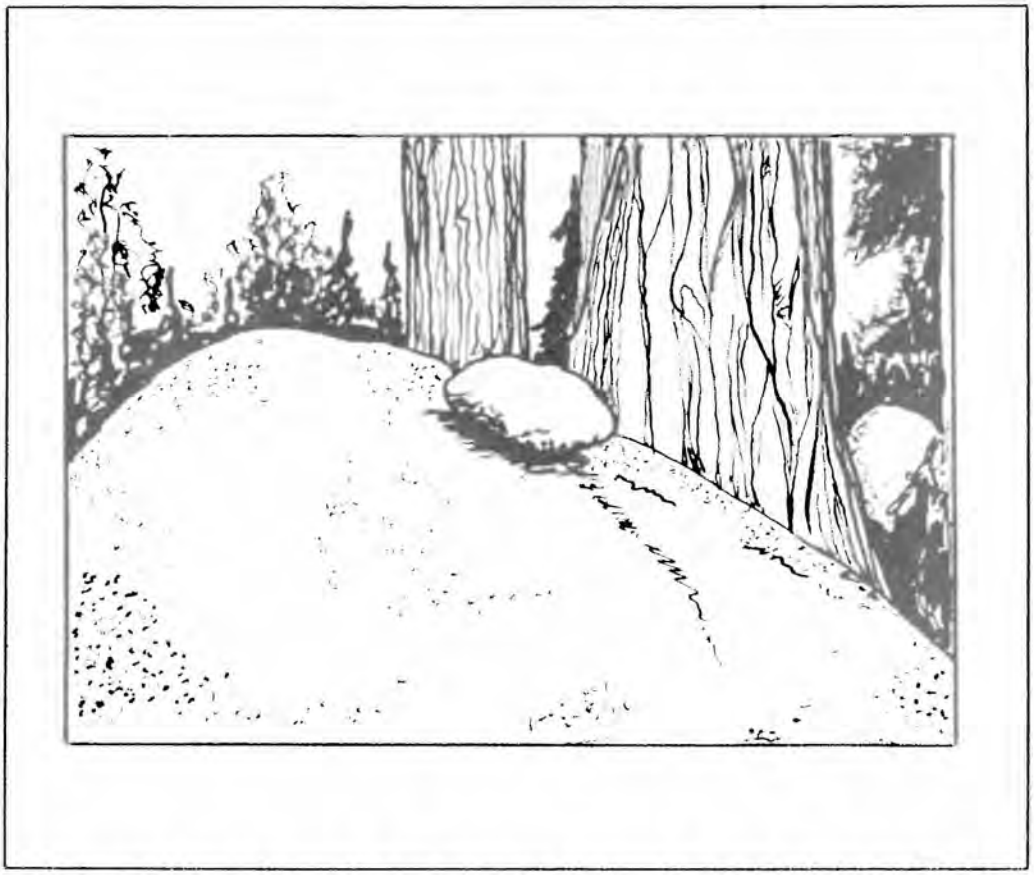
NEVADA Archaeologist

Volume 4, Number 2, 1984



Single-rock cairn believed to be downwind positional guide for aboriginal deer stalkers in the vicinity of Barker Creek, near Lake Tahoe, California. Sketch by Col Robert Brewer.

Nevada Archaeological Association

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The design for the NAA logo was taken from a Garfield Flat petroglyph by Robert Elston.

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Future Issues

Manuscripts submitted to the *Nevada Archaeologist* should follow the style guide of the January, 1979 issue of *American Antiquity*. Manuscripts should be typed and double spaced throughout, including notes and bibliography, and illustrations should be camera-ready with a caption typed on a separate sheet of paper, also double-spaced. Something less than these standards will be accepted reluctantly if what you have to say is more important than the format expressed above.

More manuscripts relating to Nevada archaeology and anthropology, in general, are solicited.

NEVADA Archaeologist

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On Rock Art Sites

The editor was reminded recently of how valuable and interesting prehistoric rock art sites really are. He was asked to remove some boulders with mountain sheep petroglyphs on them to prevent their theft. It was obvious other boulders had been hauled away from the site. After viewing the vulnerable boulders in place, and seeing that their removal would be a major engineering feat and that the site would be permanently damaged by their removal, additional photographs were taken, and the boulders were left *in situ*. At the same time, the knowledge that a determined collector had already taken some of the boulders, and probably would return for more, underscored the salvage option previously entertained.

Petroglyph sites are becoming more and more exposed to the depredations of modern land users of one sort or another. Unlike historic buildings which frequently seem to be removed from their contexts and rehabilitated, one way or another, petroglyphs out-of-context really do appear to be rock art lost. What can be done?

Since most petroglyph sites occur on rock walls, or on huge, non-portable boulders, they must remain in place. Amateur archaeologists can make a significant contribution to rock art studies by accurately recording design elements and noting locational patterns of design elements within sites. Minimal standards for recording petroglyphs stress five types of records: 1, a recording form; 2, photographs; 3 drawings; 4, maps; and 5, general descriptions. These types of activities do not disturb your friendly federal land manager, and they do contribute to the conservation of these valuable sites. More information on minimal standards for recording petroglyph sites will appear in a future issue of the *Nevada Archaeologist*. Incidentally, the line drawings of petroglyphs which appeared unlabelled in the last issue (Volume 4, Number 1) were drawn by Mary Bilan from original field sketches of Lower Truckee Basin petroglyphs by Levi Frazer, Jr. and Pete Williams.

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AMATEUR ARCHAEOLOGISTS SPEAK . . .

The Rio de San Buenaventura Revisted

by
Ruth B. Brewer

In 1776 two important Spanish missionary-explorers, Fray Francisco Atanasio Dominguez and Fray Silvestro Velez de Escalante, set out from Santa Fe, a little mission town in the southern Rocky Mountains, to make a deep exploration into the vast, unknown territory to the west. In general their objective was to find a route to California Either through a misunderstanding of Indians they questioned along the way, or from their own wishful thinking, they became convinced that there was an easy river passage to the sea. Specifically, the good fathers reported that they learned there was a river associated with a huge lake which provided a way through the "Great Sandy Plain" (The Great Basin) and the "Snowy Mountains" (The Sierra Nevadas) which they knew lay ahead of them.

Although they never found it, they named the presumed waterway the Rio de San Buenaventura and set in motion one of the most persistent and curious cartographic legends since the search for the Northwest Passage.

For the next 70 years dozens of explorer-emigrant parties picked up on the Rio Buenaventura theme left by Dominguez and Escalante, a theme which soon became amplified and embellished by many a distant armchair cartographer. But every promising waterway, later pioneers found, either . . . "Dwined to thorn scrub," as Rudyard Kipling's Explorer put it, or inexorably meandered away from California and the sea.

In 1884 David H. Burr, cartographer to the House of Representatives in Washington, came up with an interesting version (map, Fig. 1). His large lake is about where Lake Tahoe ought to be. However, Burr's Buenaventura River flows into the lake about where the Truckee flows out and the Sacramento River flows out of the lake about where the McKinney Creek pass occurs. Never mind, for the moment, that the direction of flow is scrambled, that Burr calls the "Lake of the Skies" a swamp(!) and that he has the Sacramento rising in the east instead of the north. Burr still has the topography more or less in hand and it was the topography which really interested the emigrant wagon trains.

The Buenaventura drainage (read Truckee River) and the Sacramento River (read McKinney Creek pass) are, in fact, quite related! Together they formed then, as they form now, the lowest and the easiest route for horse, ox and wagon through the very center of the mighty Sierra Nevadas.

The first emigrant party to cross into California by the route we now call "Interstate 80" was the Stephens-Murphy-Townsend group. We have no way of knowing if Burr's map of 1840, or any other map for that matter, influenced the Stephens party in 1844. However, these pioneers did make decisions just as though a map were actually in their possession. Instead of maps, however, they may have been using the same ultimate sources of the map makers -- the Native Americans whom they encountered along the way.

On the 10th of November 1844 the Stephens party reached the Truckee River-Donner Creek junction. Here two women and four men split south to Lake Tahoe. They were the first white folk to visit the lake and their names were as follows: Mrs. Ellen Murphy, Daniel Murphy, John Murphy, Mrs. Townsend, Oliver Magnam and Francis, a servant. In addition, they had two pack animals.

They were looking for a quick and easy way through the mountains to the California settlements. That the river they were following would lead them to a large lake, they would not have known unless they had Burr's map to go by, or had Indian guides, or both.

It seems likely that they would have encountered Washo Indians for both Freed (1966) and d'Azevedo (n.d.) tell us that there were villages, occupied the year 'round, in the vicinity of the Truckee-Donner stream junction. Da sasut ma'lam was a major site on Donner Creek near the current Tahoe-Truckee High School. K'ubuna detde'yi' was a large village near the present site of Truckee town on the Truckee River which the Indians called a'wakhu wa't'a.

In Robert Elston's (1977) excellent study one finds ample evidence supporting the idea that the wilmelti (northern) Washo would have advised the Stephens

party that at least the first part of a river-lake-river route (south-then-west as on Burr's map) to Sutter's Fort was viable:

> "...The Tahoe Reach (between Truckee Town and the Lake) was a major trek route to Tahoe used by the ...Washo, while Bear Creek, Squaw Creek, Deer Creek, Pole Creek (and) Deep Creek...provided access to the meadows and lakes of the high country...The Washo knew many ways to fish...all of which could have been used on these streams. The Tahoe Reach was also a good Mule Deer habitat and may have contained Mountain Sheep as well. Thus we would expect to find permanent Washo camp sites in places from which all of these resources would be available, such as the mouths of the ...creeks."

Throughout this area, a descendent of two California pioneer families, Colonel Robert Burnham Brewer, has spent years exploring the back country. Prompted by this writer's interest in the Washo, he made several trips, mapping the trails he knew of, searching for recorded camps (Freed and Elston) and looking for new ones (Map, Fig. 2).

In this regard, Site 11 at the top of Pole Creek is a red chert quarry and deer trap discovered by Col. Brewer in 1975. None of the artifacts has been taken from the quarry site, but a spear point collected by Scott Maxson, Brewer's nephew, in the deer trap area proper is sketched in Figure 3.

Tradition has it (Brewer 1966) that Squaw Valley was named for the Squaws the early emigrants found camped there (Site 22) while their men folk were off hunting in the mountains, at the top of Pole Creek, for example.

There can be little doubt, therefore, that in 1844 there were Indians around to question and to employ as guides up to the lake and beyond. Near the source of the Truckee River at the lake, Freed said there was a wilmelti Washo camp (Site 20) known as debeyumewe. This was just one of thirty sites recorded by Freed around the shores of Lake Tahoe (e.g. Sites 14-19).

The horse persons from the Stephens party probably stopped and drank in the spectacular view of the lake at debeyumewe before proceeding south around the west side of the lake. They would have passed

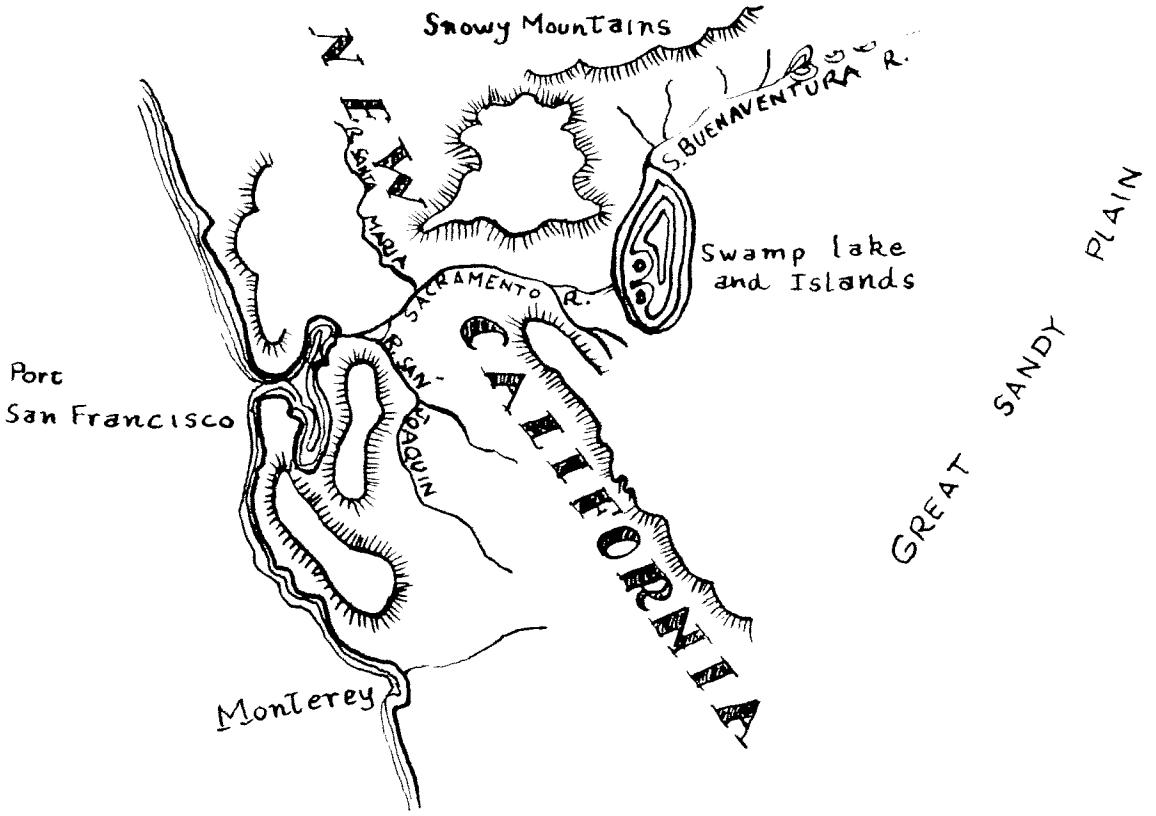


Figure 1. From David H. Burr's map of 1840 (after Cline 1963, following page 46)

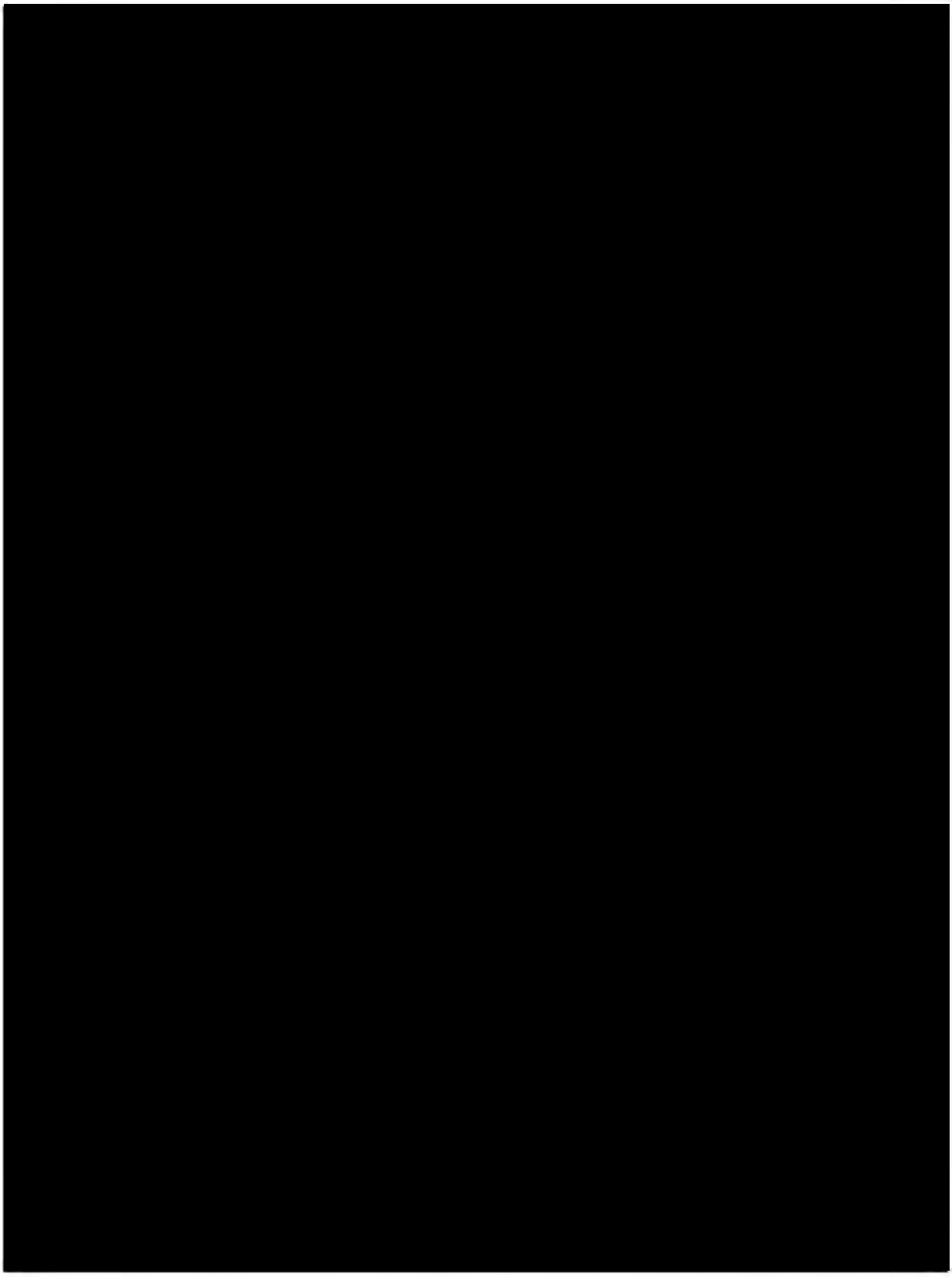


Figure 2. Sketch map of a portion of California in the vicinity of Lake Tahoe showing site locations and the route of the advance group of the Stevens-Murphy party.

