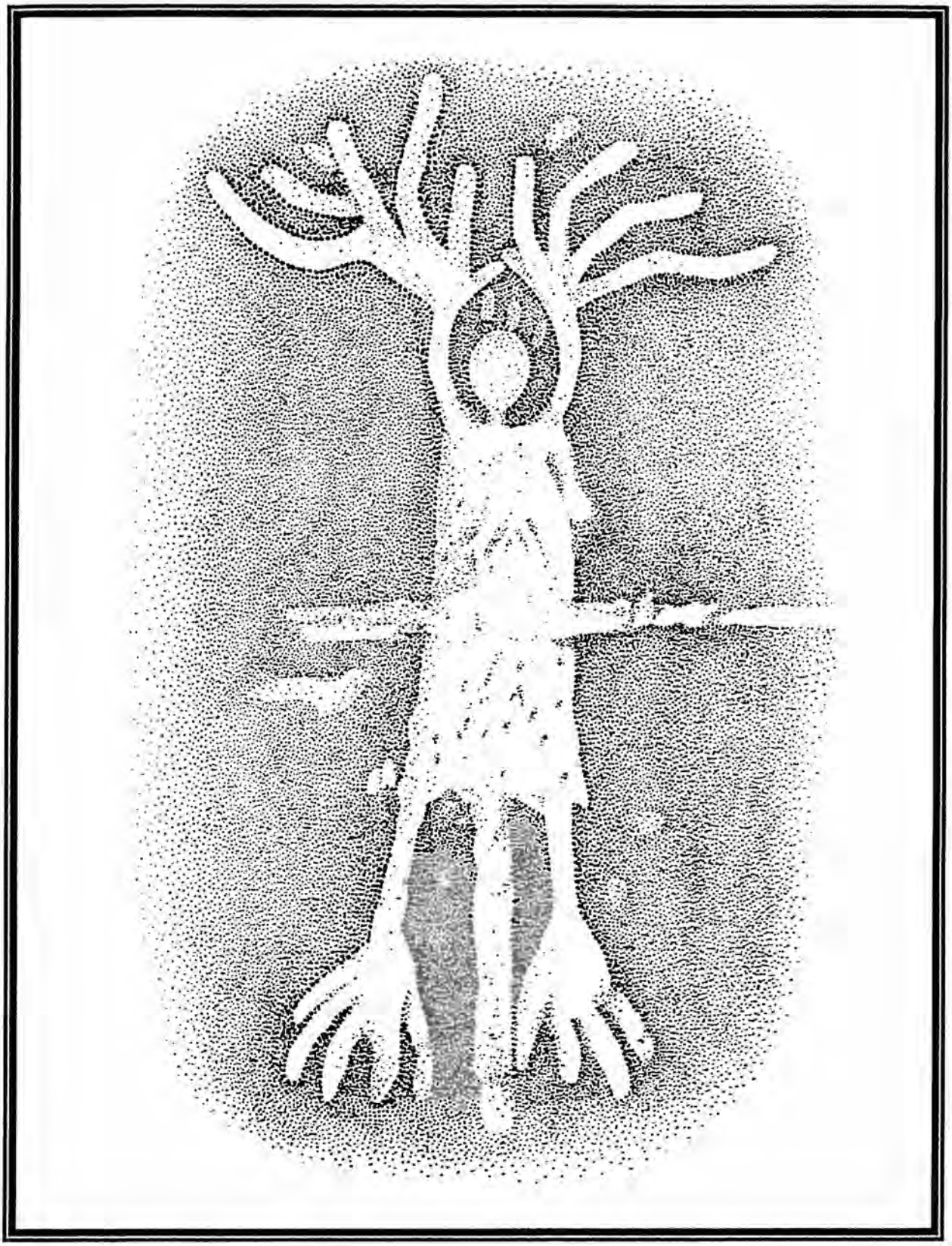

NEVADA ARCHAEOLOGICAL ASSOCIATION

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EDITOR'S CORNER

Featured within are four of fourteen papers delivered at the 26th Annual Conference of the Nevada Archaeological Association held at the University of Nevada, Las Vegas, on March 14-15, 1997. The thematic context for the conference was *Seventy Something, Archaeology of Southern Nevada: Past, Present, and Future* in recognition of the role that archaeology has played over the last seventy years in the understanding of cultural development and history of southern Nevada. Although all of the conference papers dealt with either past history or current research projects, no presenter ventured to advocate the future course of archaeology in southern Nevada.

Over the past seventy years, particularly the last thirty, much has been accomplished. Enormous quantities of data have been accumulated, much of it fragmented in isolation from a larger game plan. Much, however, remains to be accomplished and comprehended. As we prepare to bid farewell to this century and welcome the 21st century, it is time that we take stock of the past and present to address future archaeological interests in Nevada. Perhaps the new century will bring a synthesis of what we do know so that we as avocationalists, professionals, cultural resource managers, and interested parties can focus on what remains to be learned about our common cultural heritage.

Far from addressing the future or representing a synthesis, the following papers do, however, discuss the past as well as present research, taking stock as noted above. As much as some of us may disdain the topic, archaeopolitics has certainly played and continues to play a manifest role in archaeology in general. Our first paper discusses the political career of a Nevada politician, James Scrugham, who promoted and encouraged Raymond Harrington's "efforts to recover the past" in the 1920s. Also reviewing the history of Nevada archaeology, much has recently been compiled about the career of Sidney Wheeler, which is communicated in the second paper. This is followed by a current analysis of the formation and use of the Buena Vista #1 site, a Moapa Valley lithic-source site utilized over a long period of time. Finally, insight into the poorly understood Fremont frontier, specifically "fringe" Fremont settlements, in eastern Nevada is advanced in the concluding contribution.

I would like to thank the authors who shared their works in this volume. As always, the final responsibility of compiling and editing of the volume rests with the editor and not with the authors. So with this as an introduction to Volume 15, please enjoy and support Nevada archaeology.

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Cover: *"Hallelujah Man" — a petroglyph at Ash Springs Archaeological Complex (26LN215), Nevada, illustrated by David Smee, 1997*

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A Forgotten Forefather: A Political Biography of James G. Scrugham

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Abstract

A study of the role of archaeology in southern Nevada over the past 70 years cannot be completed without attention to James G. Scrugham. Mark Harrington is deservedly considered the father of Nevada archaeology, but he had a little help from his boss, the governor - Scrugham.

In Nevada's history, Scrugham was much more than a governor - as if that were not a big enough role. He served as state engineer, a newspaper publisher, a five-term member of the House of Representative, and a United States senator. He also edited a three-volume history of Nevada that is still useful to historians. Had he done no more than support Harrington's effort to recover the past from "Lost City," he would be important to Nevada's history. However, he is important in other ways, and deserves attention for them. This paper attempts to survey the life of an important politician of twentieth-century Nevada.

Presentation

Since becoming a state in 1864, Nevada has produced and profited from a series of political figures whose primary contribution, at home or in Washington, was to aid Nevada's economic development by enhancing their power or that of the bosses they served. In the nineteenth century, William M. Stewart was, as biographer Russell Elliott described him, a "servant of power" who wrote the laws that govern mineral production and benefit larger corporations to this day. In the 1900s and 1910s, Francis Newlands became a leader of the national progressive movement and wrote legislation that used western lands for irrigation and dams that have helped make possible the Sunbelt's growth. From 1913 to 1940, Key Pittman fought for silver, while wielding influence chairing the Senate Foreign Relations Committee late in his tenure. From the 1930s to the 1950s, Pat McCarran built a dominant political machine by pumping federal money into Nevada while pursuing political enemies at home and alleged communists in Washington. In recent decades, Alan Bible fathered the Southern Nevada Water Project, making water available and modern Las Vegas possible; Howard Cannon passed numerous bills in behalf of defense and tourism; and Harry Reid pushed through the creation of the state's only national park, helped negotiate the settlement of controversial water issues in northern Nevada, and moved into the U.S. Senate Democratic leadership.

All were senators, who figured: for a small state like Nevada, accumulated seniority in the upper house is its most likely route to national influence. Few of its representatives gained power, given the size of the House and Nevada's small populace. Some of its governors have enjoyed long-term importance: Republicans Charles Russell and Paul Laxalt and, especially, Democrats Grant Sawyer and Mike O'Callaghan did much to modernize Nevada in the post-World War II years, and Sawyer and Bob Miller have chaired the National Governor's Association.

Amid all of these names, James Graves Scrugham is little-remembered—unfortunately. Scrugham contributed to the

development of the West through his support for the damming of the Colorado River. He is the only person in Nevada's history to serve as governor, representative, and senator. And, ironically, he contributed mightily to Nevada's history, not only editing and writing for a massive three-volume history of the state, but also acting as the guiding force behind the excavation and preservation of the Lost City (Pueblo Grande de Nevada) and thereby aiding in the growth of archaeology in Nevada. Yet, he has only been the subject of a master's thesis, and brief references in several scholarly publications. Scrugham deserves better from scholars of the Nevada experience.

Scrugham was born in Lexington, Kentucky, on January 19, 1880, and earned a degree in mechanical engineering from the University of Kentucky in 1900. After working on engineering projects in Cincinnati, Chicago, and San Francisco for the next three years, he moved to Reno as an assistant professor in the University of Nevada's engineering college. By the time he left the university in 1917, Scrugham had received an advanced degree and had been promoted to dean. He contributed to the growth of the engineering department, acquiring buildings and equipment and building a strong program with help from graduates whom he had helped to obtain jobs.

Scrugham's departure from the university marked his entry into politics. Governor Emmet D. Boyle, a leading mining engineer active both in the public eye and behind the scenes in Nevada's Democratic party, named him state engineer in 1917. As engineer, Scrugham settled disputes over water rights, and served on the state Public Service Commission. During World War I, he interrupted his tenure to serve in the army, rising to lieutenant colonel and helping to start the American Legion.

More important for Nevada's future, in September 1920, Boyle named Scrugham to a commission whose members, including pioneer Las Vegas businessmen Charles P. Squires, Ed W. Clark, and Harley Harmon, were to study the possibilities of reclamation and electricity on the Colorado River. Eventually, Scrugham would become part of the Colorado River Commission, with Secretary of Commerce Herbert Hoover trying to broker an agreement between its members, representing the seven western states seeking water from the river. Scrugham insisted to Hoover, and anyone else who would listen, that there should be a dam on the Colorado River, and that private industry, not the federal government, should build it. He helped negotiate the Colorado River Compact, the plan to divide the waters; he also signed it in behalf of Nevada, and lobbied for its acceptance at home and elsewhere.

Amid these varied activities, Scrugham decided to run for governor in 1922. The incumbent, Boyle, had served two terms, and encouraged his fellow Democrat to seek the job. Not only did Scrugham receive widespread support from the party, his former students, and the American Legion, but he also benefitted from running on a Democratic ticket headed by Key Pittman, an incumbent U.S. senator popular with his constituents and even with many of his Republican opponents. Scrugham won by more than 2,000 votes out of more than 28,000 cast—a good showing for an electoral newcomer, but behind Pittman and most of the rest of the party ticket. While every major statewide officeholder was a Democrat, the legislature was Republican. So was Nevada's dominant political personage: George Wingfield, who owned several productive mines and most of the state's major banks, and evinced little interest in the

kind of holdover progressive reform and expertise that Scrugham represented and advocated.

As governor, Scrugham enjoyed considerable success. He became known as the "Governor on Wheels" and "Gasoline Jim" in recognition of how often he drove around Nevada, meeting voters and seeking their views. To aid those activities, and to build up his state, he succeeded in winning an expanded budget for highway-building: between federal legislation and matching funds, Nevada gained almost 1,000 miles of highways in four years. He aided federal officials seeking a location for a naval ammunition depot; they needed space, and nearby water and transportation, and his efforts helped lead to Hawthorne's selection as the site. When the state legislature agreed to his request for the power to set aside land as recreational areas, Scrugham designated fifteen of them, including the Valley of Fire, and thus created the Nevada State Park system.

Indeed, Scrugham's commitment to and interest in historic preservation and archaeology would have lasting effects on Nevada's future and past. When he learned from archaeologists that what became known as the Lost City might exist, he informed others throughout the West that pending discoveries in Nevada might rival those in Arizona and New Mexico, and alerted prospectors and other southern Nevadans to watch for caves and ruins. In 1924, he invited Dr. Mark Harrington of the Southwest Museum in Los Angeles and New York's Heye Foundation, underwriter of the Museum of the American Indian, to visit Moapa Valley. Harrington and his colleagues found the remains of Pueblo Grande de Nevada. It was a major find: Anasazi buildings revealed evidence of how they lived, their salt mining technology, and commercial economy. Thus, a significant portion of the Anasazi (Virgin Branch) past was reconstructed by historians and archaeologists, a process that continues today.

Scrugham encouraged the state to celebrate and capitalize on the discovery. The 1925 legislature went beyond his requested $200,000 and tacked on another $50,000 to build and equip a state museum. On May 23, 1925, with considerable ceremony, Scrugham formally opened the Lost City area as a state park. The Union Pacific Railroad received permission to display various artifacts at its ticket offices throughout the nation, further promoting the find in Nevada, which became even better known when the building of Hoover Dam created Lake Mead and led to the creation of the Lost City Museum in Overton. Thus, Scrugham contributed to the idea, if not the fact, that tourism should be part of Nevada's economy by adding attractions to the list of reasons to visit the state. He also acted for scholars: on November 1, 1926, the state turned over the entire Lost City complex to the Heye Foundation to continue its research and study. "If I may be allowed to say so," George Heye wrote to Scrugham, "this is the first time in the many years that I have followed the science of anthropology that I have come into contact with anyone occupying a high political position like yours who has really grasped the importance of the work we are trying to do and actually given time to it."

But Scrugham's time as governor, and influencing the state's interest in the Lost City, was running out. In 1926, he faced a tough re-election campaign. The death of Scrugham's predecessor, Boyle, removed his powerful backroom backer. This time, the incumbent senator up for re-election was not Pittman, but a Republican, Tasker Oddie,

meaning that Scrugham himself would head the ticket. Scrugham's opponent was Fred Balzar, a former state legislator who was able, well-known, and personally popular—and enjoyed strong support from Wingfield's machine, although it was nothing personal, since Wingfield liked Scrugham and appreciated his efforts in his behalf.

Scrugham also had problems of his own. When his organ, the Nevada State Journal, quoted Hoover's comment that "Governor Scrugham is the outstanding governor of the West," Republicans quickly pressed the secretary of commerce to deny endorsing the Democrat. Republicans charged Scrugham with accepting help from California interests—then a useful weapon in a state whose citizens well knew how often they had contributed to the wealth of investors who took their money to San Francisco. Scrugham feuded with several party leaders who believed that he ignored the rest of the ticket. Balzar won by 1,800 votes and, as biographer Elizabeth Raymond wrote of Wingfield, "For the first time, at all levels of government, there were men in office who shared the cardinal precepts of his particular political creed: economic diversification and social toleration," including gambling and easy divorce.

However, Scrugham's political career was far from over. Almost at once upon losing, he bought the Nevada State Journal from the Boyle family, and as Reno's Democratic daily it remained the party's de facto organ (he proved less successful when he began a newspaper of the same name in Las Vegas, where he hoped to take advantage of the growth that would result from the construction of the dam that he had advocated; he wound up selling the Journal to the owners of the established Democratic paper, the Review). The purchase also allied him, intentionally or otherwise, with Wingfield: Scrugham owed the bank a $60,000 note that kept the State Journal from making much noise about the machine's dominance; when the state treasurer and controller, both part of Wingfield's machine and elected at the same time as Governor Scrugham, went to prison for embezzling $500,000 from state coffers, the Reno daily was editorially silent.

In 1928, Scrugham became chairman of the state Democratic party—a difficult position, given the Republican party's national and state pre-eminence at the time. And he decided to run for Congress in 1932. Rather than battle Senator Oddie, a two-term incumbent and friend from whom he rented his Reno home, Scrugham ran for the House of Representatives against Samuel Arentz, a popular five-term Republican congressman. With the Depression increasingly affecting Nevada and bringing down Wingfield's banking empire, Scrugham boarded Franklin Roosevelt's bandwagon, and joined the Democratic ticket that swept to victory, albeit with nearly 4,000 fewer votes than Roosevelt. By the time he sought his fifth term in 1940, Scrugham actually ran ahead of the president in Nevada's voting.

Indeed, Scrugham proved successful as a congressman. He fell into line behind Roosevelt's New Deal, but with the predictable and popular western mutterings about the "growing bureaucracy." He worked tirelessly in behalf of silver: while his efforts to repeal the Mint Act of 1873, which had demonetized the metal, failed, he sponsored the House version of the Pittman Silver Purchase Act of 1934, a federal buying plan that would help to nearly triple Nevada's mineral production in two years. As a member and later chairman of the Appropriations subcommittee on the navy, Scrugham pushed through increased purchases

and storage of strategic minerals like chrome, tin, and tungsten. He worked in the House to help create the Basic Magnesium plant, which would prove to be a short-term boon to Nevada's mining and the nation's defense, and a long-term contributor to southern Nevada's economic development. A protectionist, he opposed American purchase of foreign food or clothing and explained, "I come from a district dependent almost entirely on beef and wool. I am sent here to protect the interests of these growers."

However, serving as Nevada's lone representative limited Scrugham's influence. The Senate might be another matter, but just as the Wingfield machine blocked his re-election as governor, one of its remnants and one of its enemies blocked his ascent to the Senate. The senior senator, elected in 1912, was Pittman, whom Wingfield had liked personally and tolerated—if not supported—politically. The junior senator was Pat McCarran, a longtime foe of Wingfield who profited, as Scrugham had, from the Democratic sweep of 1932, and was determined to supplant Pittman as the state's dominant presence in Washington. When Pittman died in 1940, Governor E.P. Carville not only declined to consult McCarran, making the new senior senator irate, but bypassed Scrugham and other senior Democrats to appoint Berkeley Bunker, a 34-year-old assemblyman who could appeal to two growing constituencies: his fellow Mormons and his fellow Las Vegans.

When Bunker ran for full term in 1942, Scrugham declared against him. Why Scrugham sacrificed a sure House seat and accumulated seniority is debatable, but McCarran certainly had no use for Bunker, writing, "I often wonder what that bird thinks about. I have come to the conclusion that he hasn't much to think about, I have come to the conclusion that he hasn't much to think with, so he shouldn't be blamed too much." Yet McCarran and Scrugham were no more compatible. McCarran knew that Scrugham had allied with Wingfield and later Pittman against him, especially over patronage appointments. As the responsible House member, Scrugham resented Senator McCarran for taking all of the credit for the approval of Stead Army Air Field near Reno. At a 1941 Washington party, they shoved and cursed at each other: Scrugham called him a "fat four flushing faker" and "told him that I would smash him in the jaw .... This seems to be the only way to deal with the man, as he has become almost unbearable in his arrogance."

While the senator and the governor announced their neutrality in the primary, McCarran clearly preferred Scrugham. So did most of the newspapers that took a position on the race. Eventually, Bunker's charges that the management at Basic Magnesium engaged in profiteering prompted Carville to praise the war plant, and built upon Scrugham's frequent reminders to his constituents that war policy was too important to be entrusted to the younger, less experienced Bunker. Scrugham won, but by little more than 1,000 votes out of nearly 22,000 cast, before cruising to victory in the general election.

As a senator, Scrugham worked for the same interests as he did in the House, but illness reduced his effectiveness so much that Jerome Edwards, McCarran's biographer wrote, "In effect for two years McCarran was the only senator Nevada had, an arrangement which he doubtless found rather comfortable." Still, Scrugham planned ahead politically, causing despair among some of his closest friends when he reconciled with McCarran by supporting his re-election in 1944 against Vail Pittman, the late senator's younger brother. In

return, Scrugham hoped for McCarran's support when he ran again in 1946. But Scrugham died of heart problems, complicated by a long bout with influenza, on June 23, 1945.

In a sense, Scrugham's death so early in his Senate career exemplifies why he is not better-remembered. While he was an exceedingly able governor, he won the job thanks to support from other politicians, owed his greatest accomplishment—highway development—to federal aid, and proved unable to win re-election against the Wingfield machine, which he never criticized. While Scrugham enjoyed influence in the House, the sparseness of his constituency meant that he remained outside the leadership. Ambition—his own, but perhaps more important, McCarran's—prompted him to surrender his seniority to run for the Senate. There, McCarran's presence and power, and Scrugham's junior status and ill health, meant that he could and did accomplish little.

But if James G. Scrugham was a second-rate leader, he was, by Nevada standards, a first-rate thinker—as McCarran eulogized him, a "great progressive." That commitment enabled him to influence life in Nevada and the West, through the Colorado River Compact and his political offices, in his time and long afterward—and, in a sense, long before. His efforts in behalf of the state park system and the building of Hoover Dam suggest an embryonic vision of a tourist-based future for Nevada. Amid his political activities, he found time—and help—to edit and publish the first major history of Nevada to appear in twenty years, and the crowning glory of his tenure as governor was his preservation of a past that Nevada, then and now, often seems determined to destroy and forget. For him to do so certainly was a labor of love; clearly, it was of little political benefit. Indeed, writing to Scrugham, George Heye of the Heye Foundation and the Museum of the American Indian proposed an appropriate epitaph: "I assure you that future generations of Nevada will look back upon the pioneer work you are doing in this matter with deep gratitude and appreciation." Undoubtedly, the Nevada Archaeological Association feels that way. So should all Nevadans.

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Who Came First, Harrington or Wheeler: Moapa Valley Revisited

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Abstract

The thematic context for the 26th Annual meeting of the Nevada Archaeological Association was the recognition of the role played by archaeology in understanding cultural development and history in southern Nevada. Researching the careers of Sidney Merrick Wheeler and his wife, Georgia, has revealed a tremendous amount of new information regarding early Nevada archaeology. This paper focuses specifically on research conducted by both the Wheelers and Mark Raymond Harrington in the Moapa Valley. Such prominent sites as Pueblo Grande de Nevada (Lost City), Granary Cave and Black Dog Cave will be highlighted.

Introduction

Many refer to Mark Raymond Harrington as the father of Nevada Archaeology. His endeavors at such notable Great Basin sites as Lovelock Cave (Loud and Harrington 1929), Pueblo Grande de Nevada (Harrington 1925a, 1925b, 1926, 1927, 1930, 1937; Shutler 1961), and Gypsum Cave (Harrington 1933) set the stage for the development of archaeology in Nevada. One site, however, Black Dog Cave, should rightfully be associated with the name S.M. Wheeler (Wheeler 1942c; Winslow 1996). Harrington is typically credited as excavating the site (Harrington 1942), however, Wheeler's involvement began some six years before Harrington's. In order to finally get those history of archaeology books straight, the intertwined events that brought these two researchers together must be outlined.

First Arrivals

As the story is already written (Harrington 1953), it was in 1924 that brothers John and Fay Perkins reported to then Nevada Governor James G. Scrugham their discovery of pueblo ruins along the Muddy River near Overton, Nevada (Figure 1). Harrington, conducting excavations in Nevada at Lovelock Cave under the auspices of the Museum of the American Indian, Heye Foundation, was contacted. Scrugham, an archaeological enthusiast, had been following Harrington's highly publicized career and contacted him in hope of setting a date for an expedition into the Moapa Valley. Harrington, enticed by the discovery (due to the then established western boundary for Pueblo Culture as being east of the Colorado River), agreed and a date was set. The expedition led by the Perkins brothers proved extremely successful in that pueblo ruins were found to stretch some six miles from Overton to St. Thomas, Nevada (Figure 2).

> Let's climb up on the ridge, Governor Scrugham suggested. We were naturally excited because a few minutes before we had found some bits of black-on-white pottery in the lowlands along the Muddy River, pottery which I knew must be of Early Pueblo make and more than a thousand years old (Harrington 1953:203).

On the east side of the Muddy River

Figure 1. Map of southern Nevada showing extent of Pueblo Grande de Nevada, taken from Harrington 1930.

(between what once was St. Thomas, Kaolin and the eastern edge of Overton) were the scattered pueblo ruins of Pueblo Grande de Nevada (which became popularly known through the press as the "Lost City")(Figure 3). Harrington (1925a:74) writes:

> Walls were made mostly of adobe bricks, or rather lumps, about the shape and size of ordinary loaves of bread, sometimes showing imprints of grass and tules; these were laid up with adobe mortar and sometimes interspersed with slabs of stone. They were plastered with adobe. Floors were usually adobe, but sometimes were paved with flat sandstone fragments. Slabs were sometimes set on edge around the wall inside the room.

Ultimately the hilltop find gave rise to a number of expeditions over the following two years sponsored primarily by the Museum of the American Indian, Heye Foundation. During the course of the excavations more than ninety separate houses, most of them early pueblos, were uncovered. Harrington stayed until 1926, excavating and restoring portions of the ruins.

> [A]ll because the Perkins brothers had thoughtfully reported to the Governor the finding of 'painted pottery' across the Muddy River from Overton, and had invited me down from my 'dig' (Harrington 1953:203).

The Civilian Conservation Corps and Wheeler

The Hoover Dam project (Department of the Interior 1976) would eventually result in the irreparable loss of the pueblo ruins under the encroaching dam waters of Lake Mead (Figure 4). The ruins having personal meaning to Scrugham, now a U.S. Congressman, arranged in the fall of 1933 for the Civilian Conservation Corps (CCC) to establish a work project. A three cornered arrangement between the National Park Service, the CCC, and the Southwest Museum was entered. Harrington, now curator for the Southwest Museum (Figure 5) was again asked to direct the excavations (1933 through 1935) and ultimately assume the role of consultant as salvage work continued against the rising waters of Lake Mead. Fay Perkins (Figure 6) would eventually supervise the salvage work and the recovery of valuable archaeological data (McBride 1995:34-38).

The CCC's largest contribution to the project was manpower. The men provided a valuable labor source for excavation and survey work (Figures 7 and 8). In addition, they constructed two museums in which to archive the artifacts recovered. The first museum constructed in St. Thomas, close to the Lost City site (Figure 9), was consumed by Lake Mead. The second, larger, permanent museum (Figure 10) was constructed on higher ground in Overton. Highlighted at each of the museums was a reconstructed adobe pueblo utilizing pueblo construction technologies and materials (Figure 11).

This CCC work project brought S.M. Wheeler to the Moapa Valley. A West Point graduate and U.S. Army Lieutenant during the 1920s, Wheeler (1942a:1) states:

> In September 1933, I was ordered to March Field, California for duty with the newly-formed Civilian Conservation Corps, and, on reporting, was assigned to the 974th Company then stationed at Charleston Mountain near Las Vegas, Nevada.

Not long after arriving, the 974th was transferred to Kaolin (three miles south of Overton), to aid Harrington with the excavation of the Lost City (Figure 12). With the arrival of the 974th and other CCC Companies, Harrington's salvage project began to take form (Figure 13). On November 14, 1933, Harrington (1985:184) wrote to his colleague George Heye:

> I'll bet you can't guess what I am doing now! Yesterday I began the excavation of the Lost City at the very point I left in 1926. The Government borrowed my services for the purpose and I shall probably work until May. I have a staff of 30 including two foreman, a sergeant and four corporals; the other are enlisted CCC men and most of them are interested and will make good workers, I think.