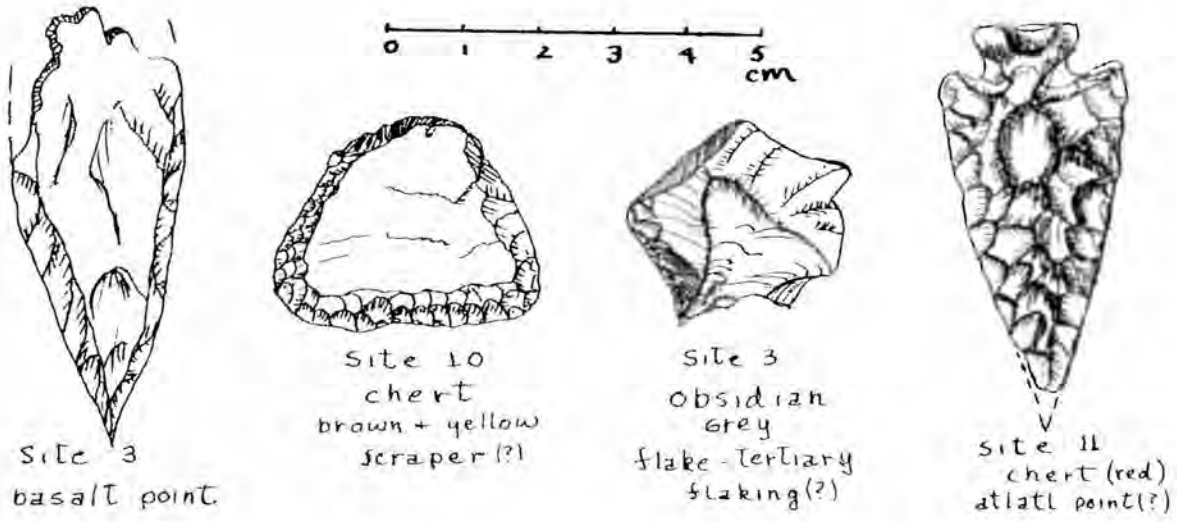


Figure 3. Projectile points and flakes collected on McKinney Gap route in 1975, 1976, and 1977.

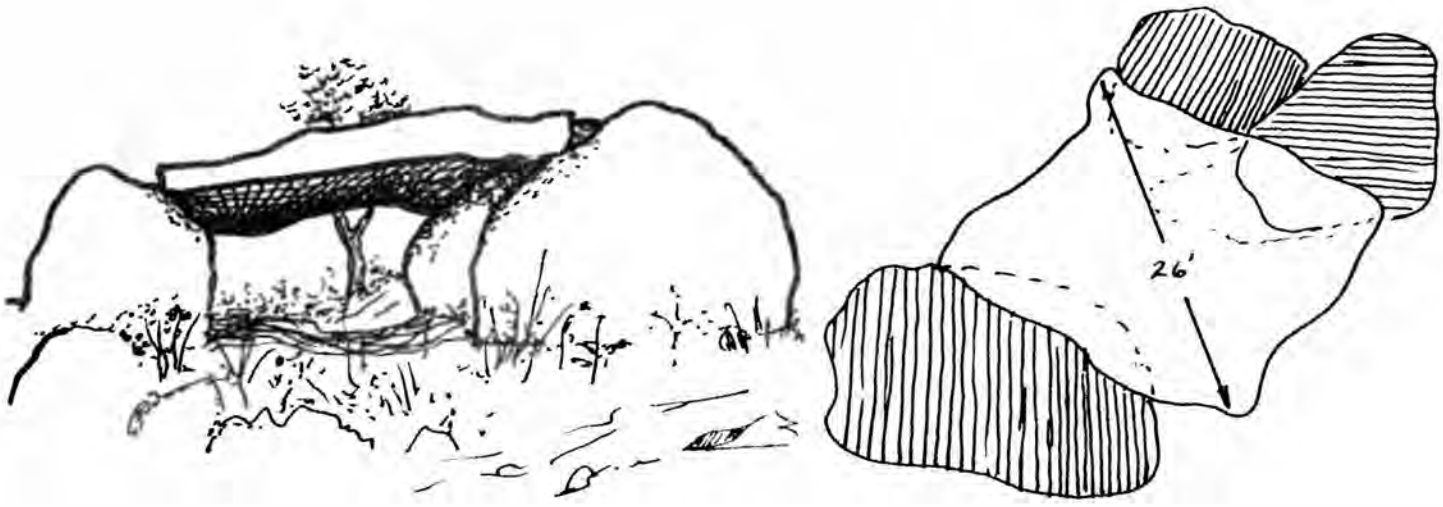
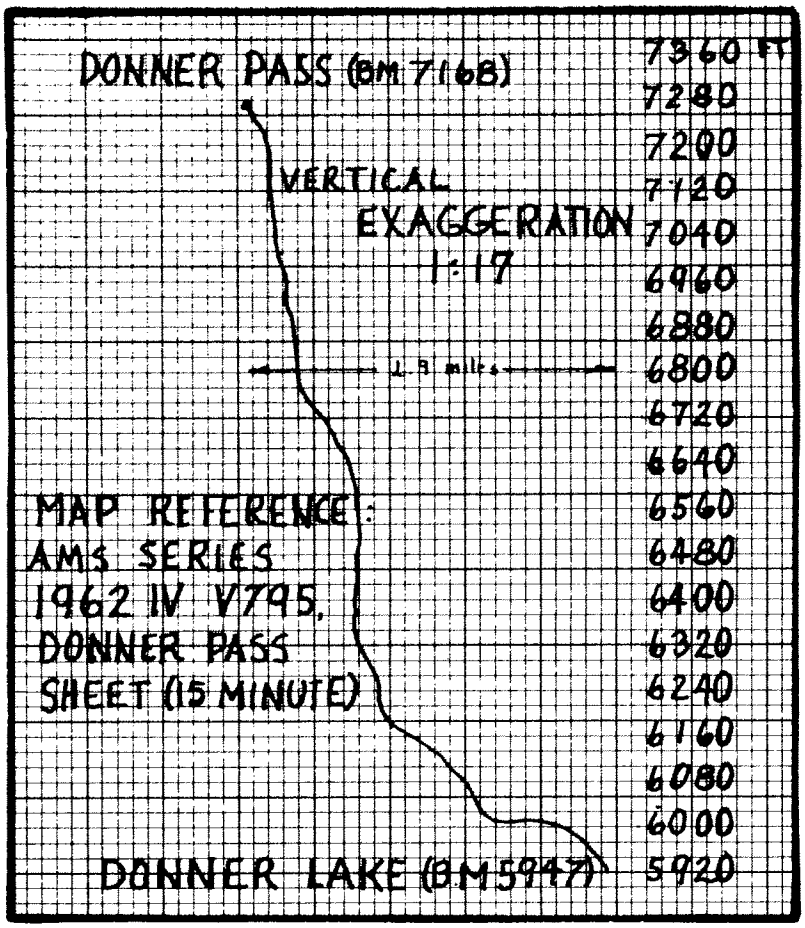


Figure 4. A camp site designated 7/? is a grotto formed by a huge piece of exfoliated granite resting upon boulders.



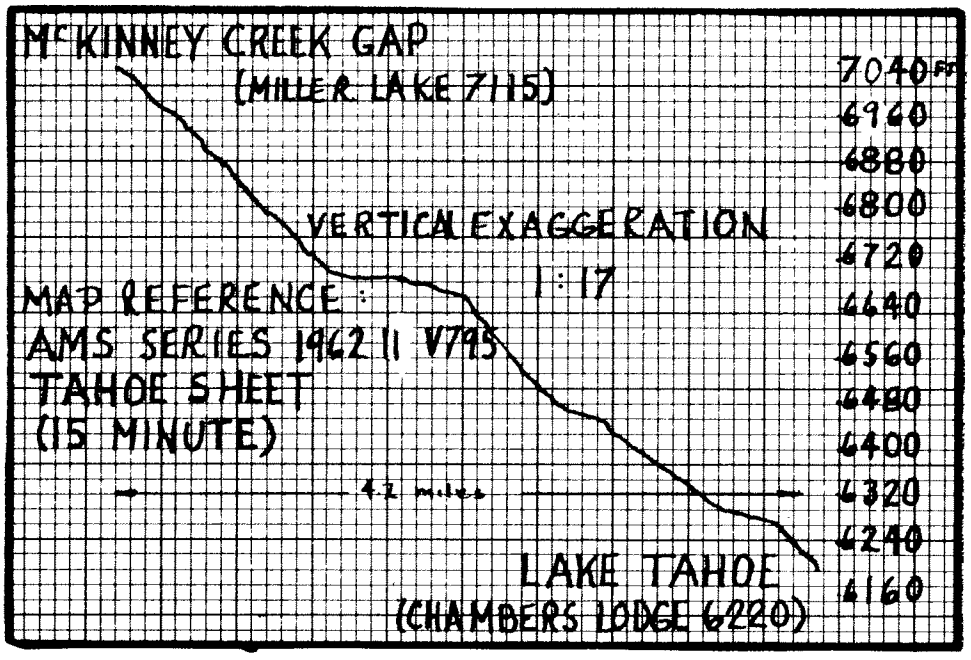


Figure 5. Comparative topographic profiles of critical sections of the Donner and McKinney trans-Sierra routes.

Indian camps, probably, at Ward and Blackwood Creeks (Sites 19 and 16). Near the mouth of McKinney Creek (Site 14) their Indian guides steered them west seven kilometers to the pass at Miller Lake, 2185 meters (7115 feet) above sea level. Through open timber and with no cliffs to scale, it was an easy climb for the horses. It is general knowledge that the Indians used this route extensively, proceeding to and from hunting grounds west of Lake Tahoe and in trekking farther west to trade with the California Indian tribes. The Indians would have known that this was a much easier crossing of the Pacific crest than the datsatsut route (Donner Pass) that the main part of the Stephens wagon train was then attempting (comparative profiles, Fig. 5).

From Miller Lake they descended 300 meters or so to Rubicon Springs and the upper Rubicon River valley where there were numerous Indian camp sites. Most of these sites were discovered in recent years by Col. Brewer, but surely some of them were occupied when the six horse persons from the Stephens party rode by.

Today, when one drops into the upper Rubicon from Miller Lake, he can see the remains of the old Rubicon Springs Hotel and Spa built originally in the 1880s. It prospered for three decades. The completion of a railroad spur line from Truckee to Tahoe City in 1900 brought many more visitors to the Lake and naturally the heartier souls ventured into the backcountry by horse, foot and carriage. Although the resulting debris of civilization is very much in evidence, including deep trail and meadow scarring by the off-the-road studs of the modern era, the area away from the old resort is very much as the Indians left it.

Noteworthy among the unspoiled natural features of both the upper and lower Rubicon River canyon are the mineral springs to be found there. Deer, grouse and marmots seem to be addicted to the salts of these springs. The Washo themselves drank of the "medicinal" waters and hunted and fished in the vast wilderness. Low growing, acorn bearing huckleberry oaks, Quercus vaccinifolia, and pine nut bearing trees, Pinus ponderosa, and Pinus jeffreyii, are everywhere. Even today it is the home of several rare fauna such as the fisher, Martes pennanti; martin, Martes americana; a scientifically unidentified pigmy western rattlesnake, Crotalus viridis (Pigmy); mountain lion, Felis concolor; and the golden eagle, Aquila chrysaetos. But all signs point to a much heavier human presence from prehistoric times up to the arrival of the small group from the Stephens-Murphy-Townsend party. The signs, most of them temporary campsites and hunting-ambush rock alignments, coincide quite nicely with wilmelti Washo models described by other authors.

A camp would consist of five or six circular windbreaks, gadu, and a bedrock mortar, lam, as permanent fixtures. Here meat, fish, acorns and pine nuts would be pulverized. Portable property was carried away when the resources of the area were depleted for the season. Difficult to find are bows, arrows, metates, manos and projectile points that the Washo valued so highly. However, chert and obsidian chips and flakes from stone implements used by the Indians are abundant in most of the sites.

Apparently, there are no first hand accounts extant on how the small band found its way down the Rubicon gorge below Rubicon Springs. If they blundered down the river canyon by themselves we might not have heard from them again; it's that rugged! We must assume they were still using Indian guides and those guides would have known about an easy route to the lower Rubicon via a topographic rift between the Rubicon and Barker Creek (sketches, Fig. 6). The rift, we are sure, was known to the Indians because there are sites there, at Long and Fern Lakes within the rift.

Site 8 near Long Lake is a natural grotto. Two or three people could escape a storm there. At the back of the cave there is an ancient fire pit, carbon-datable of course. Site 9, about 400 meters to the east is a more permanent camp site, featuring a simple bedrock mortar, spearable fish from the ledges above Fern Lake, and good observation points to guard against surprise.

One thing all campsites had in common was their situation on elevated ground away from the wet and verdant river bottom. Col. Brewer observed that an interesting

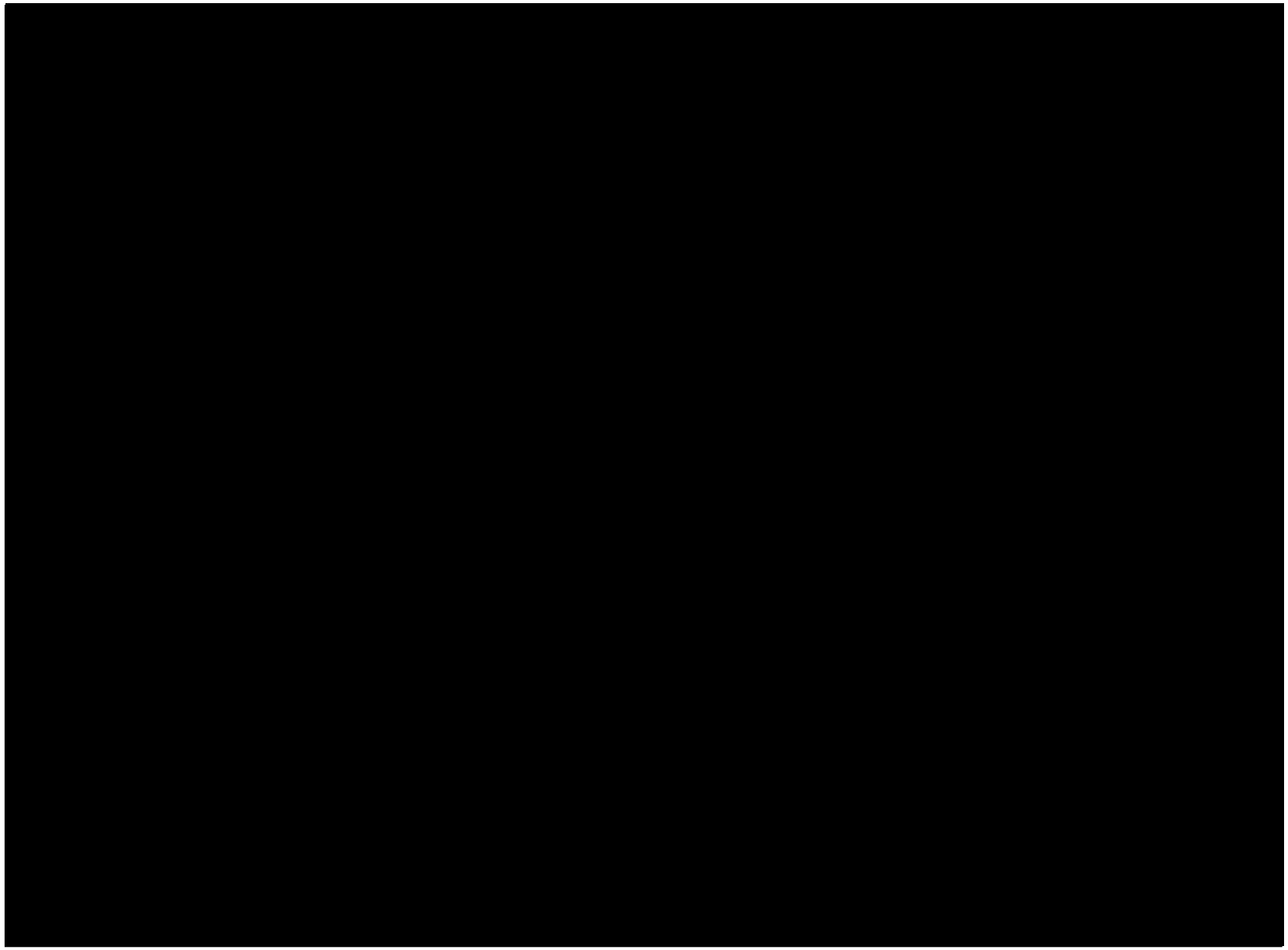


Figure 6. Sketch map of an easy route to the Lower Rubicon via a topographic rift between the Rubicon and Barker Creek.

parallel could be drawn here between this Washo Indian practice and that of the current-day hill tribes of Southeast Asia. In addition to the defensive advantages, the H'mong, Lahu, Akha, Lisu etc. claim it is warmer at night on the hillsides than in the canyon bottoms and usually there are fewer mosquitos. These very human considerations could well have occurred to the Washo, too. As Lowie (1939) has pointed out, however, the Rubicon Canyon was "peripheral land" to the Washo, outside their "nuclear" heartland, so some other rationale may have been paramount.