Although little is known about Wheeler's actual duties during the excavation, it is known that he was a member of the Company's staff. His wife remembers "[he] supervised the work and he was interested in the excavations that were being done, he worked out the grid system..." (Felts 1996:5).

Wheeler was interested in archaeology before his army career, an interest further confirmed after a post-graduation trip overseas which included a viewing of the Egyptian pyramids (Winslow and Wedding 1997). In fact, his interest brought Wheeler to the Southwest Museum during the late 1920s where he was introduced to Harrington. Wheeler and his wife visiting a relative in California decided that they would call upon the museum as they were displaying a special exhibit (Felts 1996). After speaking at great length at the museum about their interest in prehistory, Harrington invited them to join him and his wife that evening for dinner. Wheeler was quick to give credit to this early influence. In 1942 he wrote:

> [My] introduction to archaeology was mainly through association with Mr. Harrington. Under his guidance my wife and I came to realize the value of the research, and gradually acquired, through suggested reading and discussion, a foundation for future work (Wheeler 1942a:1).

Wheeler's work at Pueblo Grande de Nevada would be short as the 974th was again transferred in May of 1934 to Panaca, Nevada. Prior to departure Wheeler stated, "Mr. Harrington suggested that we explore the new area and report to him any evidence of cultures that might be found" (Wheeler 1942a:1). With several months of practical field experience under his belt, Wheeler and his wife set off to central Nevada in hopes of locating Indian relics and conducting excavations. Heeding the advice of his mentor, his first project would be the excavation of Etna Cave which he and his wife conducted with some CCC assistance. Harrington visited the site once during excavations to observe and secure artifacts for the Southwest Museum. Following Etna Cave, Harrington and Wheeler would work together at numerous sites throughout Nevada, California and Utah. For a few years Harrington even employed Wheeler on the Southwest Museum's archaeological staff.

Back to Moapa Valley, Black Dog Cave is Discovered

It was not until 1942 that Wheeler and Harrington would return to the Moapa Valley (Winslow 1996:28-29). Harrington still curator at the Southwest Museum and Wheeler now employed by the Nevada State

Parks Commission as staff archaeologist, would both be notified of new discoveries in the Moapa Valley. However, this time Wheeler was notified first. It was the middle of December, 1941, that Bradley R. Stuart (a Union Pacific Railroad employee) contacted Wheeler about some archaeological discoveries. As the story goes, Stuart was excavating a number of pit houses on the point of a mesa to the south of a pumping station. Stuart's two dogs usually accompanied him, one named "Lassie" pursued a rabbit into a hole. Hearing his dog barking "underground," Stuart investigated and found the hole to be the collapsed entrance to a cave. This cave and another nearby were the subjects of Stuart's report to Wheeler.

The Wheelers conducted archaeological assessment of the discoveries in February, 1942. Limited test excavations were done in one of the caves. This cave was later named Granary Cave (Wheeler 1942b), due to the large number of stone lined storage pits found within. The other cave was named Black Dog Cave after Stuart's dog, Lassie. After viewing Black Dog Cave, Wheeler realized he had been there before. In his report he writes:

> Black Dog Cave was first brought to my attention early in the spring of 1936 when some of the Civilian Conservation Corps men from Camp Muddy River, near Moapa, Clark County, Nevada reported the finding of a basket in the rear of a deep cave about a mile up the river and on the south side of the valley. Being stationed at the camp at the time, I was able to accompany them to the cave but made no test excavation. In 1939, I attempted to re-locate the site for the benefit of the Nevada State Park Commission but was unable to find the small entrance (Wheeler 1942c:1)(Figure 14).

Returning to the cave with Stuart, "[I took] one look and I realized that here was the missing cave" (Wheeler 1942c:1).

Wheeler agreed that Stuart had a significant find but there was only a remote possibility that the state would be able to excavate the site due to funding restrictions. It was suggested that Stuart contact Harrington. Wheeler records that it was "about the middle of May, [when] I received word that [Harrington] would visit the site about the 19th and we arranged to meet here" (Wheeler 1942c:7). After viewing the cave, Harrington was enthusiastic over the possibilities of data and specimens for the Southwest Museum. Wheeler promptly went to work.

> Mr. Harrington thought he might be able to secure funds for a partial excavation. As this would result in all the material going to California and being permanently lost to the State of Nevada, I secured a half-interest in the site from Mr. Stuart. With this, I was able to make a tentative arrangement whereby, without extra cost, the State would receive copies of all data and one-half of the archaeological specimens (Wheeler 1942c:7).

The agreement stipulated that Nevada would furnish such equipment as it had available and the Southwest Museum would furnish the additional funding for extra equipment and supplies. Wheeler supervised the excavation and did all the mapping. Georgia worked along side of Harrington with a few others from the museum at the actual excavation of the cave.

Harrington wrote a two-page article (Harrington 1942), reporting his activities to

the museum's supporters. After reconstructing the story of Stuart and his dog, Harrington gave basic interpretations of the cultural evidence, a review of the materials acquired for the museum, and the Southwest Museum associates who participated in the project. Wheeler was not mentioned. This is most likely because he was no longer affiliated with the museum while Harrington was focusing on the museum's role in the excavation.

Wheeler, however, also wrote a report. Written and submitted to the Nevada State Parks Commission, the report included a sixteen-page site record and approximately fifty pages of field notes (Wheeler 1942c). This report, archived at the Nevada State Museum, Carson City, has apparently been overlooked by scholars conducting research in the Moapa Valley and was lost in obscurity until only recently.

Conclusions

It is not uncommon in archaeology or any scientific endeavor, etc. for that matter, for the prominent researchers to overshadow the work of others. Thus, it is easily noted that M.R. Harrington was actually the first archaeologist to break ground in the Moapa Valley, however, there were others who contributed greatly to Nevada Archaeology. Sidney Merrick Wheeler and his wife Georgia are one such team of archaeologists. Beyond working with Harrington in the Moapa Valley, they took the next step, they took the teachings of their mentor and applied them. Unfortunately their work has been lost to all but a few who have found their manuscripts in the archives of the Nevada State Museum.

Background research is a very important aspect of any archaeological investigation and researchers sometimes need to dig a little deeper. The work of the avocationalists, and regional archaeologists need also to be examined and utilized. Although they might not be the movers and shakers in the discipline, it might be worth the time to take a look as one never knows just what might be found in the archives.

Acknowledgments

The authors would like to thank the following institutions and people for all their help and support with this research: The Desert Research Institute - Quaternary Sciences Center, Las Vegas, the Nevada State Museum, Carson City, the Lost City Museum, Overton, the University of Nevada, Las Vegas Special Collections and Archives, Dr. Colleen M. Beck, Dr. Claude N. Warren, Donald R. Tuohy, and lastly but most certainly never least Mrs. Georgia Wheeler Felts.

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Figure 2. Overview of Moapa Valley showing approximate location of Pueblo Grande de Nevada, March 1997.

Figure 3. Ruins of adobe houses. Wilson Collection. Photo courtesy of University of Nevada, Las Vegas (UNLV), Library, Special Collections (SC) .

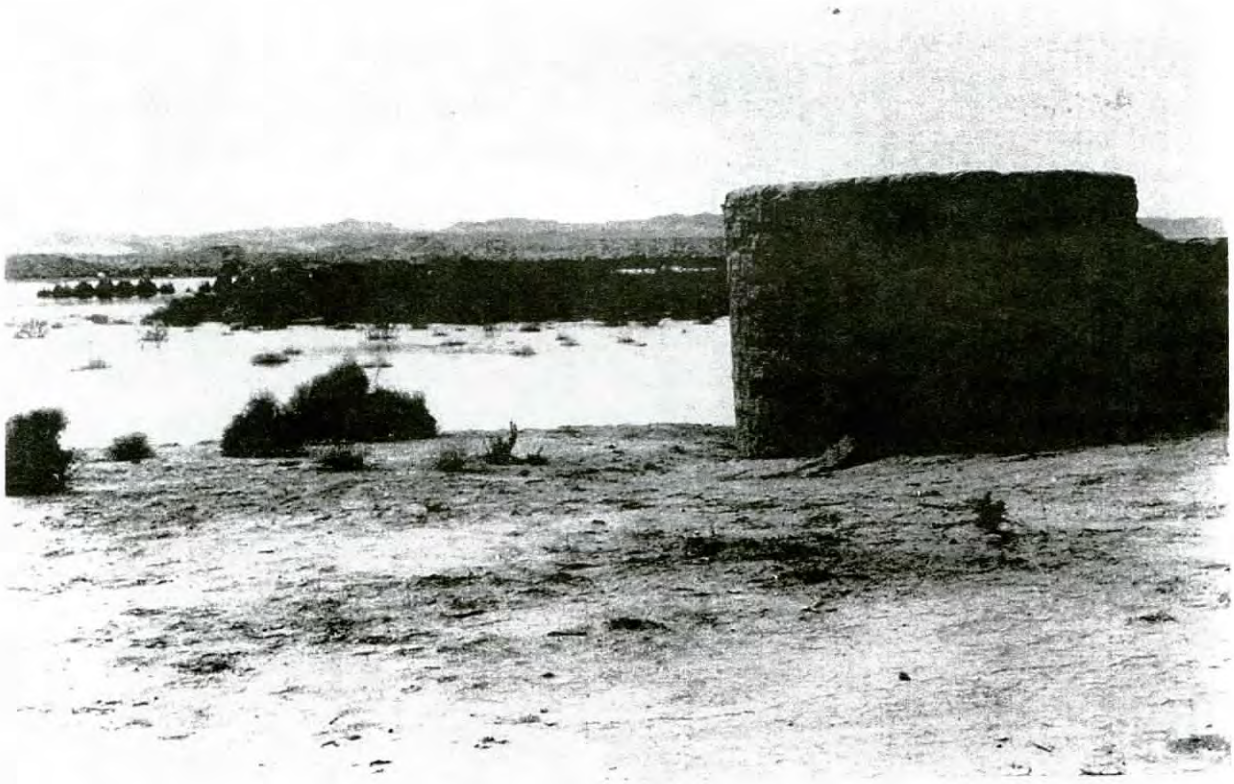

Figure 4. Lake Mead rising on Lost City. This is a portion of first house restored. Photo courtesy of UNLV, SC.

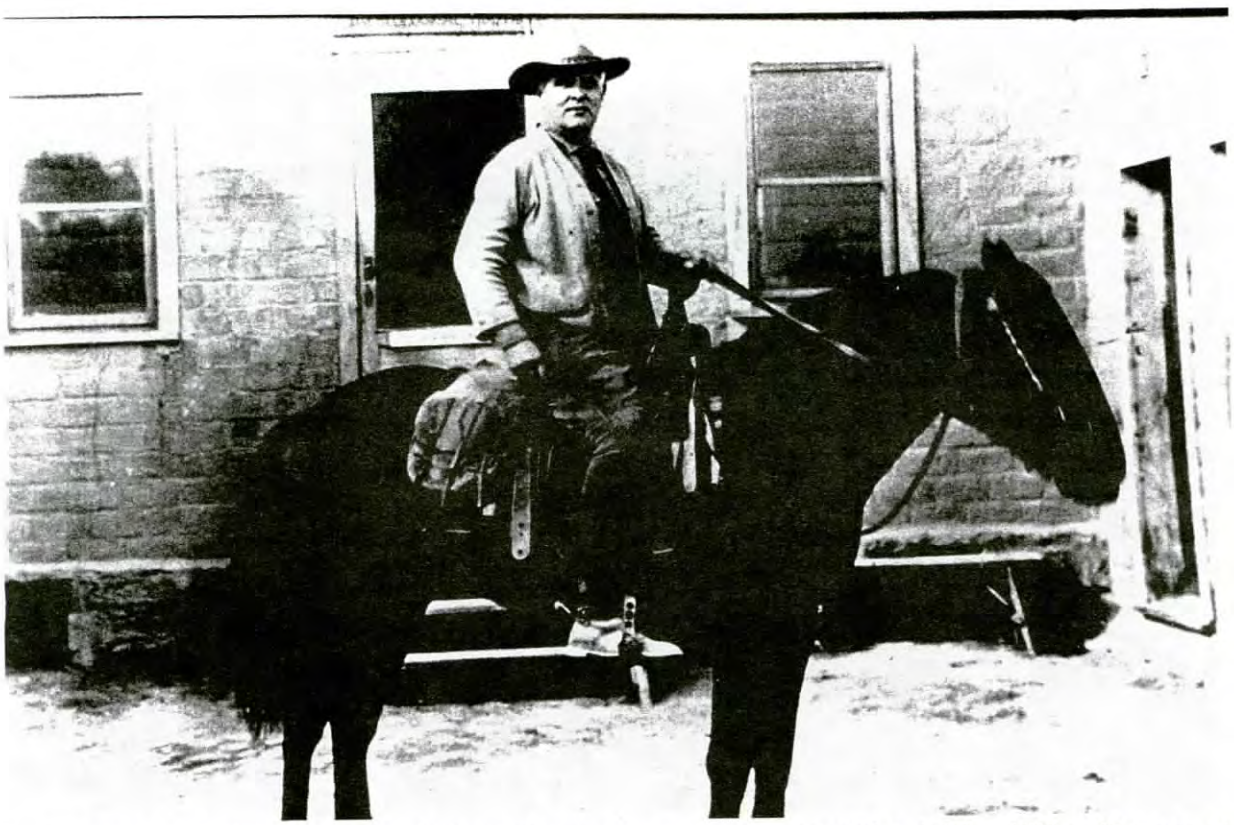

Figure 5. Mark R. Harrington on horse in front of temporary museum at Lost City, 1920s - 1930s. Photo courtesy of UNLV, SC.

Figure 6. Fay Perkins examining specimen, Pueblo Grande de Nevada. Photo courtesy of UNLV, SC.

Figure 7. Small pot in place with finder (Hightlinger), 1933. Harrington Photograph. Photo courtesy of UNLV, SC.

Figure 8. Lost City Detail, CCC Co. 934 with truck at Archaeological Headquarters, 1934. Harrington Collection. Photo courtesy of UNLV, SC.

Figure 9. Restored pueblo at original Lost City Museum now under waters of Lake Mead, 1934. Photo courtesy of UNLV, SC.

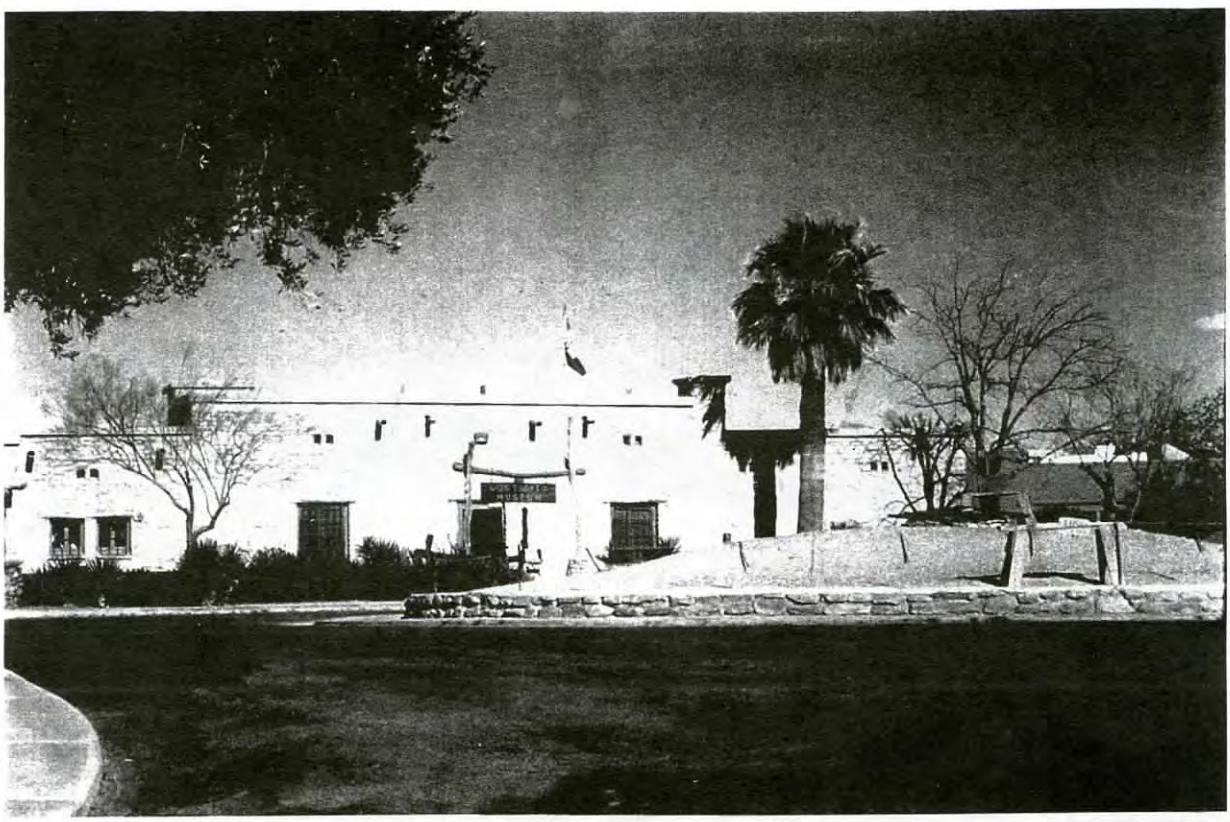

Figure 10. Lost City Museum Overton, Nevada. March 1997.

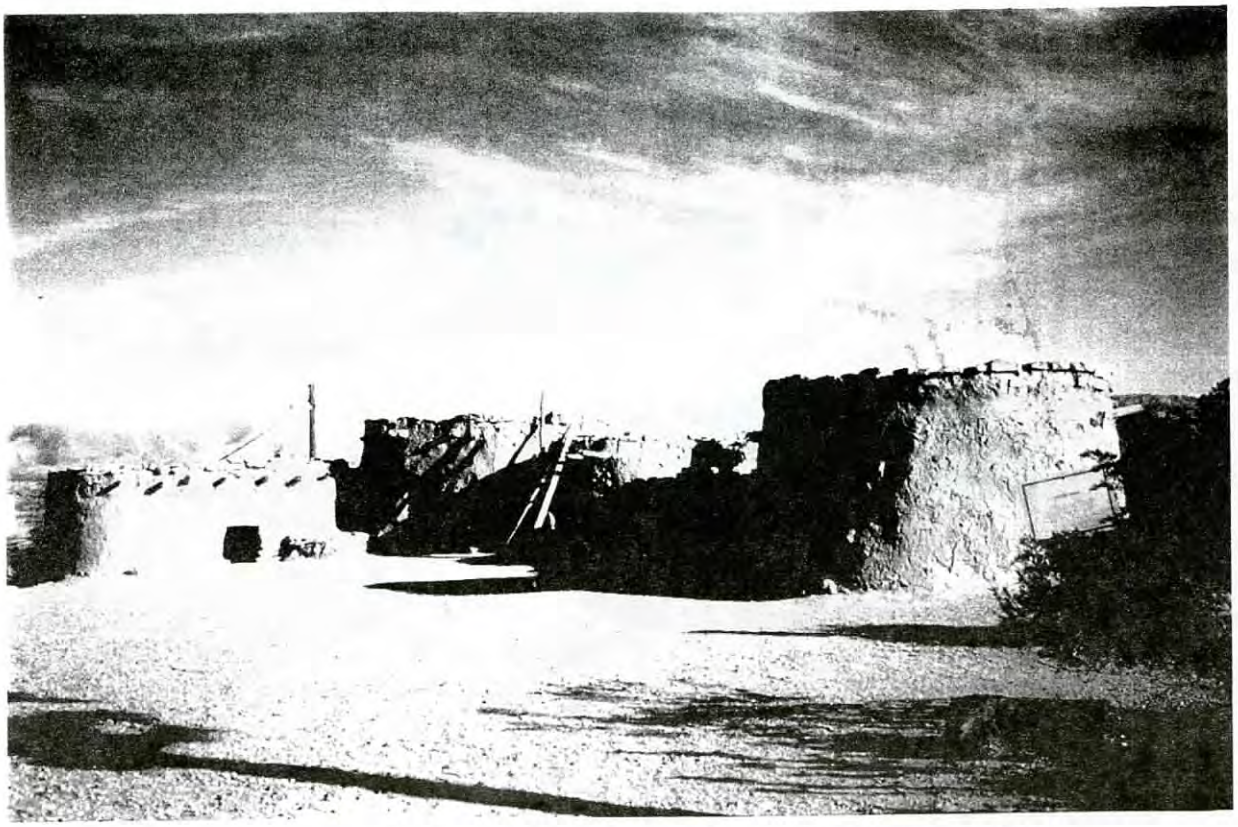

Figure 11. Reconstructed pueblo behind Lost City Museum Overton, Nevada. March 1997.

Figure 12. CCC Co. 974 at Camp SP-1, Overton, Nevada. Note: S.M. Wheeler is one of officers in front row. Pueblo Grande de Nevada Collection. Photo courtesy of UNLV, SC.

Figure 13. Ruins of Lost City, now covered by waters of Lake Mead. Photo courtesy of UNLV, SC.

Figure 14. Rockshelter #2 where a woven bag and many other articles were found. September 1936, near Overton, Nevada. Harrington Collection. Photo Courtesy of UNVL, SC.

Formation and Use of the Buena Vista #1 Site, Clark County, Nevada

Moody F. Smith and William A. Pond

Abstract

A unique combination of faulting, ground movement, and erosion produced a deposit of quartzite boulders lying on a gentle surface near a spring. The site is in a large area that is virtually devoid of good tool-stone, with none on such a favorable surface. The deposit was exploited by the so-called Malpais culture. Varying degrees of varnish on the broken stones indicates utilization of the site over a very long time period. The site has been known for decades, and it has been heavily collected, partially due to concern that it might be annihilated by mining activity.

Site Location and Geology

Located southwest of Overton, Nevada, the Buena Vista #1 site is at an approximate elevation 1,750 feet (350 m) above mean sea level and covers an area approximately 50 feet (15 m) north/south and 400 feet (122 m) east/west in dimension; less than one-half acre in size. The site is on a geological contact between the lower Cretaceous Willow Tank and Baseline Sandstone formations (Longwell *et al.* 1965: Plate 1)(Figure 1). A unique combination of faulting, ground movement, and erosion has produced a deposit of quartzite boulders lying on a gentle surface near a spring. The site is in a large area that is virtually devoid of good tool-stone, with none on such a favorable surface.

An east/west trending fault with a perpendicular branch fault trending north allowed the block containing the site and its neighboring block to the east to move independently. Both blocks moved upward; the west block slightly rotated clockwise so that it struck east/northeast with a gentle dip in the strike direction while the east block simply tilted upward with a steep dip north (Figure 2). A wash along the south side of the site is in the east/west fault; it turns sharply north and narrows considerably in the trace of the branch fault. Following the branch fault trace is a road immediately east of the site.

Crushing action on the west block's upper portion as the block rotated may have facilitated the removal of all the Baseline Sandstone material above the contact with the Willow Tank formation. The lowest Baseline Sandstone layer contained quartzite inclusions, now scattered like raisins in a pudding. These inclusions probably resulted from vug-filling by silica-rich water, thereby producing very fine-grained quartzite. Erosion deposited the inclusions, in the form of various boulder sizes, on the resistant cemented sands of the uppermost layer of the Willow Tank formation (Figure 3).

The resistant Willow Tank layer provides the spine for the east block. Boulders weathering out from the Baseline Sandstone are scattered randomly across the east block's steep north slope (Figure 4). Presumably, the resistant layer acts as a stop for groundwater flowing down from higher country to the south. This allows the water to emerge as a natural spring in the branch fault's trace. We have seen water seeping there in the middle of summer, providing water for wild burros that frequent the area.

Prehistoric Use and Discussion

Buena Vista #1 site appears to have been used by what Rogers (1939:20)

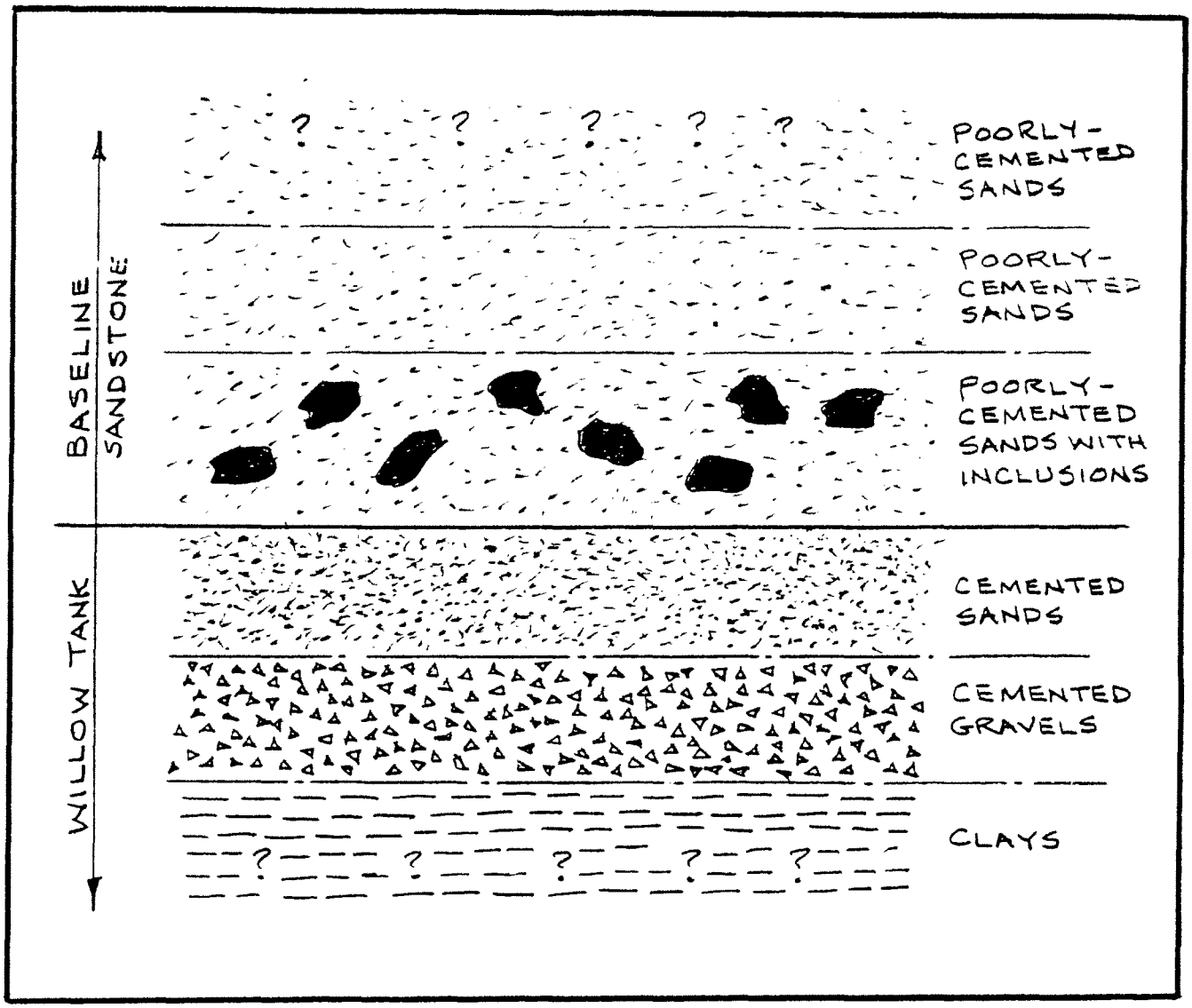

Figure 1. Portion of Willow Tank and Baseline Sandstone stratigraphic column under consideration.