Sites 7 and 10 are excellent examples of campsites possessing natural defensive advantages. Site 7 is on the shores of a small unnamed lake on a bench some 180 meters above the river. All feasible avenues of approach are clearly visible from the camp. Site 10 is similarly situated on a cliff above the river but not as high. Instead of a lake there is a stream (drainage from Buck Island Lake) for the requisite source of water for the camp. Basalt, chert and obsidian flakes are abundant on the surface at Site 10, suggesting this site was used longer and more frequently than most in the valley.

Site 7/? is a remarkable, natural megalithic grotto (sketch, Fig. 4). Col. Brewer estimated that it could sleep nine people comfortably. In August 1976 he was forced to harbor there with a group of Explorer Scouts during a two-day storm full of rain and snow. A cursory search revealed no artifacts. It would seem likely, however, that the Indians found a use for the place just as Col. Brewer did. A single slab of exfoliated granite, 30-50 cm thick and 8 meters on the diagonal, rides high, 1.8 to 2.4 meters, above the floor of the grotto on three massive boulders making two usable rooms.

According to Elston, the two entrances probably would have been closed by the Washo with bark from the incense cedar trees, Libocedrus decurrens, that abound in this area. The Explorer Scouts used ponchos and tube tents and called the place, "The Rubicon Hilton."

The two women and four men from the Stephens party were probably too intent on reaching the comfort and safety of Sutter's Fort to investigate the upper Rubicon much. Riding down Barker Creek to its confluence with the Rubicon, however, the party undoubtedly went right through one well organized deer ambush site and came close to two others (Sites 1-6; Map, Fig. 2).

Freed, Strong (1976) and Downs (1961) give us a background of the hunting strategy of the Washo. When going out to hunt in groups of five to 10, the men customarily sought first the advice of a "gifted" elder known for his supernatural vision. He would tell them of one place or another where the mule deer, Odocoileus hemionus, were especially thick at that moment. Plans for a deer drive at that spot were then made accordingly. Blinds and traps were often set near favorite deer watering holes. These were often habit-forming saline springs. Over a two-week period, usually in the fall, men from one family group would take part in these proceedings while the women and children stayed behind in camp gathering acorns and pine nuts. After a successful hunt the meat was cut into strips on the spot and dried. Presumably the women came on to help at this stage. Tradition has it that 35 to 44 kg of meat per man could be carried by the Washo back to winter quarters.

The Washo considered the bones of the deer to be sacred and "dangerous." They were often, therefore, submerged in a stream and weighted down with stones so filthy scavengers like coyotes and vultures would not disturb them. The Washo believed the animals voluntarily allowed themselves to be killed for the benefit of mankind so man was honor bound to treat this sacrifice, and the remains, with respect.

Site 6, found by Col. Brewer in 1976, is a good example of the saline springs mentioned above. Located about one kilometer upstream on the Rubicon from the junction of the Rubicon and Barker Creek, the spring is a mere 20 meters from the river on the right-hand bank. Over the centuries a dome of salt deposits approximately 2.8 meters high has accreted there.

The mineral content of the water and salts is not known, but to this writer, samples collected by Col. Brewer in

September 1977 had a slight taste of sulfur. The muddy area around the spring provides conclusive proof, in the form of a myriad of hoof prints, that the deer of today prefer the water of this spring to that of the river only 20 meters away. The site is marked by a single stone cairn. Col. Brewer surmises that it was placed there by Indian hunters in advance of a dawn deer drive. His reasons follow.

Three other almost identical single-rock cairns (Site 5), each about 115 meters from each other, were found along a heavily used deer trail leading north away from the mineral spring (Site 6). The trail seemed to be the main one in the area. In September 1977 the pathway averaged 15 cm below the surrounding surface and led directly to and through the deer trap at Site 3. All three cairns at Site 5 are single river-worn rocks, just as they are at other deer traps in the area, e.g. Sites 1, 2 and 11. All three are positioned on outcroppings of bedrock approximately 10 meters west of, i.e. below, the deer trail, suggesting that they were downwind positional guides for the deer stalkers in the dawn or predawn hours of early autumn when the wind in this region characteristically flows downcanyon. Col. Brewer tested this theory at 5:30 AM on September 27, 1977 and found it to be so. The cairns incidentally were found to be easily identifiable in silouette against the night sky (sketches, Fig. 7).

Site 4 cairns along another trail, on the other hand, are both above the trail and evidently intended for use when the wind was coming up the canyon. Usually in the summer and autumn this occurs in the afternoon and continues until after sundown.

Site 3, by virtue of its situation on a major deer trail crossing Baker Creek some 820 meters up from its juncture point with the Rubicon River, dovetails perfectly with Sites 4, 5 and 6. Evidence that the Indians turned the crossing point and the rock-walled pool above it into a cul de sac is abundant. Using mask and snorkel, Col. Brewer found obsidian and basaltic flakes in the gravel mound in the pool just above the crossing point.

Marking the north end of Site 3 at the top of a tight defile, is a cairn and a possible rock barrier similar to those at Sites 1 and 2. The rock alignment is approximately 13.5 meters from what appears to have been the killing zone at Site 3.

This presumed killing zone consists of a two-meter high log barricade on the downstream side of the trail and an equally tall flat-sided boulder on the upstream side. Two half-logs of unknown species, split lengthwise by some long-ago bolt of lightning have been neatly fitted horizontally between two trees, one of them a moribund black oak, Quercus kelloggii, at waters' edge and the other a 15 meter tall white alder, Alnus rhombifolia. The lower log is approximately 4.4 meters long, the top 2.8 meters. Lightning char marks are visible on the downstream side of one log. Filling the 1 meter gap below logs is a man-made rock wall. As the sketch map shows, the barricade may have once extended across the stream but no trace can be found today so this presumption is somewhat dubious (Map, Fig. 8).

The heavy lichen encrustations on the cairns might be meaningfully dated by lichenology. The biological integrity of the lichen coverage of both mother rock and cairn certainly looks old enough to predate the white man's coming; it might also lend itself to rather convincing evidence of a pervasive Indian presence in this now forgotten river valley back to the days exploratory expeditions like that of Fathers Dominguez and Escalante were looking for an easy way west.

Considering the sacred nature of the deer hunt, we would not have expected the Indian guides with the little Stephens party to explain the features of Sites 3, 4, 5 and 6 -- if noticed at all -- as the party passed on down the Rubicon. For much the same reason, the meeting grounds farther on at Bunker Lake (Site 23), where the Washo and Maidu may have gathered seasonally for trade and social purposes (Freed 1966), would probably have been passed without gesture or comment. Following the Rubicon to the middle fork of the American River to the north fork and the main stream, all of this a known Indian thoroughfare, the little party reached Sutter's Fort.

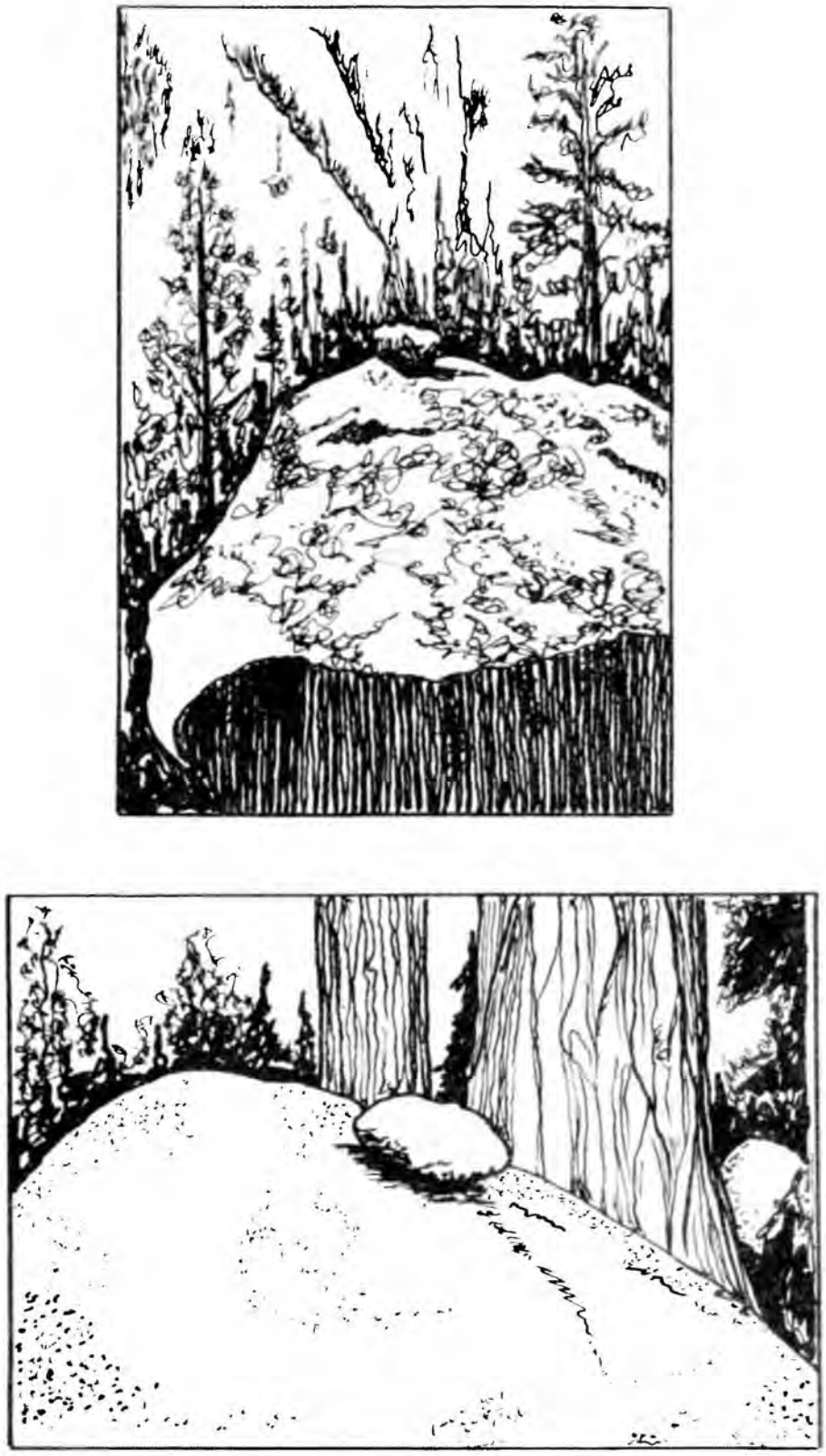


Figure 7. Single-rock cairns believed to be downwind positional guides for aboriginal deer stalkers; upper, typical Site 4 cairn in silhouette aspect; lower, typical Site 5 cairn.

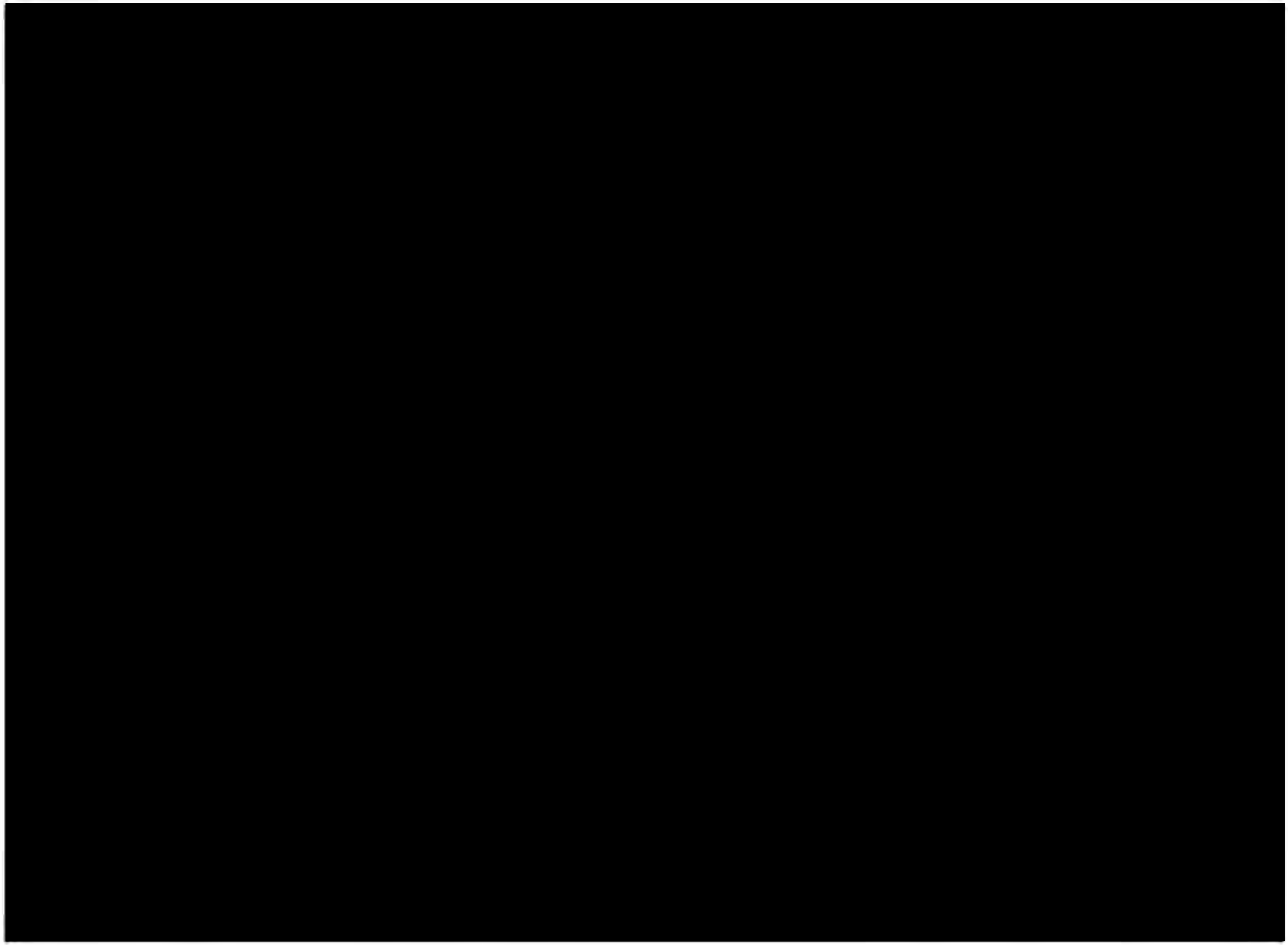


Figure 8. Presumed "killing zone," a split log and rock cairn barricade athwart a deer trail, located on Barker Creek.

As it happened, the party was days ahead of the main party which experienced considerable difficulty coming by way of datsatsut pass, later to be named Donner Pass. If the Washo guides were still at Sutter's Fort when the main party straggled in they (the Indians) may have smiled thinking how odd these new Americans were to be always insisting that the shortest distance between two points was a straight line!

It would not have been out of character for the Washo guides to rest awhile at Sutter's Fort before heading back despite the obvious onset of winter. These Indians were experienced year-round travelers. Less than a year earlier, in the middle of winter near Markleeville, Major John C. Fremont found a young Washo brave who knew where Sutter's Fort was and was willing to take him (Fremont) there right then. Fremont further reported seeing Washo on snowshoes, . . . "zipping along," westward in the vicinity of the south fork of the American River. We are told that the Washo territory covered 12,000 square miles and we know that the trails they followed in quest of pine nuts, acorns, deer, rabbit and fish were extensive. But Fremont and others provide insight to even wider excursions on the part of the Washo.

Even the mythology of the Washo covers much traveling (Dangberg 1968). They were closely associated to and traded with the Maidu and the Miwok Indians of California (Cline 1963). Their ways of living were influenced to a marked degree by the tribes they encountered on their travels (Dangberg 1968). Occasionally they went to the coast, to San Francisco and Monterey (d'Azevedo n.d.) and as far south as San Diego (Downs 1961). Among other things they returned with were sea shells for basket decorations.

Who knows? The Washo might also have traveled east as well as south and west. Conceivably they might have reached southwest Utah when the Dominguez-Escalante Expedition passed that way. A natural extension of that thought is the notion that Escalante may have acquired the idea of the great lake and river trending westward from the Washo. Given the Washo penchant for talking about the western topography (Fremont 1846; Cline 1963; Strong 1976) with early pioneers, this hypothesis is not too far fetched.

Lake Tahoe, with its huge dimensions, its magnificent mountainscape, its sacred and secret places and its bountiful resources -- in the minds of the Indians -- would naturally have loomed larger than life. As a consequence, the place would have been so described to eager explorers like the good padres from Santa Fe. The Indians would have perceived only dimly the white man's emphasis on other things: possible turnpike routes through the hostile ranges, navigable rivers, bottomlands for agriculture, the head-potential of lakes and streams for mills and industry. Confusion due to cultural biases and language difficulties was almost guaranteed. Therefore one can only surmise how the myth of the Rio de San Buenaventura and the lake with two exits might have begun.

The two most likely "exits" from Lake Tahoe basin from a topographic point of view are the "Tahoe Reach" (Truckee River) and the McKinney Creek Pass (into the Rubicon Canyon).

Late in the middle of the last century, the Hunsucker brothers who homesteaded Rubicon Springs, tried to promote the McKinney Creek Pass as a feasible toll road route for traffic to and from the Washo mines, with a ferry boat crossing of Lake Tahoe. Not much came of Hunsucker's plan when the railroad was built over Donner Summit in the 1860s. Perhaps it is best that it remains yet one little-used pathway through the Sierra, one that follows the footsteps of the Indians and a few other travelers who chose to go that way.

To these people, the ghosts of the Washo, and latter-day explorers like Col. Brewer and myself, the Rio de San Buenaventura will forever be very real. And we shall be quite content if everyone else continues to proclaim such a passage, "Myth!"[1]

NOTE

1. Gloria Giffen Cline in her volume on Exploring the Great Basin (1963) is very explicit about which river she considers the Spaniards Dominguez and Escalante had

discovered and named the San Buenaventura:

> "Following the buffalo trails, they headed northwest and were deflected toward the west by the towering Yampa Plateau. Soon the explorers found themselves on the banks of a large stream which they chose to call the San Buenaventura.
>
> In striking this river, the Spaniards had discovered the Green River, the main fork of the Colorado River."

References Cited

Brewer, William H.
1966 Up and down California in 1860-1864. University of California Press.

Cline, Gloria Griffen Cline
1963 Exploring the Great Basin. University of Oklahoma Press.

Dangberg, Grace M.
1968 Washo tales. State Printing Office, Carson City.

d'Azevedo, Warren
n.d. Washo place names. Nevada Archeological Survey, University of Nevada, Reno.

Downs, James
1961 Anthropological records, 16:9 Washo religion. University of California Press.

Elston, Robert, et al.
1977 The archeology of the Tahoe Reach of the Truckee River. University of Nevada, Reno.

Freed, Stanley A.
1966 Notes on western Nevada archeology and ethnology #66. Berkeley University Press.

Fremont, John C.
1846 Narrative of the exploring expedition to the Rocky Mountains in the year 1842, and to Oregon and north California in the years 1843-44 by J.C. Fremont and the years 1846. D. Appleton and Company, New York.

Lowie, Robert F.
1939 Ethnographic notes on the Washo. University of California Press, Berkeley.

Strong, Emory
1967 Stone Age in the Great Basin. Thomas Binford, Portland, Oregon.

THE ARCHAEOLOGY OF A DESERT OASIS: RED ROCK CANYON AND THE SPRING MOUNTAINS

by
Kevin Rafferty
UNLV Museum of Natural History

The Red Rock Canyon Recreation Lands, 15 miles west of Las Vegas, were an oasis of exploitable resources in aboriginal times. A review of the existing data indicates that the occupation of the region dates to at least 1500 B.C., and perhaps even to the PaleoIndian era. This paper reviews the work of the last 15 years, in both the Red Rocks and Spring Mountains regions, and attempts to integrate these data into a comprehensible framework for study and future research.

Introduction

The purpose of this paper is to discuss the archaeology and culture history of two areas in Southern Nevada: The Red Rock Canyon Recreation Lands (RRCRL) in particular and the Spring Mountains in a more general sense. Both regions have been the scene of extensive amounts of work in the last 15 years, but this work has been mostly of a CRM (Cultural Resource Management) or inventory nature. There has been little attempt to synthesize these data into a comprehensible whole, with the exception of a Class I inventory conducted for all of Clark County contracted by the Bureau of Land Management (Hauck et al. 1979), and an evaluative study by Lyneis (1982). This paper is an attempt at a preliminary synthesis focusing on the RRCRL. It will be shown that the human occupation of the RRCRL dates to at least 1,500 B.C., and perhaps even earlier, and that the archaeology of the adjacent Spring Mountains is at least as ancient as that of the RRCRL. This region has served as an oasis of water, fauna and flora that the aboriginal inhabitants of the region could exploit nearly year-round, as opposed to the seasonal exploitation of desert regions surrounding the Spring Mountains. No claim is made that this paper is a complete or comprehensive treatment of the subject. Instead, it is offered to stimulate discussion, criticism and research in a little known area of the Great Basin.

Setting

The RRCRL are situated 15 miles west of Las Vegas, and form the easternmost extension of the Spring Mountain Range (Figure 1). The Spring Mountains are isolated fault blocks thrust above the lowlands between the Las Vegas and the Pahrump Valleys. They mark the watershed division between the Colorado River and Death Valley drainage systems, and they are typical of ranges in the southern basin and range physiographic province.

Mount Charleston, at 11,918 feet, is the highest point in the Spring Mountains. However, the RRCRL sandstone escarpment reaches a height of near 7000 feet, and the area tapers down to a height of roughly 3400 feet on the alluvial/colluvial fan at the base of the escarpment. The regional and local geological situation governs the climatological makeup and the availability of resources within the RRCRL.

The region is located in the rain shadow of the Sierra Nevada Mountains, with semi-arid to arid conditions prevailing in the study area. The annual precipitation varies directly with elevation. Las Vegas, at 2165 feet, receives 4+ inches of rain a year, while Little Red Rock, northeast of the RRCRL, averages 7 inches of rain a year at 3800 feet. Areas above 7000 feet average approximately 12 inches of precipitation yearly. Most precipitation occurring from October to June originates in cyclonic storms from the North Pacific Ocean, while the intense summer thunderstorms from June through August originate in the Gulf of Mexico (USDI, BLM 1980:19).

Monthly rainfall averages vary significantly from year to year. In Little Red Rock, January rainfall varied from a trace in 1968 to 5.67 inches in 1969. The same pattern holds true for annual precipitation, with 4.17 inches of rain falling in Little Red Rock in 1968, while 13.64 inches fell in 1969 (USDI, BLM 1980:9, Table 3.1).

Daily temperature fluctuations of more than 30 degrees farenheit are common. Below the escarpment the average

temperature is 62°F, with ranges from 5°F to 110°F. On top of the escarpment, the average is 55°F, with ranges from 0°F to 98°F (NOAA, 1955-1978).

Most water is carried in the subsoil and the aquiferous sandstones and conglomerates, and emerges at the surface as springs, when the aquifer encounters some obstruction at the cliff bases. Most springs are perennial, and their discharge is greatest at the time of maximum snow melt (Brooks, York and Massey 1972:5). In RRCRL, there are 49 known springs and seeps (USDI, BLM 1980:33-35, Table 3.3), most of which are positively associated with aboriginal and historic remains, such as Willow Springs, White Rock Springs, Lone Grapevine and Scrub Oak Springs, Red Springs, Sandstone Spring and numerous others. The aboriginal occupations span from at least the Archaic era through protohistoric times.

The RRCRL contains a wide variety of plant associations that are dependent for their existence on soil type and depth, elevation, exposure and precipitation. The major associations are (USDI, BLM 1980:58-62; Brooks et al. 1977a:7-8): 1) Pinyon Juniper at the 5000-7000 foot range; this association receives 10-18 inches of rain, and is also associated with Mountain Mahogany, big sage, blackbrush and several grass species; 2) Joshua Tree lying between 3600 and 4200 feet, and also associated with blackbrush, creosote, Mormon tea and burrobush and with precipitation ranging from 8 to 10 inches a year; 3) Rabbitbrush which is generally found on eroded and disturbed soils and wash bottoms mainly between 3400 and 4200 feet elevation, and with precipitation averaging 6 to 8 inches a year; 4) Yucca-Blackbrush, a traditional zone between the higher and lower elevation types. It has commonly occuring flora including Spanish Bayonet, Joshua Tree, Mohave Yucca, Indian ricegrass, creosote, burrobush, beavertail cactus, opuntia, indigo bush and desert mallow in the lower elevations. The upper elevations contain pinyon, juniper, sagebrush, agave and various grasses.

The fifth and final association, the Spring and Canyon Riparian complex, is the most important for understanding aboriginal use patterns in the RRCRL. This association exists in several small, narrow canyons cut into the face of the escarpment, in areas such as Willow Springs, Pine Creek, Oak Creek, First Creek and Ash Creek. The high sandstone walls, part of the aquifer, and the cooler conditions within the canyons encourage a heavy vegetative growth within and adjacent to existing streambeds. Flora in this zone include cliffrose, Apache plume, manzanita, scrub oak, and Mormon tea. Each canyon also has certain canyon-specific flora, including wild grape, thistle, columbine, milkweek and beardtongue, with isolated examples of pinyon, juniper, Spanish bayonet, desert almond and a large opuntia community in the wash bed leading into Pine Creek. Ponderosa Pine also occurs in Pine Creek, along with juniper and pinyon, all benefiting from the cooler temperatures and low evapotranspiration within the canyons.

A wide variety of fauna occurs in these floral zones: bighorn sheep and mule deer in the higher elevations, plus cottontail and jackrabbits, ground squirrels, coyotes, kit foxes and a wide variety of reptiles and avifauna (USDI, BLM 1980:67-68).

Many of these resources were highly prized by the aboriginal inhabitants of the region: agave, pinyon, juniper, rice grass, scrub oak, opuntia and other cacti, wild grapes, Joshua tree, Mojave yucca, desert almond, and the mesquite groves in the nearby Las Vegas and Pahrump Valleys were used as sources of food and raw materials for tools, basketry and other items of material culture. Additionally, the adjoining Spring Mountains and Bird Spring Mountains to the south, and the springs in the Las Vegas Valley were also sources for food, tools and also lithic materials. Finally, the limestone found within the RRCRL would have provided the medium of heat transfer desirable for use in the roasting pits that were used to exploit agave, yucca, pinyon, desert tortoise and bighorn sheep (Steward 1938; Brooks, York and Massey 1972; Brooks et al. 1976).

Previous Research

Much archaeological work has been conducted in Clark County in the last 75 years, a great deal of it in the RRCRL and Spring Mountains region. The first published archaeological research was conducted by Duffield (1904) who described the roasting pits, rock shelters and petroglyphs in the Spring Mountains, probably within the RRCRL. Harrington worked in the region in 1939, and described the archaeological site complex at Willow Springs Shutler and Shutler (1962) also conducted surveys in the RRCRL, recording several dozen sites, including the petroglyph/pictograph panels, roasting pits and rockshelters in Brownstone Canyon, discussed in a later section. In the late 1960s Karma K. Miller, an avocational archaeologist, conducted Bureau of Land Management-approved excavations at Willow Springs and other localities in RRCRL.

From 1967-1969, the University of Nevada, Las Vegas (UNLV) conducted a series of small-scale archaeological surveys in Red Rocks, and the Department of Anthropology's archaeological field methods class conducted additional survey and excavations in the region. Moen (1967) also conducted research on the petroglyphs of southern Nevada, and his report included many locales in the Red Rock area.

In the 1970s, UNLV conducted a complete survey of the Spring Mountain State Park and the Pine Creek area for the Nevada Division of State Parks (Brooks et al. 1974). UNLV also conducted three surveys for the Bureau of Land Management, one of which was location specific (Brooks et al. 1976) and two were Class II sample surveys (Brooks et al. 1977a, 1977b). In total, over 300 archaeological sites, including several site complexes, have been recorded within the boundaries of the RRCRL.

In the Spring Mountains and Bird Springs areas, a number of surveys and excavations have been conducted that help to flesh out the archaeological picture of the RRCRL/Spring Mountains region. A survey of the Toiyabe National Forest, northwest of the Red Rocks area (Brooks, York and Massey 1972) recorded dozens of sites and resulted in the excavation of Lennie's Site, a rockshelter situated in the pinyon-juniper zone of the Spring Mountains. Additional surveys in the Charleston Peak part of the Spring Mountains include the Mack's Canyon burn mitigation survey (Ellis 1981) which recorded 22 rock ring features, 4 rockshelters, 3 lithic scatters and 13 isolated finds, mostly within the pinyon pine biome; and several clearance surveys by the writer (Rafferty 1981, 1982a, 1982b) that fall within the same environmental zone.

In addition, a number of power line and seismic line surveys, and small project Bureau of Land Management surveys have been conducted within the Spring Mountains and along its peripheral edges.

Three additional, but very important, pieces of research have been conducted in the immediate region. Three rockshelters, Bird Springs (Ancient Enterprises 1980), Mule Springs Rockshelter (Turner 1978), and the RJK Site (Rodriguez and Rodriguez n.d.) have been intensively excavated, and will be cited frequently as they provide the solid excavated data base from which chronological and settlement/subsistence pattern data can be inferred for much of the region. Finally, Cunningham conducted research at Lone Grapevine and Scrub Oak Springs (1978) which has aided in extending and clarifying the archaeological picture concerning the Red Rocks area. This report also will be utilized in the following analysis of the regional archaeological picture.