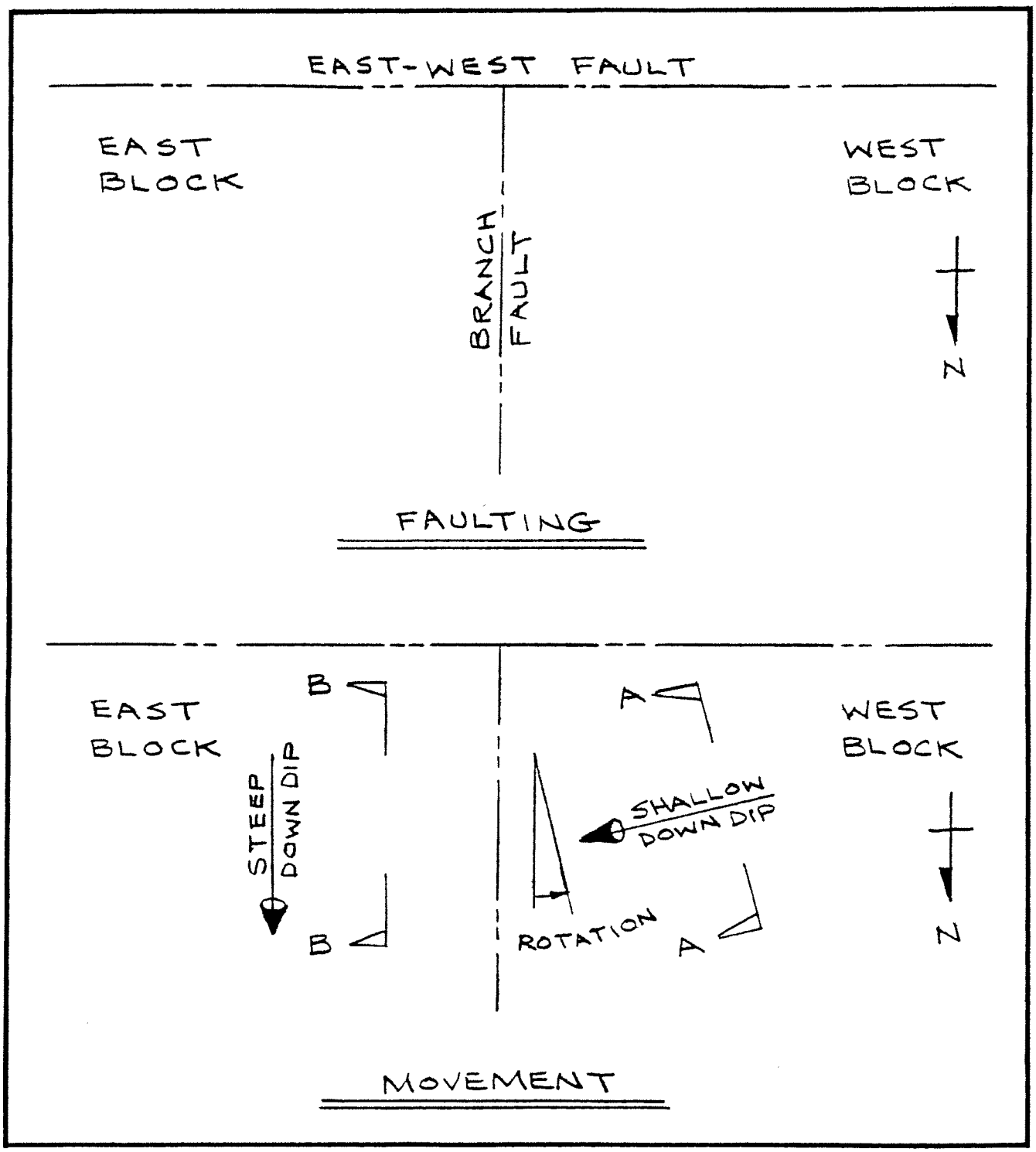

Figure 2. Faulting and movement at Buena Vista #1 site area.

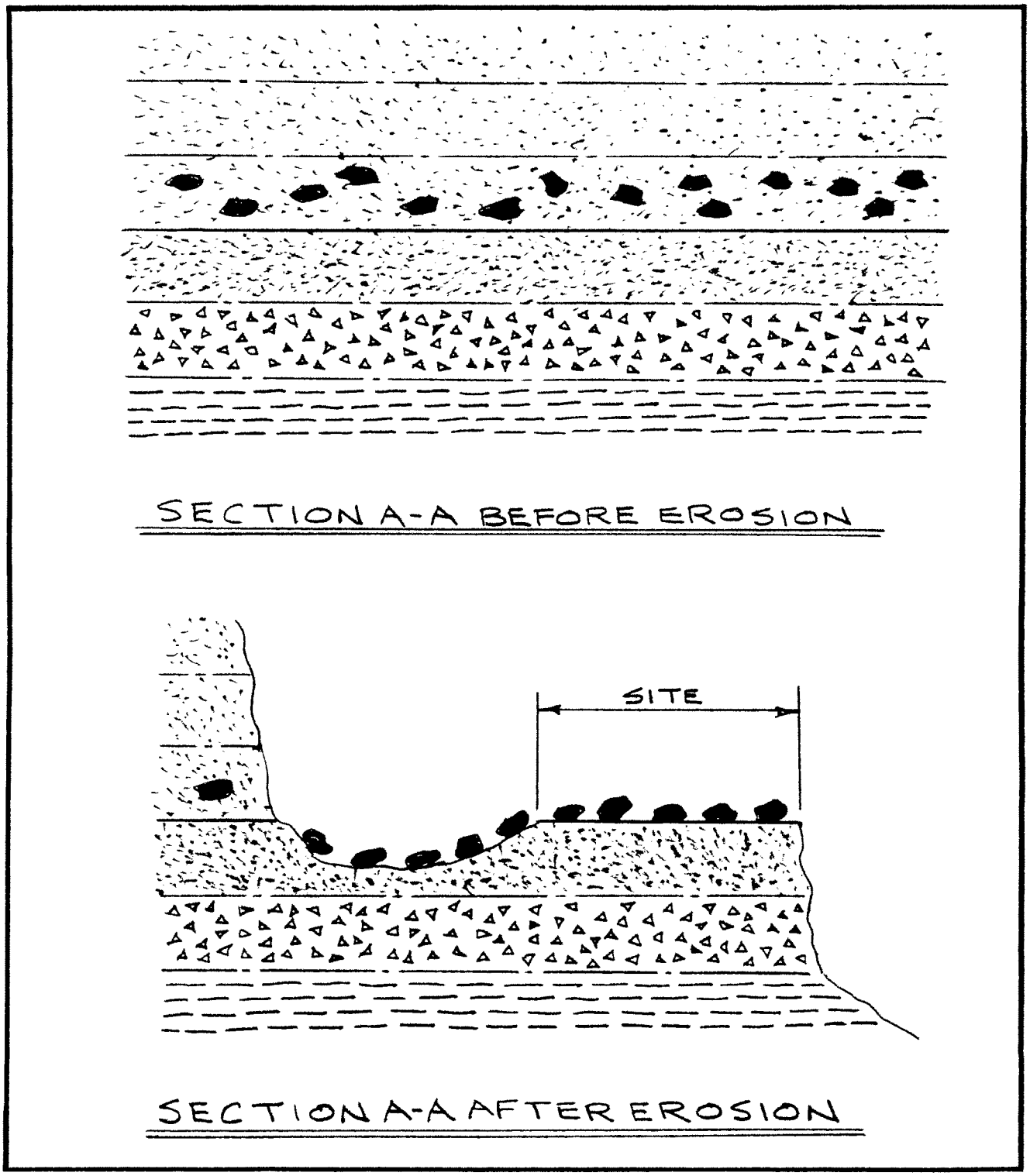

Figure 3. West fault block before and after erosion.

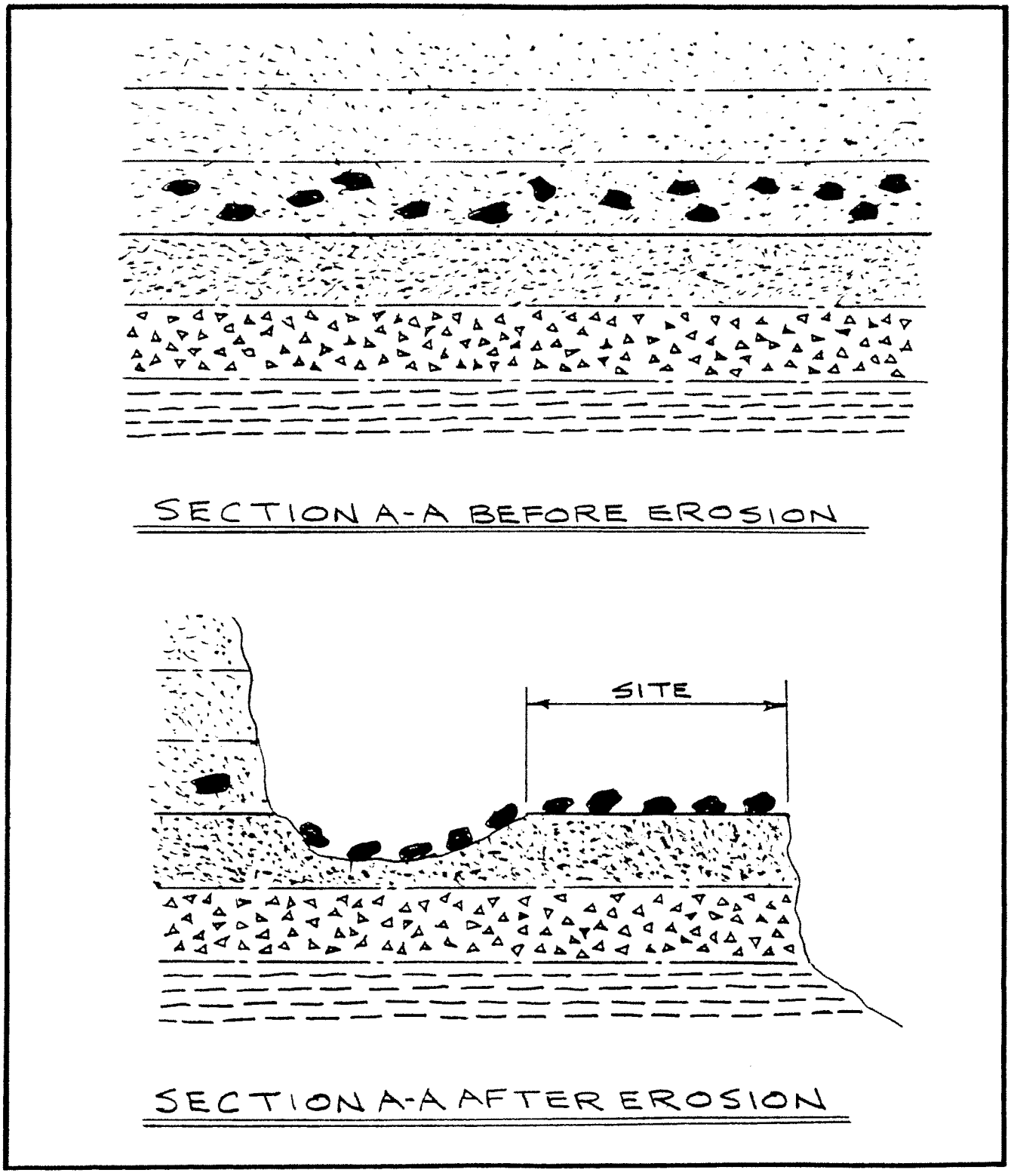

Figure 4. East fault block before and after erosion.

originally called an aberrant form of the Malpais culture. As initially defined by Rogers, the Malpais culture was based on smooth rounded cobbles found embedded in the surface of what was interpreted as extinct river terraces high above and quite a distance from the present-day Colorado River. (We note here that in parts of eastern Imperial County, California, where Rogers performed much of his research, cobbles existed before the present-day mountains were uplifted and provided the only good tool-stone in the debris washed off the mountains.) An architectural feature of the cobble-based Malpais aspect was "sleeping circles."

When Rodgers expanded his study into the intermontane region, he continued to find sites littered with crudely fashioned artifacts which he recognized as Malpais. The intermontane Malpais sites differed from those closer to the river in several "aberrant" respects: they had no sleeping circles, and contained artifacts not usually found in cobble-based sites. These artifacts include ovate bifaces, disk choppers, large scraper planes, and retouched flake scrapers. With the possible exception of the flake scraper, cobbles were seldom large enough to permit production of these aberrant artifact forms. Although the Buena Vista #1 site is only approximately five miles (8 km) from the bed of the Muddy River, the industry there was based on boulders and the site fully qualifies as intermontane Malpais.

Neither the cobble-base nor boulder-based Malpais aspects produced stone projectile points, nor any of the finely crafted tools in the toolkit of the Western Stemmed Tradition (WST). Davis (1969:70) decried the absence of points and finely crafted tools at the Buena Vista #1 site, and guessed that it was the result of constant vandalizing facilitated by the site's being beside a road and near the Buena Vista recreation grounds. "Chick" Perkins, long-time curator of the Lost City Museum, Overton, and principal collector at the site, told the authors that he had not seen any stone points nor any WST tools at the site.