Culture History and Archaeological Synthesis

The chronology utilized in this paper is one developed by Hauck et al. (1979) for the Class I overview of Clark County, and is a synthesis of formulations put forward by Shutler (1967) and Warren and Crabtree (n.d.). The culture history of the study area cannot be discussed without reference to data from the immediate Spring Mountain and Las Vegas Valley area, particularly to the sites specifically mentioned at the end of the last section. Thus, local data will be utilized and data from other portions of Nevada will be brought to bear on the subject as they

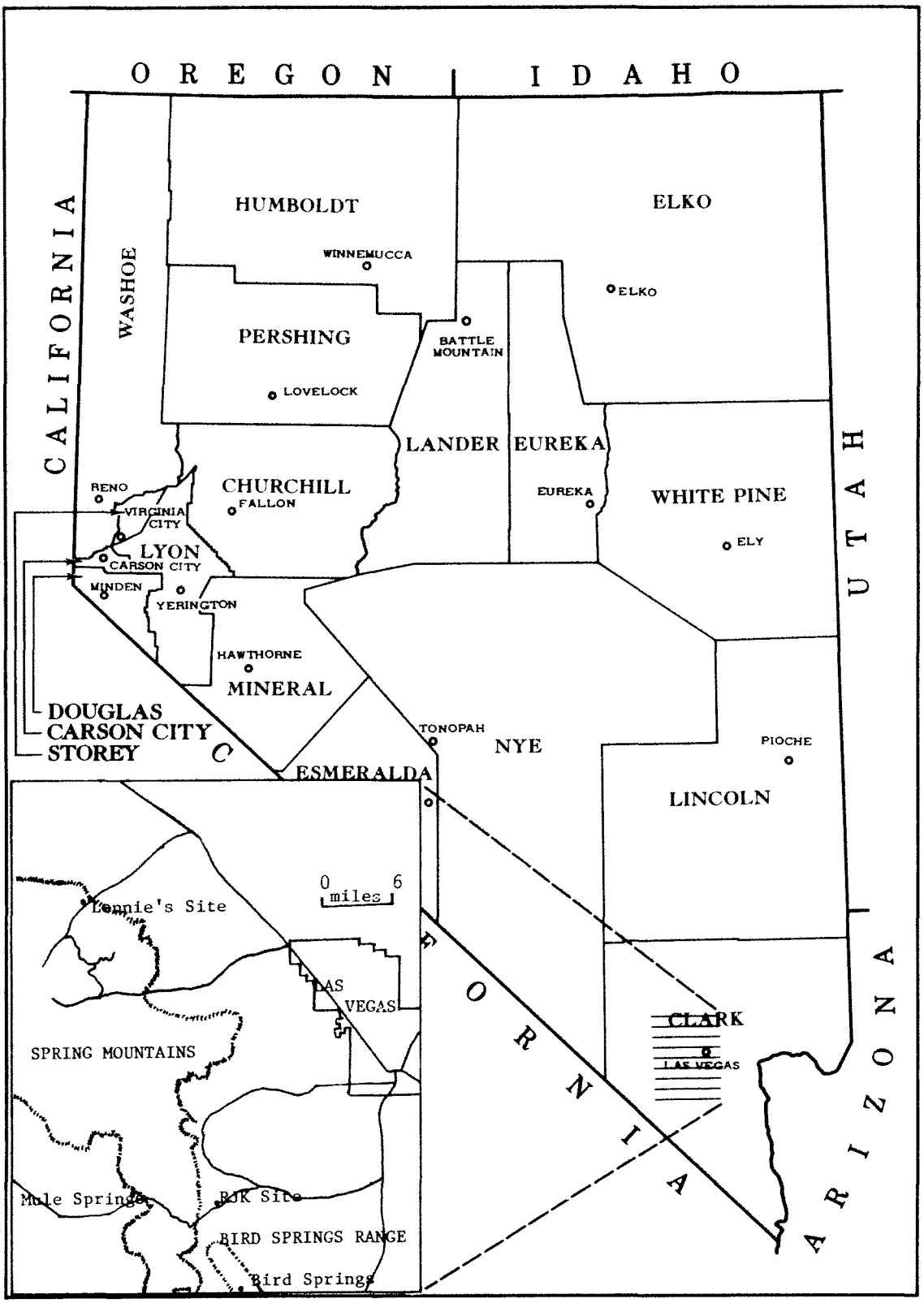


Figure 1. Map of Nevada with an inset showing sites located in and near the Spring Mountain Range.

are found pertinent.

Tule Springs Phase (13,000 to 10,000 B.P.)

This is considered to be the Paleo-Indian Phase, or big game hunter era, of the prehistoric occupation within Clark County. It is defined essentially by the work conducted at Tule Springs by Harrington (1934, 1941, 1954, 1955a, 1955b; Harrington and Simpson 1961) and later, and much more modern field work conducted by Shutler (1967) and others (Wormington and Ellis 1967). Only 5 hearths and 11 artifacts were recovered at the sites in question, which had early levels dated via radiocarbon dating to between 13,000 and 10,000 B.P.

There is precious little other evidence of PaleoIndian occupation of the region. Fluted or Sandia points, hallmarks of this phase, have been reported from around Mud Lake in Nye County, from the Nevada Test Site (Worman 1969:33) and Pleistocene Lake Tonopah in Esmeralda County (Tuohy 1969; Thomas 1978). Brennan (1982 personal communication) and Brooks (1982 personal communication) report that amateurs recovered a Sandia point in the Rainbow Gardens area east of Las Vegas, and fluted points on the west side of Las Vegas (Perkins 1968: 4-5). The majority of the finds have been reported from around the shorelines of extinct lakes, leading E. L. Davis (1963) to hypothesize that the settlement/subsistence pattern of these peoples were primarily directed towards the hunting of extinct megafauna that frequented the now dry lakes. This interpretation, however is still open to question.

There is also problematic evidence of PaleoIndian utilization of the Spring Mountain and Bird Spring Range area. The excavation report (Ancient Enterprises 1980) cites testimony from amateurs that unauthorized excavations at Bird Springs uncovered two fluted points from deep within the midden at the site. This should not be surprising, since although the shelter is within the generalized blackbrush zone, floral resources such as agave, datura, cholla cactus, and Joshua tree, and fauna, such as bighorn sheep and mule deer, plus desert tortoise and rabbits, exist very close by. It would be illogical to assume that the PaleoIndians subsisted only on megafauna. Ethnographic studies (Lee and Devore 1968) indicate that even big game hunters in Africa derive the majority of their subsistence from floral resources. Additional archaeological evidence from Arizona and elsewhere in the west (Martin and Plog 1973) seems to indicate that the PaleoIndians made camps in a variety of resource zones. Size of the camps ranged from large base camps in the lowland areas, where multi-family or multi-band groups gathered, to kill sites also located in the lowlands with large numbers of butchered animals, to smaller, higher altitude, special activity sites for hunting and floral resource exploitation (see also Wilmsen 1970; DeGarmo 1970), finally to medium size, mid-altitude sites where bands or families gathered prior to dispersing to the uplands or moving into the lowlands. Bird Springs may have been a special activity site for floral and/or faunal exploitation, given the regional resource base and the availability of water.

Therefore it seems quite likely that the rich resources of the RRCRL and the Spring Mountains were exploited by Paleo-Indians. The writer suspects that more evidence of such an occupation will be found, given large-scale survey and excavation programs in the region that could uncover this evidence.

San Dieguito Phase (ca. 9,000 to 7,500 B.P.)

This phase has been defined elsewhere, mainly in the western Mojave Desert near Lake Mojave, California (Campbell et al. 1937; Rogers 1939). It is defined by sites with small, cleared, living areas found on terraces of extinct lakes, and accompanied by artifacts such as Lake Mojave and Silver Lake points, scrapers, borers, and other bifacially flaked tools. The people are seen as hunters who took the dwindling megafauna around the Pleistocene lakes and who exploited a wide variety of lakeside fauna and flora.

As in the case of the Tule Springs Phase, there is little direct evidence for this phase in the immediate region of the Spring Mountains or RRCRL. Harrington

and Simpson (1961) and Susia (1964) reported Lake Mojave and Silver Lake points and other artifact types on the surface near Tule Springs, and this is about the extent of the evidence. But given the resources of the Spring Mountain/RRCRL area, and the dessicating environment in the valleys around the area during this period, the resources available in the study area would become even more valuable and desirable to the inhabitants of the southern Nevada region. It is believed that a detailed research program in the study area would reveal a fairly intensive exploitation of the available resources by San Dieguito peoples in the RRCRL.

Hiatus (7,500 to 5,500 B.P.)

There is presently little or no archaeological evidence that Clark County was inhabited at this time, perhaps due to the extremely dry and arid conditions in effect (Hauck et al. 1979). This period corresponds with Antev's (1948) Altithermal Period. It is very likely that continued excavation at deeply stratified rockshelters such as Pintwater Cave (Tuohy 1971) would reveal occupations that span this time period.

Little Lake Pinto-Gypsum Phase 5,500 to 2,000 B.P.

This era is generally known as the Archaic or Desert Culture period, and is heavily represented in the Spring Mountains and the RRCRL. In general, the settlement/subsistence pattern was one of seasonal transhumance. Sites are located in a wide variety of ecozones, including being adjacent to streams and springs in the lower valleys, and in seasonally favorable localities, mainly near or around springs, in the foothills and mountains. The small population groups, either small bands or extended families, would move from area to area as resources became available on a seasonal basis: shoots and greens in the early spring, agave in the summer and early fall, pinyon nuts in the fall, and other floral resources when they became available. Grinding equipment -- manos, metates, and mortars -- and smaller projectile points for the hunting of game -- bighorn sheep, deer and rabbits -- testify to the wide ranging resource exploitation practiced by these groups. Site types include rockshelters, temporary camps by springs, circular rock alignments and roasting pits.

Direct evidence of use of the RRCRL/Spring Mountains region comes from excavation at Mule Spring Rockshelter just outside of RRCRL (Turner 1978), and at Lennie's Site (Brooks, York and Massey 1972) in the Charleston Peak area, and Bird Springs (Ancient Enterprises 1980) in the Bird Springs Range. Surface surveys in the RRCRL and Spring Mountains also testify to the Archaic occupation of the region, as does evidence from the excavations of roasting pits from eastern Clark County.

Mule Springs Rockshelter (Turner 1978) reveals artifactual remains dating from the period in question. Uncovered were 22 Eastgate points, time range 2500 B.C. through historic times, and 1 Pinto style point, dating from 5,000 to 6,000 through 2,000 to 4,000 B.P. Accompanying the artifacts were large numbers of agave quids and bones of sheep, deer, cottontail and jackrabbits, a wide variety of mammals and a number of reptiles. This evidence of wide ranging resource exploitation, along with the presence of nearby roasting pits, led Turner (1978:86-87) to suggest that the site reflected a generalized hunting/gathering pattern, along with the manufacture of simple and complex artifacts.

Additional Archaic Period material was recovered at Lone Grapevine and Scrub Oak Springs (Cunningham 1978) in the form of projectile points and the presence of Great Basin Curvilinear petroglyph styles that may date to 1000 B.C. (Heizer and Baumhoff 1962). This site, along with Mule Springs, seems to have been a base camp, more permanent living areas where many types of resource procurement and daily activities took place.

Elsewhere in the RRCRL, surveys in the Spring Mountain State Park (Brooks et al. 1974) revealed several sites from the Archaic, and suspected sites from this period, or isolated material, occurs in Lost Creek and the archaeological complex in Willow Springs. Suspected Great Basin Curvilinear petroglyphs also occur in Brownstone Canyon.

Survey in the Spring Mountains area (Brooks, York and Massey 1972), and the excavations at Lennie's Site that developed from those surveys, reveal an Archaic Period presence. Surface material from

the Brooks' survey dates to this era, and the excavations at Lennie's Site recovered a Pinto point dating to this period. It is suggested that this site was a hunting camp, based on the artifactual content of the excavations. The Mack's Canyon survey (Ellis 1981), northwest of Lennie's Site, also recovered a Gypsum style point, and numerous rock circles that may have been pinyon nut caches, as these sites were in a heavy pinyon zone. Although these sites cannot with confidence be placed within this time period, the likelihood remains that they should be so placed given the other types of material recovered in the region.

Work at Bird Springs (Ancient Enterprises 1980) recovered Elko and Humboldt points that date from the Archaic Period. Given the size and long period of occupation of this site, it has been suggested that Bird Springs represented a semi-permanent base camp similar to Mule Springs or Lone Grapevine Springs.

Further evidence of an Archaic presence eventually may be discovered as roasting pits in the RRCRL are excavated in the future. Dozens of pits exist within the recreation lands, and evidence from excavations in eastern Clark County have revealed a long sequence of their utilization in this region. Data from the Virgin Peak area in Clark County (Ellis et al. 1982) has yielded radiocarbon dates of 500 B.C. ± 155, 450 B.C. ± 80, and A.D. 595 ± 70. Work in the Dry Lake and Muddy Peaks areas have yielded roasting pit dates of A.D. 1440 ± 65, 845 B.C. ± 45 (Brooks and Larson 1975), and 1335 B.C. ± 125 (Ellis et al. 1982). Ethnographic evidence indicates use of these features into the Historic Period (Coville 1882). Based on the comparative data, it would not be surprising if many of the unexcavated roasting pits in the RRCRL date to the Archaic Period.

Puebloan Era (2,000 to 850 B.P.)

This era saw heavy use of the RRCRL, and the Spring Mountains, by the Puebloan inhabitants of the Virgin and Muddy River Valleys. Although basically agriculturalists they also made extensive use of the wild resources in the areas surrounding their riverine oases. Puebloan sites and ceramics have been found in Nevada as far west as the Nevada Nuclear Test Site in Nye County (Bergin and Roske 1978; Bergin et al. 1979; Worman 1969), in the mountain ranges of eastern Clark County (Ellis et al. 1982; Brooks and Larson 1975) and in the Las Vegas Valley (BLM site files, Las Vegas District Office), in a variety of ecological zones, and often in association with roasting pits. All of the rockshelters referred to in this paper -- Bird Springs, the RJK Site, Mule Springs, and Lennie's Site -- reveal a cultural sequence that includes Puebloan ceramics ranging from Basketmaker III to Pueblo III times, although this entire sequence is not present in toto at all of these sites.

In the immediate Red Rocks area, Puebloan sites and ceramics have been recorded at a number of localities -- Red Springs, Willow Springs and Lost Creek archaeological complexes, Lone Grapevine and Scrub Oak Springs, and several other localities. There are also petroglyph/pictograph panels attributable to the Puebloan peoples in these locales as well. The most spectacular are those at Brownstone Canyon, in the northern part of the RRCRL. There are two major concentrations of petroglyphs, and a spectacular multicolored pictograph panel, in association with 13 roasting pits, two rockshelters and other debris at Brownstone Canyon. It has been suggested by several researchers that given the number, size and complexity of the various panels and motifs, that Brownstone Canyon was a major ceremonial center for the Anasazi, and perhaps other peoples, as well, because it is a rich environmental zone with a wide variety of exploitable resources (Shutler and Shutler 1962; Brooks et al. 1977a; Rafferty and Rolf 1981; Rafferty 1982c).

If this is so, then the Brownstone Canyon occupation may be related to an attempt by the Anasazi perhaps to colonize the entire Las Vegas region. A major Anasazi site has been recorded at Pine Creek, that may be of at least a semi-permanent nature. This site is .25 miles long by 100 yards wide and sits on an alluvial bench overlooking Pine Creek Wash and the rich opuntia colony and pinyon stand found there. Additional data on the site recorded a large scatter of lithics and milling equipment, two roasting pits, at least one house area and other aligned rock walls. Ceramics recovered include six varieties of Anasazi

ceramics (Brooks et al. 1977b; Cunningham et al. 1978). This settlement may have not been just used for temporary living quarters during resource procurement forays, for a large midden also was recorded at the site (Brooks et al. 1977b). It has been suggested by Lyneis (n.d.) that the Anasazi sites in the Las Vegas Valley were related to an attempted colonization of the area. She cites evidence that Big Springs, located in the Las Vegas Valley, has an Anasazi settlement, consisting of five pithouses accompanied by greyware ceramics, adjacent to it. Another puebloan structure was reported to Lyneis by R. F. Perkins of the Lost City Museum, who stated that an Anasazi structure was located at Corn Creek, on the northern margin of the Las Vegas Valley. Unfortunately, the latter two sites, reported by Lyneis (n.d.) are long since destroyed, and many other potential settlements also have been destroyed in the last 20 years in the valley. It is likely that some may still survive, perhaps in a badly damaged form, and they may shed light on the puebloan occupation of the area. Perhaps Brownstone Canyon served as a focal point for social and religious activities for the puebloan inhabitants of the region, much as did kivas or Great Kivas elsewhere in the Anasazi culture area.

Lower Colorado buffwares have also been recovered at several sites in the RRCRL, in particular at Brownstone Canyon and at Willow Springs. They have been recorded also at the rockshelters that form much of the data base for this paper -- Lennie's Site, Mule Springs, and Bird Springs -- at least in small quantities. It is unknown at this time whether these buffwares are trade wares, or represent an actual Yuman exploitation of the area coeval with, or dating after the Anasazi occupation of the region. This question needs considerable more attention and research.

Protohistoric Paiute Era (850 B.P. to 100 B.P.)

From the time of the puebloan abandonment of the area, or perhaps even coeval with the puebloan occupation, to the time of the occupation of the Las Vegas Valley by whites, the Southern Paiute were the inhabitants of the RRCRL and the southern Nevada region. The general belief is that the Southern Paiute, like the Archaic peoples, were seasonally transhumant, moving to areas of seasonally available resources, with temporary habitations being located in a variety of ecological zones (Larson 1978). However, based on historic accounts and a recent reinterpretation of the archaeological and ethnological evidence, it has been suggested that the Paiute were at least semi-sedentary farmers who grew fairly large fields of maize, chenopods, amaranths and, later on, wheat (Stoffle and Dobyns 1982).

All of the excavated rockshelters discussed in this paper have a Paiute component to them in the form of ceramics and/or projectile points. Surveys in the Spring Mountains (Brooks, York and Massey 1972) and in the RRCRL (Brooks et al. 1976, 1977a, 1977b) have revealed Paiute ceramics in Brownstone Canyon, Lost Creek and Willow Springs, and numerous other localities in the RRCRL and adjacent areas. Many of these sites have an Anasazi/Paiute intermixture of artifacts, often in the same excavation levels, and in the case of Lost City, in the same burial (Shutler 1961). The number of sites with such mixing have led researchers such as Fowler et al. (1973), Turner (1978) and Cunningham (1978) to argue that the two cultures were coeval in time and in spatial occupation. Further, Aikens and Witherspoon (1982) have suggested that the protohistoric Paiute and Shoshone represent the latest manifestation of an occupation of the central Nevada region that had been occurring for the last 5000 years. Their thesis is that the Numic expansion to the fringes of the Great Basin happened after the abandonment of the Great Basin by the more "advanced" Anasazi, Fremont and Lovelock cultures abandoned their respective areas in the mid-12th century. Aikens and Witherspoon (1982) cite Thomas's work in the Reese River Valley (1973, 1974; Thomas and Bettinger 1976) as being indicative of a Numic type of settlement pattern recognizable up until historic times. They argue for a continuum of occupation in the Great Basin, rather than an explosive movement of peoples out of the southern California deserts around A.D. 1000 (Lamb

1958; Miller 1966; Bettinger and Baumoff 1982).

This protohistoric era ended with White or Anglo incursion into southern Nevada in the mid-nineteenth century. The pressure and competition from Anglo farmers on the water and land resources of the river valleys, springs and other water sources, plus the use of the range for cattle grazing and the confiscation of water sources for that purpose, had a completely disruptive effect on Southern Paiute culture, leading to its disintegration and degeneration.

Historic Era (100 B.P. to Present)

There is little need to repeat the history of the region, since it is fairly well known. Between the incursion of the Spanish missionaries and later explorers like Jedediah Smith that created the Old Spanish Trail, and the movement of settlers down the trail to California, and the settlement of the Las Vegas and Muddy and Virgin River Valleys, the impact of the Whites on the Southern Paiutes was devastating. Not only were major vital resources confiscated by the Whites, but various Old World diseases carried by settlers and travelers decimated the local native populations. These factors were responsible for disrupting the semi-sedentary settlement/subsistence pattern of the Southern Paiutes, creating the situation later studied by Steward (1938) in his ethnographic reproduction after the fact study of basin lifeways (Hauck et al. 1979; Stoffle and Dobyns 1982 for a more detailed discussion of this topic).

In the RRCRL, the most direct impacts archaeologically occur in the form of the remains of ranches located in the well-watered canyons. Spring Mountain State Park and a ranch in Pine Creek, the Wilson Ranch, were established in the late 1800s to oversee ranching and farming operations (Hauck et al. 1979:96). Mount Potosi, in the southern part of the Spring Mountains/RRCRL area, was established by the Mormons as a lead mine in 1856, and was abandoned in 1857. It enjoyed a revival from 1861-1863 due to silver mining, but the workings were abandoned shortly thereafter (Scrugham 1935:I:613). In the RRCRL proper, Sandstone Quarry exists as the remains of a quarrying operation that provided building stone for the new town of Las Vegas, and dates from the early 1900s. There are also numerous historic cabins and trash scatters in the Spring Mountains region dating from this early historic period.

Summary and Conclusions

As can be seen the culture history of the RRCRL and the Spring Mountains is a long and rich one, dating perhaps into the PaleoIndian era. Prehistoric peoples were attracted to the RRCRL due to the varied and rich resources, particularly assured water, that existed in the area and assured the survival of these peoples during much of the year. This availability of water accounts for the wide variety of site types and culture groups that are represented in the archaeological record of the region.

Although much work has been conducted in the area, many questions remain unanswered or even unasked; what was the exact nature of the PaleoIndian/San Dieguito occupation of the RRCRL and surrounding region? What does the multiplicity of ceramics found in the region tell us about trade, intertribal and intergroup relationships and other details about the sociopolitical situation in southern Nevada through time? Were there changes in the patterns of settlement and subsistence in the area as different cultures occupied the region? These are just a few of the many questions that need to be asked before we can claim we have an inkling of an understanding about the archaeology of the study area, and of southern Nevada itself. More than just CRM work needs to be accomplished in this region if these questions are to be answered. We have merely scratched the surface; we need to dig deeper for more and better questions and answers.

References Cited

Aikens, C. Melvin and Y.T. Witherspoon
1982 The Numic expansion. Paper presented at the Eighteenth Great Basin Anthropological Conference. Reno.

Ancient Enterprises
1980 Test excavations at Bird Springs, Clark County, Nevada (26Ck1).

Prepared for the Bureau of Land Management, Las Vegas District Office.

Antevs, Ernst
1948 Climatic changes and pre-white man. In The Great Basin, with emphasis on glacial and post-glacial times. University of Utah Bulletin 38(20). Salt Lake City.

Bergin, K. and R. Roske
1978 Literature overview concerning cultural resources of the Nellis Bombing and Gunnery Ranges, Nye Lincoln and Clark Counties, Nevada. Archaeological Research Center, Museum of Natural History, University of Nevada, Las Vegas.

Bergin, K. et al.
1978 Final report on the 1978 archaeological investigations of the Nellis Air Force Bombing and Gunnery Ranges, Nye, Lincoln and Clark Counties, Nevada. Archaeological Research Center, Museum of Natural History, University of Nevada, Las Vegas.

Bettinger, R.L. and M.A. Baumhoff
1982 The Numic spread: Great Basin cultures in competition. American Antiquity 47(3):485-503.

Brennan, Lynda
1982 Personal communication.

Brooks, Richard
1982 Personal communication.

Brooks, Richard and Daniel O. Larsen
1975 Prehistoric and historic research along the Navajo-McCullough Transmission Line right-of-way. Prepared for the Los Angeles Water and Power Company by the Nevada Archaeological Survey, Museum of Natural History, University of Nevada, Las Vegas.

Brooks, R., D.O. Larson, R. Frazier, J. King, R. Leavitt and K. Olson
1974 A report on the archaeological inventory survey of the Spring Mountain Ranch and Pine Creek area for the Nevada State Parks Survey. Nevada Archaeological Survey, Museum of Natural History, University of Nevada, Las Vegas.

Brooks, R., D.O. Larson, J. King and K. Olson
1976 An archaeological survey of the Visitor's Center Site, the Blue Diamond Administrative Site, Willow Springs (Rocky Gap), and La Madre Canyon, within Red Rock Canyon Recreation Lands. Nevada Archaeological Survey, Museum of Natural History, University of Nevada, Las Vegas.

Brooks, R.H., J. King, E. Bussard, D. Ferraro, and M. McMackin
1977a Cultural resources inventory of areas in the Red Rock Canyon Recreation Lands, Clark County, Nevada. Archaeological Research Center, Museum of Natural History, University of Nevada, Las Vegas.

Brooks, R.H., D.O. Larson, J. King and K. Olson
1977b Cultural resources inventory of areas in the Red Rock Canyon Recreation Lands, Clark County, Nevada. Archaeological Research Center, Museum of Natural History University of Nevada, Las Vegas.

Brooks, Richard H., R.D. York, and W.C. Massey
1972 Archaeological Research in the Las Vegas Ranger District, Toiyabe National Forest, Las Vegas, Nevada. Nevada Archaeological Survey, University of Nevada, Las Vegas.

Campbell, E.W.C. et al.
1937 The archaeology of Pleistocene Lake Mojave. Southwest Museum Papers 11. Los Angeles.

Coville, Frederic
1882 The Panamint Indians of California. American Anthropologist 5:351-361.

Cunningham, A.L.
1978 Analysis of the interrelationships of archaeological surface assemblages: An approach to petroglyphs. M.A. thesis, Department

of Anthropology, University of Nevada, Las Vegas.

Davis, Emma Lou
1963 The Desert Culture of the Western Great Basin: A lifeway of seasonal transhumance. American Antiquity 29(2).

DeGarmo, G.D.
1970 Big game hunters: an alternative hypothesis. Paper presented at the 35th Annual Meeting of the Society for American Archaeology. Mexico City.

Duffield, M.S.
1904 Aboriginal remains in Nevada and Utah. American Anthropologist 6. Menashsa.

Ellis, Robert R.
1981 A Class III cultural resources investigation at the Mack's Canyon burn area, near Cold Creek, Spring Mountains, Southern Nevada. Archaeological Research Center, Museum of Natural History, University of Nevada, Las Vegas.

Ellis, R.R., L. Brennan, T. Swearingen, E. Green and D. Jenkins
1982 Test excavations at the Happy Face Site, 26Ck1481 (CR-NV-05-634), and the Barbecue Site, 26Ck1482 (CR-NV-05-635), Hidden Valley, within the Muddy Mountains, Clark County, Nevada. Archaeological Research Center, Museum of Natural History, University of Nevada, Las Vegas.

Fowler, Don D., D.B. Madsen and E.M. Hattori
1973 Prehistory of Southeastern Nevada. Desert Research Institute Publications in the Social Sciences 6. Reno.

Harrington, Mark R.
1934 A camel hunter's camp in Nevada. The Masterkey 8(1):22-24.

1941 Our oldest bone implement. The Masterkey 15.

1954 The oldest campfires. The Masterkey 28:233-234.

1955a Man's oldest date in America. Natural History 64:512-517. New York.

1955b A new Tule Springs expedition. The Masterkey 30:112-114.

Harrington, Mark and Ruth D. Simpson
1961 Tule Springs, Nevada, with other evidence of pleistocene man in North America. Southwest Museum Papers 18. Los Angeles.

Hauck, F.R., D.G. Weder, L. Drollinger and A. McDonald
1979 A cultural resource evaluation in Clark County, Nevada. Part 1. Cultural Resource Overview. For Bureau of Land Management, Las Vegas District, by Archaeological-Environmental Research Corporation, Salt Lake City.

Heizer, R.F. and M.A. Baumhoff
1962 Prehistoric rock art of Nevada and eastern California. The Univeristy of California Press. Berkeley and Los Angeles.

Lamb, S.M.
1958 Linguistic prehistory in the Great Basin. International Journal of Linguistics 24(2). Baltimore.

Lee, R.B. and I. DeVore (editors)
1968 Man the hunter. Aldine Publishing Company, Chicago.

Lyneis, Margaret M.
1982 Prehistoric southern Nevada study units. In An Archaeological Element for the Nevada Historic Preservation Plan. Prepared for the Nevada Division of Historic Preservation and Archeology by Margaret M. Lyneis, Coordinator. Las Vegas.

n.d. The Western Anasazi frontier: cultural processes along a prehistoric boundary. Paper in press. Department of Anthropology, University of Nevada, Las Vegas.

Martin, Paul and Fred Plog
1973 The archaeology of Arizona. Doubleday/Natural History Press, Englewood Cliffs.

Miller, Wick
1966 Anthropological linguistics in the Great Basin. In The current status of anthropological research in the Great Basin: 1964. W.L. d'Azevedo (editor). Desert Research Institute Publications in the Social Sciences and Humanities 1. Reno.

Moen, Michael
1967 Unpublished ms. on rock art in the southern Great Basin. Department on Anthropology, University of Nevada, Las Vegas.

National Oceanic and Atmospheric Administration
1955-1978 Climatological data summary, Nevada. National Climate Center Ashville, N.C.

Perkins, R.F.
1968 Folsom and Sandia points from Clark County. Nevada Archaeological Survey, Reporter, Vol. II(4)4-5. Reno.

Rafferty, Kevin A.
1981 Spring Mountain Free Trappers FUP N5-81-40. Cultural Resources Report 5-891(n). Bureau of Land Management, Las Vegas District Office.

1982a Spring Mountain Free Trappers 5th Annual Rendezvous, N5-82-6. Cultural Resources Report 5-1023(p). Bureau of Land Management, Las Vegas District Office.

1982b R&PP N-34782, Application for a youth camp site. Cultural Resources Report 5-1113(p). Bureau of Land Management, Las Vegas District Office.

1982c A management plan for Brownstone Canyon Archaeological District. Bureau of Land Management, Las Vegas District Office.

Rafferty, Kevin and Stanton Rolf
1981 Brownstone Canyon Archaeological District National Register Nomination. Bureau of Land Management, Las Vegas District Office.

Rodriguez, R. and M. Rodriguez
n.d. The RJK Site, 26Ck304. Unpublished ms. Department of Anthropology, University of Nevada, Las Vegas.

Rogers, Malcolm J.
1939 Early lithic industries of the lower basin of the Colorado River and adjacent desert areas. San Diego Museum Papers 3.

Scrugham, James G. (editor)
1935 Nevada: A narrative of the conquest of a frontier land comprising the story of her people from the dawn of history to the present time. Volume I. The American.

Shutler, Richard
1961 Lost City: Pueblo Grande de Nevada. Nevada State Museum Anthropological Papers 5. Carson City.

1967 Archaeology of Tule Springs. In Pleistocene studies in southern Nevada. H.M. Wormington and D. Ellis (editors). Nevada State Museum Anthropological Papers 13. Carson City.

Shutler, Richard and M.E. Shutler
1962 Archaeological survey in southern Nevada. Nevada State Museum Anthropological Papers 7. Carson City.

Steward, Julian H.
1938 Basin-Plateau aboriginal sociopolotical groups. Bureau of American Ethnology Bulletin 120. U.S. Government Printing Office, Washington.

Stoffle, R.W. and H.F. Dobyns (editors)
1982 Nevagantu: Nevada Indians comment on the Intermountain Power Project Intermountain Adelanto Bipole I Transmission Line, Nevada: Ethnographic (Native American) Resources. Applied Urban Field School, University of Wisconsin-Parkside/Applied Conservation Technology, Incorporated, Fullerton, California.

Susia, Margaret L.
1964 Tule Springs archaeological surface Survey. Nevada State Museum Anthropology Papers 12. Carson City.

Thomas, D.H.
1973 An empirical test for Steward's model of Great Basin settlement patterns. American Antiquity 38:155-176.

1974 An archaeological perspective of Shoshonean bands. American Anthropologist 76:11-23.

1978 A preliminary report on Paleo-Indian settlement patterns at Pleistocene Lake Tonopah. Paper given at the 43rd Annual Meeting of the Society for American Archaeology. Tucson.

Thomas, D.H. and R.L. Bettinger
1976 Prehistoric pinon ecotone settlements of the Upper Reese River Valley, Central Nevada. American Museum of Natural History Anthropological Papers 53(3).

Tuohy, Donald R.
1969 A brief note on additional fluted points from Nevada. Nevada State Museum Anthropology Papers 14. Carson City.

1971 Notes and reports on inspection trips to Pintwater Cave on the Indian Springs Gunnery Range, Clark County, Nevada. Ms. on file, The Nevada State Museum, Carson City.

Turner, Thomas Hal
1978 Mule Springs Rockshelter, it's archaeological and ecological interpretation within the Great Basin. M.A. thesis. Department of Anthropology, University of Nevada, Las Vegas.

United States Department of the Interior, Bureau of Land Management
1980 Final environmental assessment NV-050-9-30: oil and gas leasing in the Red Rock Canyon Recreation Lands. Las Vegas District Office.

Warren, Claude N. and Robert Crabtree
n.d. The prehistory of the southwestern Great Basin. Ms. prepared for the Handbook of North American Indians. Smithsonian Institution, Washington.

Wilmsen, Edward N.
1970 Lithic analysis and cultural inference: A Paleo-Indian case. Anthropological Papers of the University of Arizona 6. Tucson.

Worman, Frederick
1969 Archaeological investigations at the U.S. Atomic Energy Commission's Nevada Test Site and Nuclear Rocket Development Station. Los Alamos Scientific Laboratory of the University of California. Atomic Energy Commission.

Wormington, H. Marie and Dorothy Ellis (editors)
1967 Pleistocene studies in southern Nevada. Nevada State Museum Anthropology Papers 13. Carson City.

26Pe1003: A Pinto Lithic Scatter on the Black Rock Desert, Nevada

by
Donald R. Tuohy

INTRODUCTION

This brief paper has as its purpose the reporting of a lithic scatter, one of two sites found and collected on the Black Rock Desert by the late Peter Ting, Sr. (see Nevada Archaeologist 4:1). The two sites represent the last prehistoric sites Mr. Ting was able to visit prior to his death in 1980. He decided to visit the sites on my inquiry about mileages, as both sites needed to be located accurately on maps, and reported to the Winnemucca District Office Office of the Bureau of Land Management. The BLM District Archaeologist, at that time, John Roney, was particularly interested in the other site, 26Pe996, Peter Ting, Sr. had found on the Black Rock Desert, as that one contained 302 pebble mounds very much like those first reported by Tuohy (1974:91-116) for the Sadmat site near Fallon, Nevada in Churchill County (Tuohy 1981:4-15; Dansie 1981:16-28; Roney 1977, 1978; Rusco and Tuohy 1975).