Buena Vista #1 site possessed much of what we assume the intermontane Malpais people were looking for when selecting a living area. These variables include an abundance of good tool-stone, a gentle well-defined surface, and a sufficient water supply. Although first used very long-ago, there are indications that it was inhabited only intermittently over a long period of time by a small number of individuals.

Varnish on the broken stone artifacts remaining on the site varies from very dark to virtually non-existent. If it is assumed that variations in trace elements from boulder to boulder affected only the quartzites' color and did not affect the stone's ability to host varnish growth, then the very dark varnish bespeaks great antiquity while the gradation in varnish darkness speaks for a long period of time. The site has been so disturbed that we do not feel that any stone there is a candidate for the somewhat reliable cation-ratio varnish dating technique, because of the critical importance of microenvironmental measurements that must be made before the material is ever processed (Dorn 1985:56).

Site boulders were reduced by a combination of the bipolar and unipolar breakage techniques. Bipolar breakage, in which the workpiece is placed on a hard anvil so that force of the hammer blow rebounds into the workpiece from the anvil (having the practical effect of simultaneously striking the workpiece top and bottom), was used to shear the boulder into manageable units of production. In the main, the chunks were further reduced by the unipolar technique, in

which the workpiece is usually held in one hand and struck by a hammer held in the other hand. Sometimes, however, the chunks were further reduced by the bipolar technique.

Stone fragments produced by the unipolar technique exhibit attributes that are easily recognized as the result of deliberate human effort (Patterson 1983). Deliberate human effort is not so obvious when fragments are produced by the bipolar technique. Fragments produced by both techniques, exhibiting retouch flaking and/or use wear, were used as tools at the Buena Vista #1 site (Williams and Johnson 1967, 1980).

The intermontane Malpais knapper, regardless of the technique used, appears to have only rarely been concerned with producing a particular shape. His primary goal appears to have been reducing a boulder to a pile of sharp-edged fragments from which he and the other members of the group could pick and choose for use as tools. We did, however, observe two examples of three-sided choppers, which we have also seen at other intermontane Malpais sites, that could only have been deliberately produced by bipolar breakage.

A hand-held workpiece subjected to unipolar breakage while the workpiece is being turned in all directions to present an appropriate striking angle to the hammer will inevitably result in an ovate biface as the depleted core. Frequently referred to as a "handaxe," the ovate biface, because of its ubiquitousness, has sometimes been considered the definitive artifact of cultures that produced crudely fashioned tools. Often, the depleted unipolar core, because of its sharp edges, was put to use as a tool. Just as often, however, the ovate biface remained where the knapper had discarded it on the fragment pile; its edge still as sharp as the day it was knapped. Most of the unipolar cores produced at the Buena Vista #1 site, used and unused, have been carried away into various collections.

There are two styles of bipolar breakage, neither of which yields the pressure bulbs, bulb scars, and concentric pressure ripples produced by unipolar breakage and neither of which requires the acute striking angle necessary for successful unipolar breakage. In one style, the workpiece is rotated horizontally on the anvil, and occasionally turned over like a pancake. The knapper works his way around the gradually diminishing perimeter toward the center of the workpiece. This style produces the triangular prismatic blades. When this style of breakage is performed by a master knapper, the depleted core is a four-sided prism, sometimes with the sides no wider than 3/4-inch (2 cm). There are still triangular blades on the site. Four-sided depleted cores, however, have not been observed by the authors.

In the second style, the initial workpiece is sheared into smaller worked pieces. Smaller worked pieces are successively rotated through ninety degrees horizontally or vertically between strikes. The fragments thus produced are multi-faceted, with each facet being virtually flat. This type of fragment has often been interpreted as the product of natural breakage. This style of breakage does not produce recognizable depleted cores.

Not a single boulder remains on the site surface. After all of the west block's deposit was exhausted, boulders were scavenged from the western end of the east block and carried to the site for breakage. The scavenging activity did not extend very far eastward, however, not because the effort involved became too great but probably because the site was abandoned for reasons

unknown by us.

Rogers (1958:3) later professed to see the Malpais culture and the WST culture (which Rogers (1939:27-46) had originally labeled "Playa") as simply different manifestations of a single culture. We, like Warren (1966:171), have failed to see, with one exception, an interrelationship between the cultures. The possible exception is simply an implement shape that we have seen at both intermontane Malpais sites and WST sites; this implement is often referred to in the ethnographic literature as a "broken knife," but which we believe to have been a hafted cleaver for harvesting mescal (Smith and Pond 1994).

Buena Vista #1 site has been known to archaeologists for decades. Although he was understandably reluctant to publish site locations, Rogers (1939:6,20) was apparently familiar with the site sixty years ago. Davis collected the site in the 1960s while she was formulating the abortive "Western Lithic Co-tradition" theory (Davis *et al.* 1969). This idea was driven by her experience in the Panamint Valley in California, where she found an extensive intermontane Malpais site low on the western slope of the Panamint Range relatively near a small WST site, on the valley floor, that had served as a base camp for exploitation of the marshes along the northern shore of Lake Panamint. Artifacts at both sites were of the same locally available basalt. Davis went Rogers one better: she tried to establish an almost statistical interrelationship between the artifacts of the two cultures. In her paper, Davis notes the site number of the Buena Vista #1 site as Cla-1, while the Lost City has it on record as 26CK359.

Buena Vista #1 site has been heavily collected, partially out of fear that it would be annihilated by mining activity. When that concern was voiced in the 1960s, it was well founded. The site is on land leased by a company which mines silica sand, and a bulldozed road had been built just north of the site. In subsequent years, however, the directions of the sand pit development and the placement of its spoil dumps have taken it westward, away from the site. The effect of mining activity on the site itself has been nil; peripheral environs were affected in ways not detrimental to the site. The wash immediately south of the site has been cut off from much of its originally small watershed by an earthen dam constructed to retain a large settling pond. The pond, in turn, has inundated part of the former Buena Vista Road, the road Davis was concerned with. A combination of dam and pond has rendered that road impassable west of the site.

If the site was inhabited only intermittently over a long period of time, as we suspect, then we must wonder where the people spent the majority of their time. Our guess is that they usually could have been found exploiting the west shore of the Muddy River, five miles (8 km) to the east and approximately 600 feet (185 m) lower in elevation. As previously stated, the Buena Vista #1 site provided the only good tool-stone within a large area. The valley slope between the river and the site is covered with Cenozoic Muddy Creek formation material.

The Muddy Creek formation is sedimentary fill created before there was any through-cutting water courses in the area. Fill material grades from coarse at the former basin's perimeter to bedded fine-grained sands, silts, and clays at maximum distance from the perimeter (Longwell *et al.* 1965:48-49, Plate 1). South of Overton, the Muddy Creek formation is visually quite noticeable as eroded badlands. Especially in the area we are considering, the formation provided no tool-

stone.

People who made their living with stone tools had to have tool-stone, even if they had to make a ten-mile (16 km) round trip to obtain it. We suggest that much of the stonework produced at the Buena Vista #1 site now lies beneath the water of the Overton Arm of Lake Mead.

Acknowledgments

We thank Pat Olson and Ken Lang, Lost City Museum, for their cheerful assistance while providing us with site reports and access to the museum's collections and for their animated interest in what we were attempting.

Dedication

We dedicate this effort to the memories of "Chick" and Iola Perkins. They were good people who always seemed glad to see us whenever we showed up at their back door.

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"Connections" and "Meaning" of the Swallow Fremont Site (Eastern Nevada) Artifact Assemblage

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Abstract

Non-architectural Fremont sites have been reported from a number of eastern Nevada localities. While this "fringe" Fremont settlement is not fully understood from the scattered survey reports, questions have been raised about the relationship of these sites to western Utah Fremont regional variants and important sites such as the Baker and Garrison Sites and to possible southern spheres. The Swallow Fremont Site was tested in 1984 and subsequently revisited on other occasions. The artifact assemblage, while exhibiting Fremont ceramics and projectile points, has provided an unexpected richness in exotic artifacts including Anasazi pottery, a gaming piece blank, clay figurine, incised stone and olivella beads. The assemblage is interpreted first in terms of explaining the site presence and significance in understanding the eastern Nevada Fremont and secondly, in terms of interpreting wider social dynamics.

Introduction

The Swallow Site is a Late Fremont site situated along the eastern edge of Spring Valley in eastern Nevada. Like many others, this site was located during a cultural resources survey for a Bureau of Land Management project (McFarlin 1984). To the professional, student and amateur crew that recorded and tested the site, it provided surprises because of its Kayenta Anasazi sherds, an abundance of Fremont pottery, and site dimensions that exceeded the pre-survey notion of a typical artifact scatter. The intrigue continued when subsequent visits to the site revealed other unexpected artifacts including a clay figurine, incised stone tablet, additional Anasazi pottery and shell beads.

For some time, archaeologists have known about the Fremont presence in eastern Nevada from sites recorded in the Spring and Snake Valley areas. Earlier and more recent excavations at the Garrison and Baker Village sites (Taylor 1954; Wilde and Soper 1993) and survey descriptions of numerous tasks and small camp sites (James 1981, 1986; James and Zeier 1981; Zancanella, 1989, 1990) have begun to define what has been called a "fringe" or "frontier" edge of Fremont settlement. The results of limited work at the Swallow Site, carried out due to possible threats from adjacent land use, made the authors rethink the nature of Fremont settlement in Spring Valley and adjacent areas.

The Swallow Site appears to be neither a village nor a task site. Site setting and artifact assemblage suggest the key characteristics that define the Fremont adaptation elsewhere are also present in eastern Nevada. In this paper, we describe the site setting and assemblage. We explore possible explanations for how this site relates to other Fremont sites and to social and economic dynamics that, in our understanding, characterize the region during this period. We also test some current thinking about the Fremont adaptive strategy applied to eastern Nevada.

Part I: Describing the Environmental Setting and Artifact Assemblage

Archaeological Site Work

The Swallow Site is located on a west-facing alluvial slope of the Snake Range at an elevation of 5,880 ft. (Figure 1). At this location, the rock alluvium (toe slope of the fan) grades into finer soils on the valley edge. These soils provide arable land which is farmed today. The site surface is rather featureless with only a small rock mound and wash channels.

Little archaeological work has actually occurred on the site; therefore, current interpretations might change if more were to be learned about its depositional history, if additional datable materials were recovered, and especially if architectural features were uncovered. The Swallow Site has not been excavated or subjected to a rigorous testing program. Site boundaries have been located, but no formal mapping has occurred. About 25 percent of the site surface has been collected. Within this collection area, five test units were excavated to sterile levels. Just under 1000 items were recovered.

No architectural structures or remnants of houses, firepits or storage areas were noted although the area most likely to contain structures or depth has not been tested. In a road cut profile along the site edge, cultural materials, possibly ash and midden materials, can be seen. Structures may be hidden below the surface. Certainly Baker Village, which recently proved to have formal and planned structures (Wilde 1996; Wilde and Soper 1993), did not appear to have architectural remains from the surface appearance. Wells (1993) reported that numerous subsurface features were revealed in her testing of sites near Baker, Nevada.

Environmental Setting

Given what is known about the Fremont adaptation elsewhere, the environmental setting is significant in understanding why the site may have been established and how its inhabitants may have related to other Fremont sites. Within a short distance of the site, a range of topographic and vegetational settings are compressed along the eastern Spring Valley edge. The valley, a north-south trending ancient bolson along the western flanks of the Snake Range, is composed of a northern and southern Basin. The Swallow Site is located in the southern Spring Valley basin. Just five miles east of the site, stretch the high peaks of the Snake Range. From these peaks, alluvial fans spread out defining slopes between 5,800 and 7,000 ft. The fans are cut by drainages, most notably Spring Creek flowing west just a mile south of the Swallow Site. Springs occur along the mountain edge at Raised Spring, Hub Mine Basin and in relation to Willard, Pine and Ridge Creeks. At some springs, rock art indicates human use for some time.

Gravelly surfaces at higher elevations give way to fine silt and sand areas in lower washes where wind and water have redeposited soils further downslope. Just two miles west of the site, where the alluvial fans hit the valley edge, springs, marshlands and artesian wells evidence the riparian areas that stretch along the eastern side of the southern Spring Valley basin. Today, agriculture occurs mostly on the well-watered eastern side stretching west for several miles. On the valley floor, seasonal water in low areas, seeps and sand dunes punctuate the fairly flat floor (elevation 5,760 ft.). The soils become alkaline and saline in portions of the valley bottom where vegetation is sparse.

The variation of topography within a

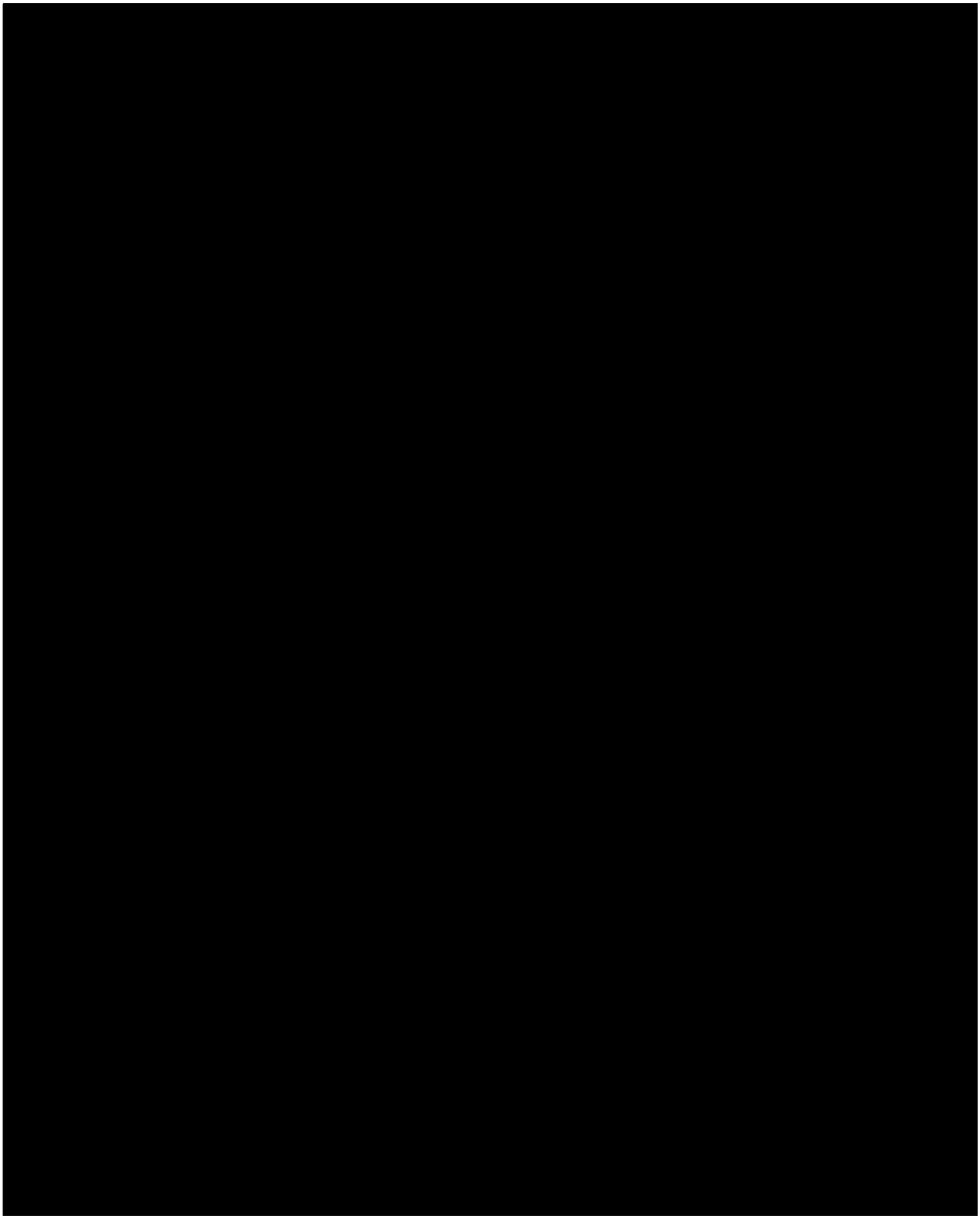


Figure 1. Site vicinity map.

short distance of the site is paralleled by the vegetation community. Thompson (1985) has suggested that major vegetational changes have not occurred since the time the Fremont would have occupied the area. A cross-section of the major ecosystem includes: the valley edge desert community with greasewood, shadscale and shrubs and grasses including sedges, rushes, western wheat grass, saltgrass, cordgrass, alkali sacatone and horsetail (McFarlin and Lindsey 1984). Pockets of particularly dense vegetation, especially including Great Basin Rye, occur at lower elevations. Sagebrush and rabbit brush covered slopes give way to the dry coniferous woodland, pinyon and juniper species with serviceberry, chokecherry, and to mountain mahogany, other pine and fir at the higher elevations.

Animal life is plentiful in Spring Valley with antelope, deer and coyote common large game. Both elk and bison bones were reported from Baker Village in low numbers (Hockett 1996) and from Garrison (Taylor 1954). Bighorn sheep and mountain lion are frequently seen in the mountains. Smaller mammals include rabbit, badger and small rodents. Bostick (1975) notes that because it is cooler and better watered, Spring Valley has a denser bird population than usual for Great Basin valleys. The species summering or wintering in Spring Valley range all the way from dickey birds to golden eagles (Bostick 1975:442).

Fremont subsistence involved a strategy of hunting and gathering wild food mixed with agricultural products, primarily corn. East of the Swallow Site in Snake Valley, Fremont village sites such as Baker Village and Garrison are situated near permanent water sources along alluvial benches between 5,250 and 5,289 ft. in elevation (refer to Figure 1). Some locations in Spring Valley including the Swallow Site vicinity also offer arable soils. Agricultural success was probably limited, however, due to a short growing season of 100 days (Rush and Kazmi 1965:7). Agriculture was risky, but the Fremont inhabitants may have attempted seasonal, random gardens.

The primary draw for Fremont habitation to the eastern part of Spring Valley may have been the availability of a varied but generalized resource base which was compressed within a narrow range. The intensified collection of wild plants may have been combined with horticulture with risks. An abundance of grasses, pinyon pine and other plants and small mammals, birds and larger mammals are available on a seasonal basis within a short distance from the site. The proximity to local foragers and the potential for exchanging plant and animal resources may also have attracted Fremont families or small groups to the area.

Swallow Site Assemblage

Janetski (1994) has noted that marine shell, turquoise, exotic Anasazi material and non-local Fremont ceramics frequently occur in Fremont assemblages. The Swallow Fremont Site fits this description although turquoise items were not recovered. The presence of these artifacts and the non-local obsidian toolstone reveal that the site inhabitants were part of a dynamic, regional socioeconomic system. The archaeological assemblage, added to the site environmental setting, provide strong clues to the site function and its relationship to other sites in the Spring and Snake Valley areas.

At the onset of artifacts analysis, several items were labeled as "exotic" finds, but as the authors became more familiar with the Swallow and other Fremont sites, it was

clear that "exotic" or non-locally produced artifacts and non-local raw materials are hallmarks of many Fremont sites. While Fremont task sites in eastern Nevada are numerous, these often consist only of scatters of Fremont ceramics and lithics. Viewed from the Spring Valley context, the Swallow Site is unusual for its array of artifact types and materials; however, viewed from the wider Fremont context, the assemblage is less exceptional. The more unusual finds include an incised stone tablet, gaming piece blank of shaped bone, unfired clay figurine, shell beads (probably olivella) and Kayenta Anasazi sherds (Figure 2 and 3). Non-local artifacts would have to include, however, Fremont ceramics (Figure 3) and toolstone obsidian.

The figurine, a headless, upper female torso with clearly formed breasts and a neckline formed from punctate designs, is of the "handle terminus" type as defined by Morss (1954). It was found with brownware (possibly Shoshone) sherds. Elsewhere this type of figurine is commonly seen throughout Fremont/Sevier Culture areas, but rarely reported along the western frontier. A similar clay, "handle terminus" type was found to the south at Spring Creek. A shaped schist, ocher-stained figurine was also collected from the Garrison Site area during the Snake Valley desert land entry survey (Zancanella 1989).

An incised stone tablet (broken) exhibits one face with linear, slanted cross-hatched lines, about a dozen lines in each direction. These lines were then further incised by 8 oblique lines. The distribution of incised stones or tablets is wide geographically and temporally and in associated site types (Tuohy, 1986; Klimowicz 1988).

Recovered ceramic assemblage is represented by: Sevier Gray (38.7%), Snake Valley Gray (35.4%), Snake Valley Black-on-gray (12.4%), with less than 5% of Snake Valley Corrugated, Great Salt Lake Gray, an undefined utilitarian ware, Ivie Creek Black-on-Gray, North Creek, Citadel Polychrome, and Shoshone pottery. James (1986:109) notes that in the western periphery, the majority of ceramic finds consist of Snake Valley Gray; Snake Valley Black-on-gray followed closely by Great Salt Lake Gray; smaller amounts of Snake Valley Corrugated, Sevier Gray and minor amounts of other types. In this regard, the Swallow Site is "over-represented" by Sevier Gray which may be tied to the site function or the origin of its inhabitants.

Collected Fremont pottery from the site appears dominated by utilitarian wares probably in use for the preparing, cooking, and storage of food. Vessels were not reconstructed, but jars, bowls, and perhaps pitchers were possibly present. Bowls may have been used for food service but may also indicate prestigious items. Bowls would have required additional production time in decoration and may represent long-distance trade.

Only a small number of sherds have been classified as Shoshone, but until a better understanding is gained for Fremont utilitarian wares and local production, this analysis is subject to review. Small amounts of Shoshone pottery, including vessels and pot drops have been found in Spring Valley (James and Zeier 1981:33, 77; McFarlin 1983; Zancanella 1990). Zancanella (1989:39) noted for Snake and Spring Valley that Shoshone ceramics are associated with Fremont sites perhaps representing trade during a 100 to 200 year overlap of both populations.

Four sherds of Citadel Polychrome were recovered including one rim from a medium to large bowl with a rectilinear design

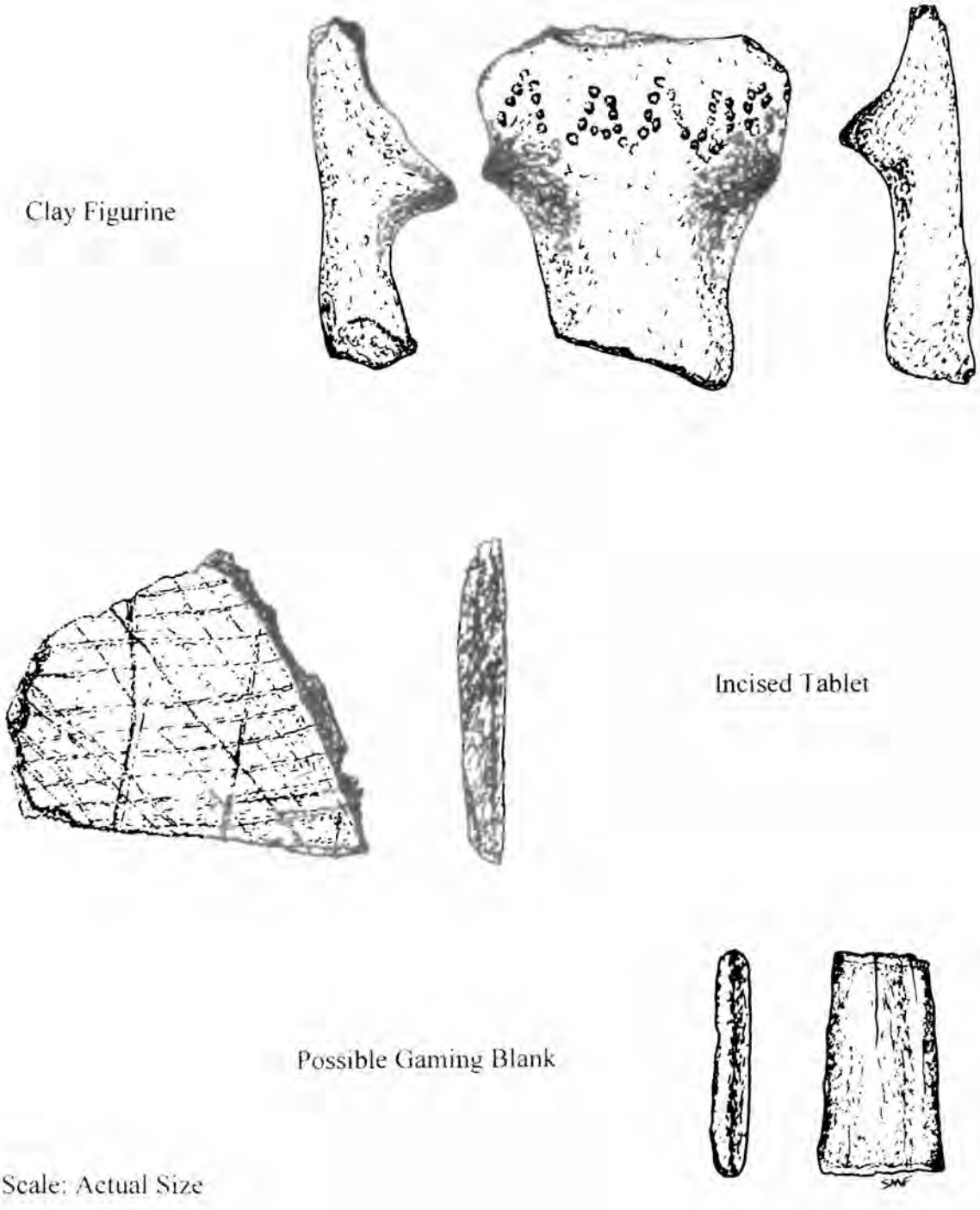
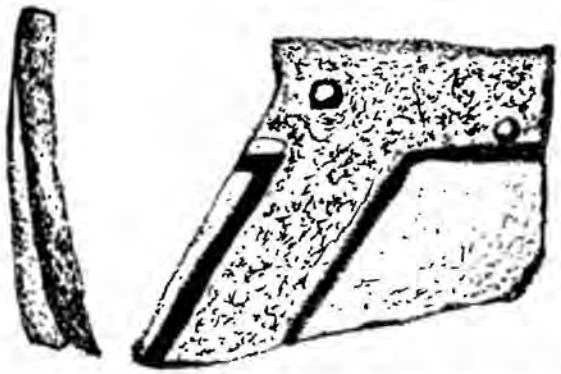
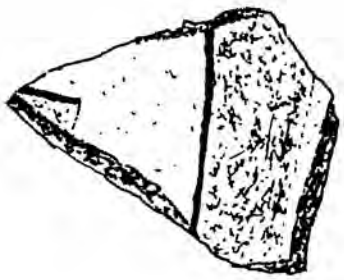


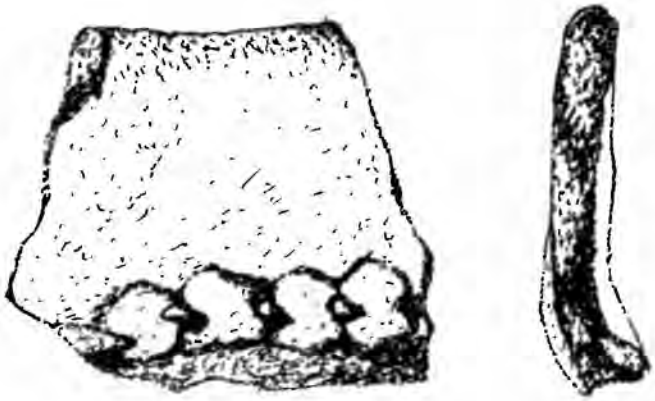
Figure 2. Clay figurine, incised tablet, and gaming blank recovered from Swallow Site.