In any case, Peter Ting, Sr. and another amateur, Noble Crew, visited both sites on March 20, 1979, made mileage records, and plotted them on maps which were then forwarded to me. These maps, in turn, were sent to the federal archaeologists who recorded the sites on standard forms. The Black Rock Desert site, 26Pe996, with the 302 pebble mounds was named in Mr. Ting's honor. The other site, 26Pe1003, the lithic scatter, as indicated, forms the subject of this brief paper.

The lithic scatter had been collected by Peter Ting, Sr. and Stephen V. Tieber in 1979 when it was first discovered. When collecting, the amateurs did make a sketch map of the area, however, and donated it to NSM together with such notes as they had made, and with the collection of 29 lithic specimens. The lithic scatter was confined to an area of desert pavement extending 50 meters west and 16 meters north of a dirt road between Gerlach and Sulphur, Nevada. Vegetation in the vicinity is presently very sparse and apparently limited to Bailey greasewood (Sarcobatus vermiculatus) and Shadscale (Atriplex confertifolia). The terrace upon which the lithics were collected has been identified as a Lake Lahontan terrace at an elevation of 4,000 feet (1219 meters) above sea level. A lithic scatter recovered at that elevation can have considerable antiquity (Dansie 1981:26, Fig. 7).

The distribution map of the surface scatter tells little about associations, as the individual artifacts were recovered anywhere from 15 centimeters to 20 meters apart. Even artifacts found within a radius of 3.5 meters apparently do not represent a single episode, as such scatters as are noted among the overall collection, cross-cut the three material types present -- basalt, obsidian, and brown chert. Yet this paper should serve to remind amateurs to make sketch maps of sites and artifacts observed as part of the permanent record of field excursions.

THE ARTIFACTS

The small collection of worked lithics taken from the site consist of 29 stone tools, two of which were placed in the "doubtful artifact" category. The latter, numbers 15 (Fig. 1e), and 24 (Fig. 1c), are basalt pebbles less than 10 centimeters in length and no more than 2.5 centimeters in thickness. They appear to have been rolled in transport, and contain "nibbled" edges resembling purposeful flaking. The other basalt specimens, nine in all, are artifacts which include six bifaces and three flakes. Obsidian pieces are the most numerous in the collection totaling 15 specimens, including nine bifaces and six flake tools. The remainder, three brown chert tools, is comprised of two bifaces and a unifacial scraper-graver.

Basalt bifaces (Fig. 1, a-f)

The basalt pebbles used as raw material form part of the desert pavement at the site and they appear to have incipient cleavage planes paralleling their long axis (Fig. 1c). These flat-sided pebbles apparently were the preferred raw material for reduction into bifacial tools. The knappers found that their primary reduction flakes tended to hinge-off, thus leaving step fractures along edges and preserving at least part of the original cortex on the flat faces. Four of the basalt bifaces, numbers 1, 2, 4, and 5 (Fig. 1a, b, d, f) have one or more edges exhibiting retouching. These fist-size bifaces would have

made excellent scraping or chopping tools.

The fifth specimen, number 18 (Fig. 2n), shows more reduction than the others with no cortex remaining except at the platform. The convex working edge of this artifact exhibits considerable use wear and feels smooth to the touch. Dimensions are given in Table 1.

The sixth basalt specimen, catalogue number 12 (Fig. 2h), is a bifacially worked piece which probably represents a portion of a stem from a Stemmed Series point (Tuohy and Layton 1977). The piece has been rather carefully retouched on its margins, so some care apparently was exercised during its manufacture. Dimensions of all basalt pieces also are given in Table 1.

Three basalt flakes of different sizes are considered next. All three represent thinning flakes. They are more or less ovate-shaped flakes removed from bifaces to thin them. Prominent on the largest, catalogue number 7 (Fig. 3a), is the angle formed between the platform and the planar face of the flake, some 54°. Clearly, the flake represents a billet, or baton flake. One of the flakes, number 6A (Fig. 3e), appeared to be retouched for further use as a scraping tool. Specimen 6B (Fig. 3h), also is a thinning flake from a soft baton, and it has been "snapped off." Dimensions of the basalt tools and flakes are shown in Table 1.

Obsidian and Chert Bifaces

The balance of the bifacial artifacts is comprised of three brown chert and 14 obsidian pieces. The chert artifacts include a plano-convex uniface with two graving spurs (Fig. 2k), a triangular-shaped edge piece from a biface (Fig. 2i), and a drill or reaming tool (Fig. 2j). The obsidian pieces include five projectile points that are typable (Fig. 2a-e), two obsidian biface point tips (Fig. 2f, g), one pointed side scraper (Fig. 3i), a burinated rectangular biface fragment (Fig. 3g), three cortex flakes from obsidian nodules (Fig. 2 l, m and Fig. 3c), and three thinning flakes utilized as scrapers (Fig. 3b, d, f). All of these pieces except number 26 (Fig. 2b) were collected and their find spots were plotted on the original site diagram (Fig. 4).

Projectile Point Types

The five typable projectile points include a "classic" Pinto point, two other Pinto points, a fragment of Rose Spring corner-notched point, and one Elko-eared point.

Number 26 is an excellent example of a "Pinto" point, comparing favorably in form with the plastic type cast No. 28 from Riverside County, California issued by the Denver Museum of Natural History. The two other Pinto variants are within the range of forms illustrated by Warren (1980:68-71, Figs. 1-4) as Pinto Series points from the Pinto Basin. Dimensions of all points are given in Table 2.

The proscribed temporal ranges of the points recovered are anchored upon the stratigraphic and chronologic placement of identical types by Layton (1970) for the High Rock Country caves he excavated and reported. Pinto points, recently incorporated in a central Nevada "Gatecliff" series" (Thomas 1981:22-24)

Table 1. Dimensions of Basalt Tools and Flakes

Cat. #	Fig. #	Size (mm) L	W	Th	Weight (gm)	Type
1	1f	145	87	23	381.2	biface; scraper/ chopper
2	1d	130	81	15	176.2	tabular piece; retouched edge
4	1a	110	57	21	173.2	biface; reject
5	1b	101	51	17	96.0	biface, scraper
18	2n	79	48	15	51.6	biface, scraper
12	2h	41	26	8	8.6	stemmed point fragment (?)
6A	3e	54	67	11	4.1	soft baton thinning flake
6B	3h	19	32	6	7.5	snapped thinning flake
7	3a	27	44	6	42.0	thinning flake
24	1c	--	--	--	---	not an artifact

Table 2. Dimensions of Obsidian Projectile Points

Cat. #	Fig. #	Size (mm) L	W	Th	Weight (gm)	Type
26	2b	3.5	1.6	0.9	3.4	Classic "Pinto"
10	2c	3.1+	2.3	0.8	5.6	Side-notched "Pinto"
14	2e	2.7+	2.4	0.9	4.7	Shoulderless "Pinto"
21	2a	2.1+	2.2	0.5	2.7	Rose Spring corner notched
20	2d	3.4+	2.6+	0.7	4.5	Elko-eared

generally are believed to span the interval between 4000 B.C. and 500 B.C. (Layton and Thomas 1979; Hattori 1982). Elko-eared points in the High Rock Canyon country generally date between 1000 B.C. and A.D. 500, while Rose Spring points usually date between A.D. 500 to A.D. 1300 in northern Nevada. These age estimates seem reasonable for this collection of surface bifaces and they probably approximate their actual ages.

CONCLUSION

Modern archaeology on the Black Rock Desert dates from 1966-67 when the Nevada Archaeological Survey and the University of California, Berkeley sent C. William Clewlow and Richard Cowan to survey sites known to amateurs in the area. There were federal land managers in the Black Rock Desert Area (Susanville and Winnemucca BLM Districts), but they rarely expressed interest in protecting the non-renewable archaeological resources there, as they had no expressed mandate to do so, and were preoccupied with other multiple land use problems.

Fifteen years later, federal land managers did have such a mandate, and, indeed, the majority of archaeological explorations on the Black Rock were in-house projects. Thus, Clewlow's (1968) and Cowan's (1972) early studies of Black Rock Desert archaeology have more recently been augmented by federally funded or contract-funded studies with an overview report by Smith, Jones, Roney and Pedrick (1983: 61-71) listing most of the recent work.

Perhaps the most directly pertinent sites with Pinto materials in the region include those reported at Granite Creek (Roney 1975; 1980c), the High Rock Canyon area and vicinity (McGonagle 1979; Layton 1979), the Black Rock Range and Desert (Elston and Davis 1979; Clewlow 1981), and the Dyke Hot Springs area (Botti and James 1976). Much of the chronology in the region is based upon the cave excavations of Layton (1966; 1970; 1979).

It is clear from other studies made in northwestern Nevada as well as the descriptive materials in this brief report that traditional "Pinto points," as defined by Warren (1980:67-76) occur as homologous forms on the Black Rock Desert of Northwestern Nevada and western Nevada, in general (Hattori 1982; Stanley, Page and Shutler 1970).

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References Cited

Boni, Les and John Roney
1975 Cultural resources short report Cr2-19(P): Summit Twin Spring. Bureau of Land Management, Winnemucca District.

Botti, Nancy
1976 Cultural resources survey for oil and gas geothermal leasing in the vicinity of Gerlach, Nevada. Winnemucca District Office, Sonoma, Gerlach Resource Area, Buffalo Hills Planning Unit. Supplement to EAR No. 27-020-4-99.

Botti, Nancy and Steve James
1976 Cultural resources survey for geothermal leasing Dyke Hot Springs area. Bureau of Land Management Cultural Resources Report 2-74. Reno.

Clewlow, C. W., Jr.
1983 Report on 1981 and 1982 archaeological investigations at P-Hu-8 and 26Hu55, Black Rock Desert, Nevada. Report prepared by Ancient Enterprises, Santa Monica, California.

1968 Surface archeology of the Black Rock Desert, Nevada. University of California Archaeological Survey Report No. 73. Berkeley.

Corson, Christopher
n.d. The desert countryside in the wake of the beasts. Some observations on the quality of environmental data in the Northern Great Basin. Bureau of Land Management.

n.d. Spatial patterning of small lithic scatters in northwestern Nevada. Bureau of Land Management.

Cowan, Richard
1972 The archeology of Barrel Springs site (NV-Pe-104) Pershing County, Nevada. Archeological Research Facility, Department of Anthropology, University of California. Berkeley.

Dansie, Amy
1981 Pebble mound complexes in northwestern Nevada. Nevada Archaeologist 3:1(16-28. Carson City.

Elston, Robert and Cameron Covington
1976 A preliminary archeological investigation of Onion Valley Reservoir. Report to Bureau of Land Management, Winnemucca District, Nevada.

Elston, Robert, Cameron Covington and Jonathan O. Davis
1979 An overview of cultural resources in the Lahontan Cutthroat Trout study area, Black Rock Range, Humboldt County, Nevada. Report submitted to the Winnemucca District of the Bureau of Land Management.

Hattori, Eugene
1982 The archaeology of Falcon Hill, Winnemucca Lake, Washoe County, Nevada. Nevada State Museum Anthropological Papers, Number 18. Carson City.

Layton, Thomas
1979 Archaeology and paleoecology of Pluvial Lake Parman Northwestern Great Basin. Journal of New World Archaeology 3(3):41-56. Los Angeles.

1977 A 12,000 year old obsidian hydration record of occupation, abandonment and lithic change from the Northwestern Great Basin. Tebiwa, 15(2):22-28.

1970 High rock archaeology: an interpretation of the prehistory of the northwestern Great Basin. Ph.D. dissertation. Department of Anthropology, Harvard University, Cambridge.

1966 The archaeology of Smoky Creek Cave, Humboldt County, Nevada. MA thesis, University of California, Davis.

Layton, Thomas and Jonathan O. Davis
1978 Last Supper Cave: early Post-Pleistocene culture history and paleoecology in the high rock country of northwestern Nevada.

Layton, Thomas and David Hurst Thomas
1979 The archaeology of Silent Snake Springs, Humboldt County, Nevada. Anthropological Papers of the American Museum of Natural History 55:3 (251-269). New York.

McGonagle, Roberta
1979 Surface archaeology at High Rock Lake. Desert Research Institute, University of Nevada System, Publications in the Social Sciences, No. 14. Reno.

Roney, John
1980 Geothermal leasing near Granite Creek. Bureau of Land Management Report. Winnemucca District, Nevada.

1978 Pine Forest Recreation Area, 1978. Bureau of Land Management Report. Winnemucca District, Nevada.

1977 Pine Forest Recreation Area, 1977. Bureau of Land Management Report. Winnemucca District, Nevada.

1975 Granite burn reseeding project. Bureau of Land Management Report. Winnemucca District, Nevada.

Roney, John and Richard A. Whitley
1976 Cultural resources report Cr2-90(N): interior fence. Bureau of Land Management, Winnemucca District, Nevada.

Rusco, Mary and Donald R. Tuohy
1975 Archaeological assessment of five Sierra Pacific potential power plant sites in the State of Nevada. Report 111C of the Central Division of the Nevada Archaeological Survey. The Nevada State Museum, Carson City.

Smith, Regina
1978 Cultural resources report Cr2-205(P): Bartlett Creek right-of-way. Bureau of Land Management, Winnemucca District, Nevada.

Smith, Gerald and John Roney
1976 Cultural resources report Cr2-88(P): Soldier Paiute Drift Fence. Bureau of Land Management, Winnemucca District.

Smith, Regina C., Peggy McGuckian Jones, John R. Roney and Kathryn E. Pedrick
1983 Prehistory and history of the Winnemucca district: a cultural resources literature overview. Bureau of Land Management Nevada Cultural Resource Series No. 6. Reno.

Stanley, D.A., G. M. Page, and R. Shutler,Jr.
1970 The Cocanour Site: a western Nevada Pinto phase site with two excavated "house rings." Nevada State Museum Anthropological Papers 15:1-46. Carson City.

Ting, Peter C.
1983 Collection of Peter Ting, Sr. articles. In Nevada Archaeologist 4:1. Carson City.

Thomas, David H.
1981 How to classify projectile points from Monitor Valley, Nevada. Journal of California and Great Basin Anthropology 3(1):7-43. Banning.

Analysis of faunal remains. In, The archaeology of Barrel Springs site (NV-Pe-104), Pershing County, Nevada. Archeological Research Facility, Department of Anthropology, University of California, Berkeley.

Tuohy, Donald R.
1981 A brief history of the discovery and exploration of pebble mounds, boulder cairns and other rock features at the Sadmat Site, Churchill County, Nevada. Nevada Archaeologist 3(1):4-15. Carson City.

1974 A comparative study of Late Paleo-Indian manifestations in the Western Great Basin. In, A collection of papers on Great Basin archaeology, edited by Robert Elston and Loretta Sabini. Nevada Archaeological Survey Research Paper, No. 5:91-116. Reno.

1968 Some early lithic sites in western Nevada. In, Early Man in Western

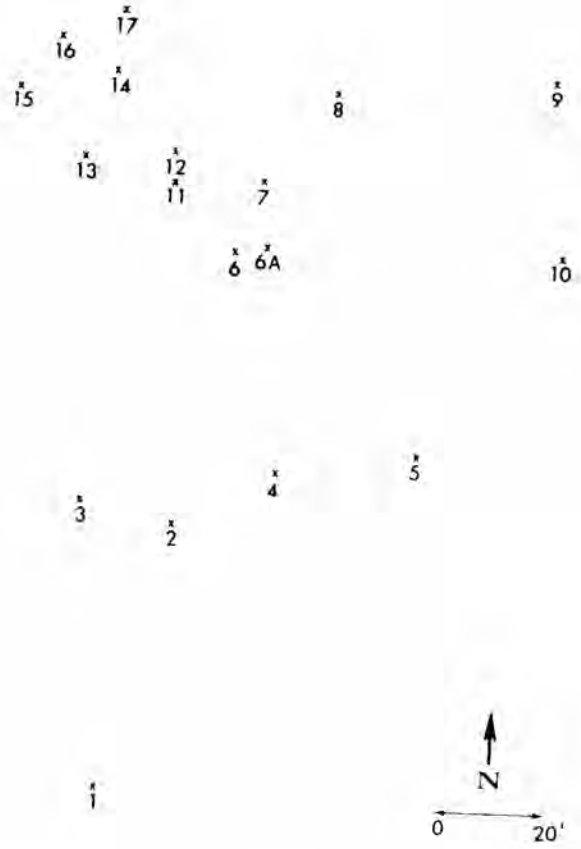
North America, edited by C. Irwin Williams. Eastern New Mexico University Contributions in Anthropology 1(4): 27-38. Portales.