Citadel Polychrome rim sherd



Citadel Polychrome body sherd



Sevier jar rim (Applique)

Snake Valley Black-on-Grey rim sherd

Scale: Actual Size

Figure 3. Examples of ceramic types recovered from the Swallow Site.

form. The Sosi type design can only be seen on the rim sherd which also exhibits two drilled holes (refer to Figure 3). Occurrence of Anasazi Citadel Polychrome pottery (dated by Breternitz 1966 and by Colton 1953:75 as A.D. 1075-1175) suggest a relationship with the Virgin Kayenta through trade, perhaps up the Muddy River/Meadow Valley Wash; or, of more extended trade links through the Parowan area. Janetski (1996) noted that Anasazi ceramics, especially Tusayan, occur in low numbers (typically less than one percent of the ceramic assemblage) throughout the Fremont area.

Madsen (1979) and Marwitt (1970) found it likely that Fremont ceramics were produced in the subregional core areas and traded to the peripheries. Simms and Isgreen (1984) suggest that although styles and techniques of manufacture are fairly uniform over large areas, temper variation is a product of the use of locally available materials. Baker Village and Garrison may represent a "core ceramic area" from which vessels were distributed to smaller sites such as the Swallow Site. From his refiring study, Richens (1986) found that the refired colors from the Swallow Site are identical to those refired from other Utah sites supporting the assumption that Fremont sherds found in Nevada are trade wares from Utah. The refiring test suggest that most of the sherds could have been from the Parowan Valley; unless similar clays are found in the study area. Local clay sources are as yet unknown.

Presence of a possible subtype, an undefined utilitarian brownware, might be a locally produced ware. No sherds of this type were refired. Zancanella (1989:35) in his Snake Valley survey reported a ceramic type which was recognized on almost all sites that doesn't conform to currently described types. This type may correlate with those described by Taylor (1954:43) as "unclassified." Zancanella (1989) believes this form of ceramic represents a "utilitarian" ware produced on site from alluvial clays. Vessel forms identified include a dish or plate and wide-mouth jars. They do not resemble later brown wares associated with Shoshone or Paiute groups (Zancanella 1989:35).

The Swallow Site lithic assemblage is really unexceptional and fits what others (Zancanella 1989:35; Kodak 1993, 1996; Wilde and Soper 1993;) have observed about lithic materials in the area: obsidian is a preferred material (83.5%). As a toolstone, obsidian appears to have been reused and conserved. Lithic reduction is absent from the site but implement resharpening or finishing occurred. Only 22 tools were recovered including projectile points and point fragments, bifaces or blanks, and utilized pieces. While obsidian dominates the waste material, most of the finished tools (72.7%) were flaked from other materials, predominately chalcedony and cherts—locally available toolstones.

While no source studies have been done on the Swallow Site obsidian, no local sources are known to occur. Several studies (Kodak 1993:56, 62; 1996:308-314) have concluded that obsidian sources utilized by the Fremont were no closer than 100 km and as far as 300 km from the Snake Range. Several sources seem to be used for both village and non-village sites (Wells 1993:131; Kodak 1996:344). The Swallow Fremont inhabitants may have acquired obsidian directly by expedition, indirectly through embedded procurement activities (Kodak 1996) or through an exchange network.

Four projectile points recovered generally fit the post-Archaic time period. Three forms were represented: a corner-notched Rose Spring/Eastgate series, a basal-

notched point, and one similar to a Cottonwood triangular. This latter also resembles the residual types identified for Median Village (Adovasio, in Marwitt 1970:75-81). All points fit within the range of points illustrated for Baker Village (Wilde and Soper 1993:31-42) and Garrison (Taylor 1954:45-46).

Two complete manos and five mano fragments were collected from the surface and from the top levels of two test units. Material used appears to be local cobbles (rounded or tabular) which are frequently found in the washes today. The absence of basal grinding stones could be more apparent than real, but also could indicate curation of grinding stones.

Recovered faunal bone material is small, fragmentary, and exhibits weathering. A few examples of burning occur in the collection. An analysis of the faunal remains is underway by Steve James.

Generally, the artifact assemblage provides a chronological framework for interpreting the site. The site dates to the Late Fremont as established through Fremont and Anasazi ceramics and projectile point typologies. More likely, it dates to the mid-12th to mid-13th century, possibly mid-14th century, based on the presence of dated pottery types including the Citadel Polychrome sherds. Ceramic and projectile points correlate with those excavated at Baker Village which is well-dated using radiocarbon assessments to the late 12th and early 13th century although high quality dates from corn suggest occupancy into the 14th century (Wilde 1992).

The Swallow Site projectile point styles are less useful for bracketing the site. Only a small sample of points was found. Styles include the Rose Spring/Eastgate types (estimated dates elsewhere of A.D. 300-900 and side-notched forms similar to Uinta and Nawthis types suggest A.D. 800-1300 [Holmer and Weder 1980]). The triangular and lozenge styles elsewhere may date post A.D. 1300 (Thomas 1981).

Part II: Explaining the Swallow Site, Economic and Social Perspectives

While the knowledge base for interpreting the Swallow Site is limited, admittedly, we would nonetheless like to explore some of the economic and social implications of the Swallow Site archaeology. In particular, we address three areas: the application of Simms' (1986) economic strategy models, boundary concepts applied to eastern Nevada, and implications for Fremont social interactions.

Applying the Simms Strategic Models

In a discussion of Fremont adaptive diversity, Simms (1986) proposed three different economic strategy models for the western frontier in western Utah. His models are based on settlement information from excavated and recorded sites along the Wasatch front and the western desert of Utah. Other models, such as offered by James (1981 1986), have also been proposed for eastern Nevada, but we chose to apply Simms' models and to offer modifications based on our own observations of the Swallow Site material and other relevant archaeology.

Each of the three models proposed by Simms suggest differential settlement patterns and implicit archaeological expectations. We have attempted to make more explicit the archaeological observations expected for each strategy in order to make the model more operational. Our observations are based on current archaeological thinking on the subjects

of settlement patterns and archaeological correlates.

Strategy 1: From a central agricultural base, small groups would have made logistical forays to gather local resources with the majority of the goods returning to the base. This would have produced many smaller task/special use sites located in the surrounding areas. These latter sites would be characterized by morphologically identical ceramics to those found at nearby agricultural bases, but with fewer types and in lower frequencies. The variety of stone and bone tool types also would be low, consisting of no more than one or two specialized functional types.

Strategy 2: This is a variable approach in which groups from larger communities experiencing shortfalls would switch back and forth between horticulture and hunting and collecting, depending on environmental conditions. Rather than a main horticultural base, many smaller sites would be established on a temporary or seasonal basis indicating a residential mobility pattern. Sometimes these sites would be focused on agricultural pursuits at locations near washes, springs or streams. Evidence would be sparse, consisting of possibly temporary structural remains, no or thin midden deposits, pottery scatters indicating storing, cooking and serving, and a variety of stone, bone and ceramic tools and paraphernalia. At other times, the orientation would be on local resources. Sites should be found in a wider variety of environmental zones with differential ceramic, stone, and bone tool type expectations based on the resources being exploited and/or processed. Ceramics would be similar to those found at horticultural sites, though more expedient types produced from local clays should also be present.

Strategy 3: Groups would have practiced horticulture, as in Strategies 1 or 2, in the same area occupied by "full-time" collecting and hunting groups. There would be a variety of site types and locations, representing both seasonal and temporary occupation. The regional material culture would reflect this coexistence by exhibiting great diversity. Ceramic production should indicate more expedient use of local clays.

The material culture and geographic setting of the Swallow Site most resembles that described in Strategy 2, especially the more mobile horticulturalists. Occupation at the site seems to be oriented towards horticulture and broad-based resource exploitation. This pattern is consistent with the view of others who have worked in eastern Nevada and western Utah (Fowler, Madsen and Hattori 1979; James 1981, 1986; Madsen 1982; Janetski 1994) who see eastern Great Basin Fremont economic strategies as variable and adaptive to local conditions. Simms (1986) proposes that this strategy, however, may have been due to population dispersal from local farming communities brought on by temporary or persistent shortfalls in horticultural crops. We suggest that the possibilities that may have lead to the pursuit of Strategy 2 at the Swallow Site need to be considered more carefully.

Material remains from the Swallow Site are locally unique and suggest that the occupants were not just local hunters and gatherers who had acquired Fremont goods nor were they local Sevier Fremont groups exploiting the valley temporarily. We believe the inhabitants represent the first reported occupation in southern Spring Valley by a group (or groups) participating full-time in the Fremont cultural system. This recognition is consistent with Simms' expectation for Strategy 2 or 3, and suggest a relationship with the sites in the Baker/Garrison area or

areas further east.

Fremont Frontier Boundary Relations

Occupants of the Swallow Site appear to have been actively involved in local and extraregional exchange systems. The exact mechanisms operating in these systems is not well understood. But, by looking at the local archaeology and at assumptions behind frontier and boundary situations, we may better understand why Strategy 2 is considered adaptive in this case.

Along the western frontier, the Sevier Fremont of the Baker/Garrison area would have interacted with mobile Great Basin hunting and gathering groups to the west (James 1986; Simms 1986; Janetski 1994). Spring Valley has long been noted as one of the richer lowland basins of eastern Nevada. Steward (1938) described the area as being well-watered with seasonally abundant marsh and grass resources, as well as having one of the higher population densities in the Great Basin for later Numic populations. It also has been recognized as a boundary between the eastern and western Great Basin as far back as 8,000 years ago (James 1981; Holmer 1986). At least for the Fremont period, this apparent long-term, resource rich boundary can be described as an "open static" frontier (Dennell 1985), or one with a fixed boundary between horticulturalists and hunters and gathers. Interaction along an "open static" frontier is usually considered mutually beneficial, consisting of the exchange of useful commodities. For example, hunters and gatherers exchanging food stuff, skins and marriage partners to farmers for obsidian, processed domesticates and/or prestige items such as pottery (Lyneis 1984; Dennell 1985; Moore 1985; Janetski 1994).

The archaeology of Spring Valley suggests extensive interaction between Sevier Fremont and Late Archaic and/or Numic populations (James 1981; Zancanella 1990), presumably amicable. Many sites exhibit mixing of cultural elements. The Swallow Site, however, is archaeologically distinct from any known sites in the area. We might conclude from this that the occupants were not participating in local interaction systems, as might be expected with local Fremont groups. This is an important observation when combined with the chronological data.

Social Dimensions and Site Relations

Chronologically, the Swallow Site dates roughly between A.D. 1150 to 1250. This period corresponds with reported occupations at the Baker Village, Garrison and Silver Creek sites (Wilde and Soper 1993) as well as other sites in Spring Valley based on the presence of painted and corrugated gray ware pottery (Zancanella 1990; BLM Ely District Site Files). This apparent high density of Late Fremont sites corresponds to the unexplained abandonment of similar farming communities to the east along the Wasatch Front between A.D. 1150 to 1200 (Wilde and Soper 1993:9). Wilde and Soper indicate that the Baker/Garrison area exhibits relative occupational stability during the later part of the Late Fremont period. Given the presumed exchange networks and social relations connecting these areas, it is not unreasonable to assume that some of the perceived population increases in Spring and Snake Valley at this time are the product of migration. The migration theory may provide some insights into the relationship between the Baker/Garrison area and communities further east. It might also enlighten us about the subsequent social complexity developed at Baker Village (Wilde and Soper 1993; Barker

1994).

Janetski (1994:173) notes that the movement of materials among the Fremont argues for a relatively high level of individual and group interaction. Lineage or clan-based systems allow for such interaction and are typically associated with agricultural economies (Cordell 1984; Lyneis 1984; Janetski 1994). These systems would allow for residential reciprocity during hard times. Groups migrating to the Baker/Garrison area would have initially put a strain on limited resources in that valley, but they may have found refuge in Spring Valley where resources were more extensive. Out of necessity, their strategy would have been one of seasonal, residential mobility.

Summary

The authors believe that seasonal residential mobility may best explain the distinctiveness of the Swallow Site in Spring Valley. An alternative explanation might include fissioning from the larger settlements at Baker/Garrison area due to natural population increase. Viewed from the prespective of Simms' models, the Swallow Site meets the economic criteria set forth for Strategy 2 and is another example of adaptive diversity on the western Fremont frontier. While the nature of the site may be understood by applying Strategy 2, the social dimensions can only be understood by looking at broader social and chronological context. This is especially true in relation to exchange networks, group movements and interactions between villages and other sites.

In summary, the Swallow Site lacks extensive archaeological work, but its assemblage and setting indicate the site inhabitants were participants in the highly adaptive economic strategy and dynamic social networks which characterize the Fremont. While this site appears somewhat unique in its occurrence in Spring Valley, the inhabitants were not isolated.

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