Tuohy, Donald and Thomas Layton
1977 Towards the establishment of a new series of Great Basin projectile points. Nevada Archeological Survey Reporter 10(6):1-5. Reno.

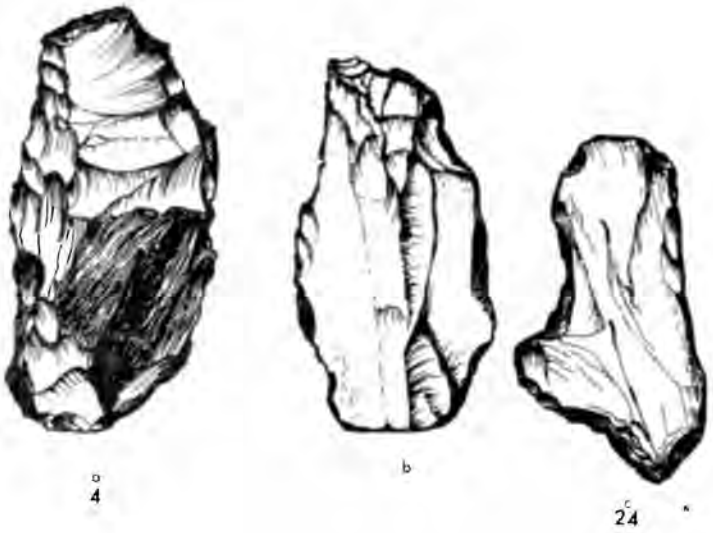
Warren, Claude N.
1980 Pinto points and problems in Mojave Desert archaeology. In, "Anthropological Papers in Memory of Earl H. Swanson, Jr.," edited by Lucille B. Harten, Claude N. Warren, and Donald R. Tuohy. Special Publication of The Idaho Museum of Natural History. Pocatello.

Wheeler, Sessions S.
1978 The Black Rock Desert. The Caxton Printers, Ltd. Caldwell.

Whitler, Richard A., Gerald M. Smith and John Roney
1976 Cultural resources report Cr2-98(P): Mahogany Creek exclosure. Bureau of Land Management, Winnemucca District.



Map 1. Schematic diagram of the surface distribution of artifacts 1-17. Numbers 18-26 were not mapped.



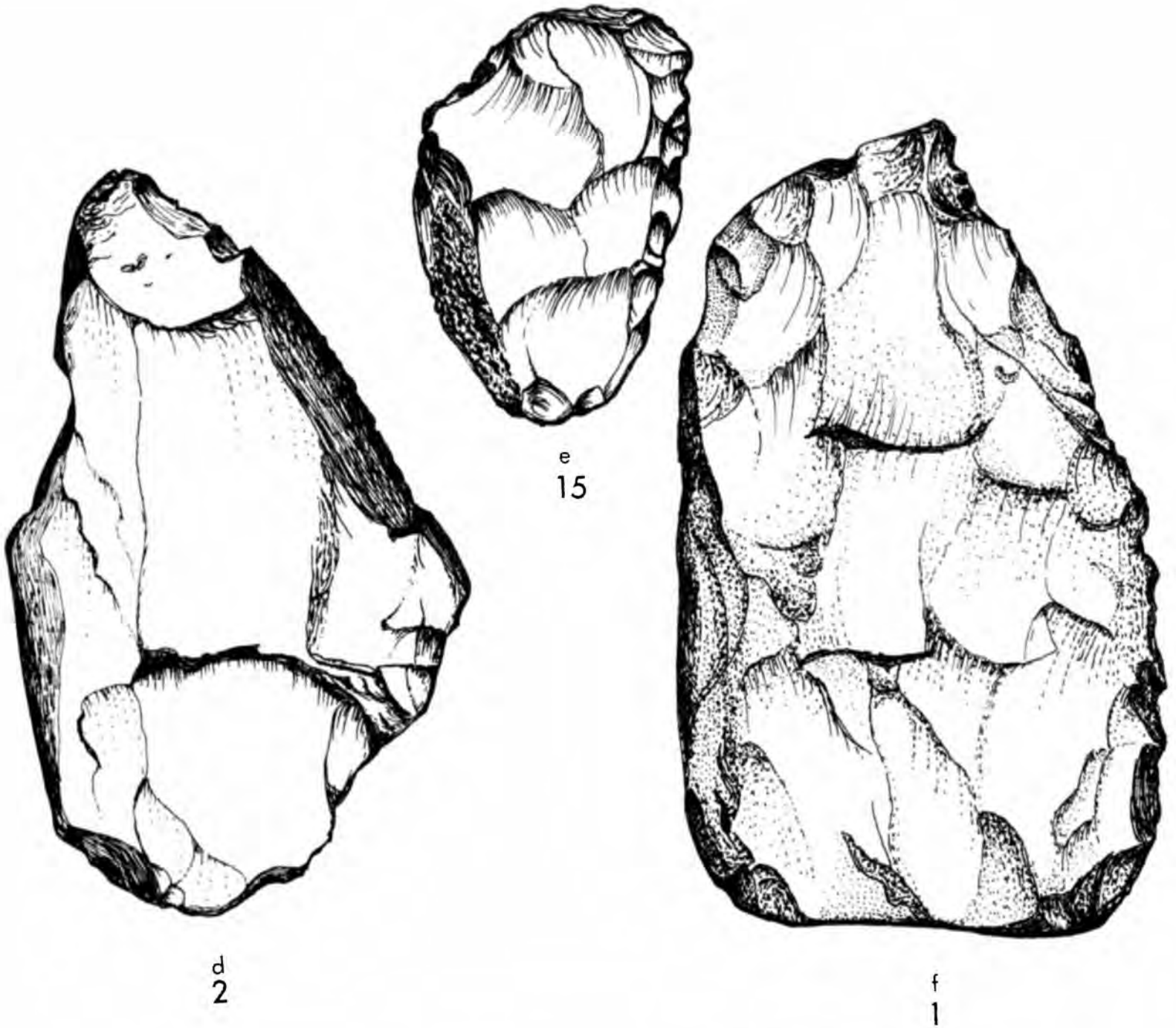


Figure 1. d-f. Basalt bifaces recovered at the site.

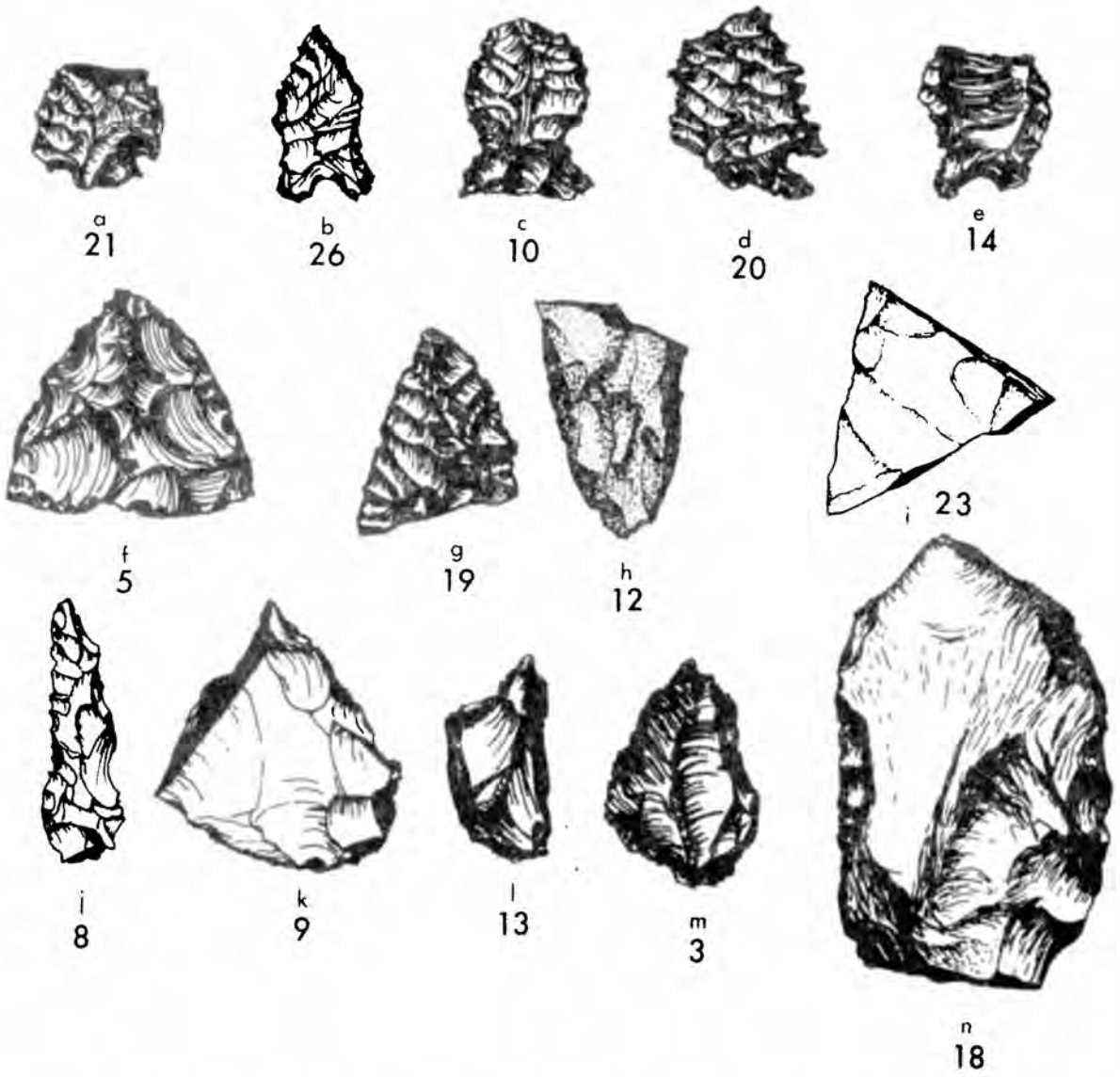


Figure 2. a-e, Projectile points; f-n, other obsidian, basalt, and chert bifaces, including one drill, i, and three gravers, k-m.

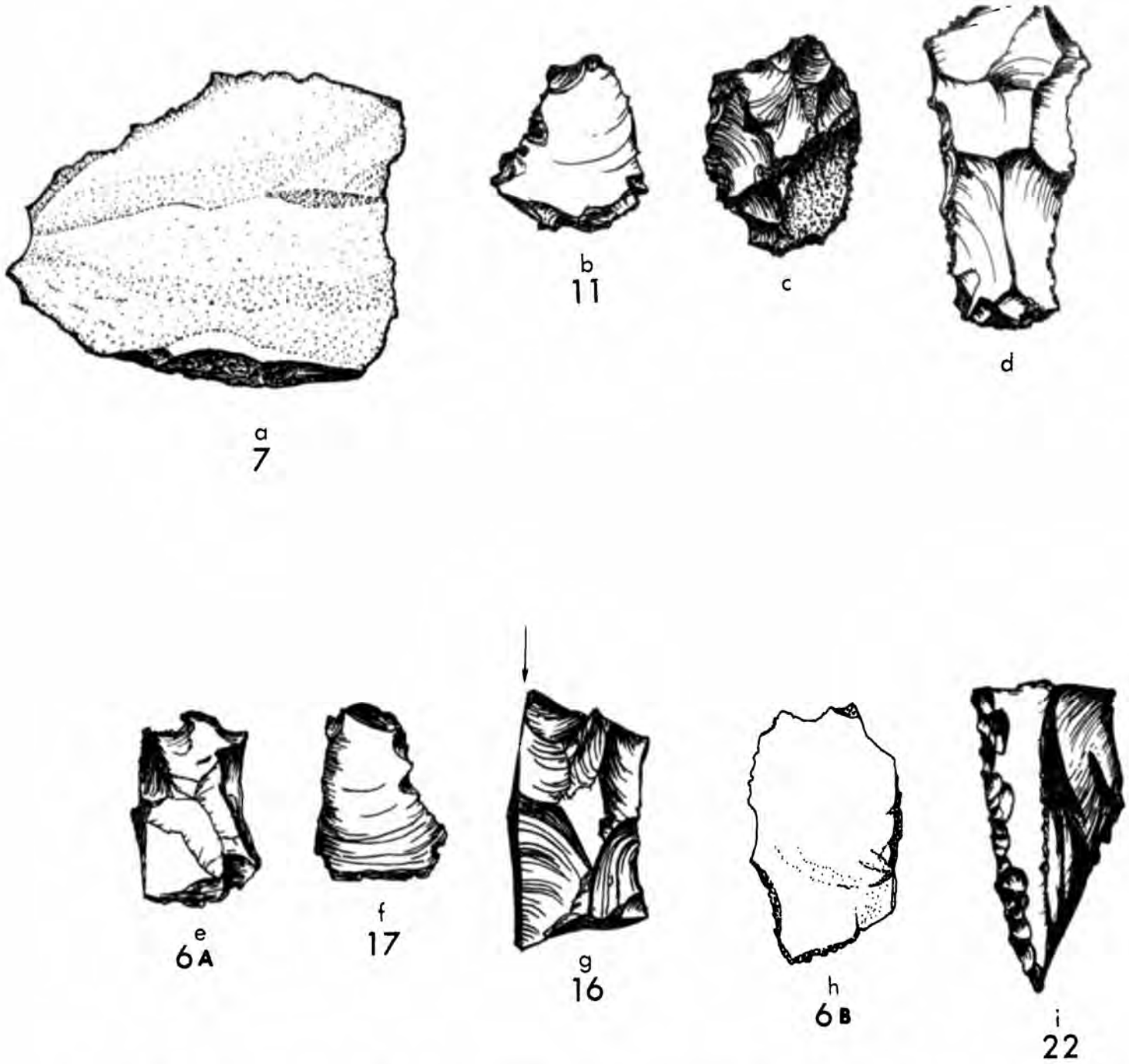


Figure 3. a-i, Unifacial waste flakes and scrapers made of basalt, obsidian, and chert; g is a biface with a burinated edge.

The Nevada Archaeological Association

The Nevada Archaeological Association was organized in 1972 to provide a bond of communication between professionals in the field of archaeology and its allied sciences, members of various amateur organizations, and the people of Nevada towards the furtherance of public education and involvement in reponsible preservation of Nevada's finite archaeological and historical resources.

The need for recording these cultural resources of the past for the enlightenment of future generations grows more pressing with each day of development and progress. The goals of the Nevada Archaeological Association are: to provide a focal point for general information and study of non-renewable cultural resources; to provide a central point for recording artifact collections from Nevada and the Great Basin and the verbal knowledge of provenience and associations accompanying these collections; to correlate this knowledge with that information already professionally recorded for the mutual benefit of the amateurs and professionals with research interests; to provide assistance with education towards responsible public participation in archaeology; to assist in the preservation of sites by the establishment and maintenance of a registry of available, capable, and technically skilled amateurs in Nevada who would be able to work with professionals in accordance with the Code of Ethics and Standards of Research Performance as advocated by the Society of Professional Archaeologists, particularly in the immediacy of salvage archaeology; and to provide a bond of communication between professionals, amateurs, and the general public by publishing a journal, *Nevada Archaeologist.*

To these ends the Nevada Archaeological Association was incorporated in 1972, in the State of Nevada, with its organizational and editorial offices as listed on the inside cover, and with designated conference and meeting center located in Tonopah, Nevada. Membership is open to all those interested in the archaeology, ethnology, and history of the human inhabitants and their natural habitats in Nevada, the Great Basin, and adjacent environs.

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Secretary: vacant

Telephone: (702)882-1506

Residents of all other Nevada communities are asked to join the Nevada Archaeological Association until such time as there are sufficient numbers of people willing to form local chapters of either of the above organizations. Information on the Constitutions and By-laws of the above organizations may be obtained at cost from the secretaries of the above organizations.

Medicinal Uses of Plants by Indian Tribes of Nevada

Percy Train
James R. Henrichs
W. Andrew Archer

This work is a facsimile reproduction of the revised edition of 1957 which included a summary of pharmacological research by W. Andrew Archer and published as *Contributions Towards a Flora of Nevada No. 45.*

This small volume of 139 pages is hardbound in library buckram and has contents which include a partial vocabulary of Indian names and terms, Medical uses of Plants, Index of Medicines and remedies and a short abstract of pharmacological research. This volume is the first in Quarterman's series entitled *Bioactive Plants.*

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