

THE WYOMING ARCHAEOLOGIST



VOLUME 27(3-4)
FALL 1984

THE WYOMING ARCHAEOLOGIST
WYOMING ARCHAEOLOGICAL SOCIETY, INC.

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THE WYOMING ARCHAEOLOGIST is published quarterly by the Wyoming State Archaeological Society, with the financial assistance of the Wyoming Recreation Commission. This issue was typed by Robyn Parrish. Address manuscripts and news items for publication to: George Brox, Editor, The Wyoming Archaeologist, 1128 11th Street, Rawlins, Wyoming 82301. Please send a minimum of two (2) copies of each manuscript submitted. A third copy would speed the review process. Readers should consult the articles in this issue for style and format.

Membership period is from January through December and includes all issues published during the current year regardless of the month the subscription commences. All subscriptions expire with the Winter Issue and renewals are due the first part of January each year.

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Individual Associate Member @ \$10.00
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LETTER FROM THE EDITOR

While this issue of The Wyoming Archaeologist may be a little late, we feel the wait is worth it. The delay was due primarily to a paucity of articles, but we finally accumulated enough for an issue. Five articles are published in this issue, ranging in topics from Shoshonean pottery, to rock art, historical archaeology and ethnohistory, a well-rounded issue. We welcome once again Dr. Tom Lewis from Montana who describes more rock art localities. Two papers are authored by graduate students in Anthropology at the University of Wyoming, Russel Tanner and Howard Haspal. Howard was the William Mulloy Scholarship winner of 1983 and his paper presents the results of research conducted since the receipt of the scholarship. The final two papers are from professional archaeologists working for the State of Wyoming; Carl Spath in the State Historic Preservation Office and Dave Reiss and Skylar Scott in the Contracting Division of the State Archaeologist's Office.

As always, we would once again like to take this opportunity to ask for papers written by members of the society. While it is nice to read papers prepared by "professionals", we must remember this journal is the publication of the Wyoming Archaeological Society and its members. Please write articles, describing your sites or activities and submit them for publication.

MINUTES OF THE SUMMER MEETING, WYOMING ARCHAEOLOGICAL SOCIETY

A meeting of the Wyoming Archaeological Society took place on Veterans Island, Saratoga, Wyoming

on July 21, 1984. Officers present were President Imogene Hanson, Treasurer Milford Hanson, First Vice President Carolyn Buff, Second Vice President Evelyn Albanese and Secretary Mimi Gilman.

President Hanson introduced the new Wyoming State Archaeologist, Dr. Mark E. Miller, and asked the membership of the Wyoming Archaeological Society to welcome him. Dr. Miller said a few words thanking everyone for the help he had received since taking office in May.

President Hanson then asked for suggestions for the spring meeting and the membership voted to have it in Torrington, hosted by the North Plains chapter. More information will be forthcoming on this meeting later in the year.

President Hanson also announced that next year, we would have a complete new slate of officers, as Milford Hanson and Mimi Gilman would not be serving additional terms of office.

No further business to be conducted, the meeting was adjourned.

(signed)
Mimi Gilman
Executive Secretary
Wyoming Archaeological
Society

A LETTER FROM THE WYOMING STATE ARCHAEOLOGIST

I would like to take this opportunity to update the Wyoming Archaeological Society membership on some of the recent research in Wyoming archaeology, particularly that conducted by the State Archaeologist's Office.

It seems most professional archaeologists working in Wyoming had a very active and productive 1984 field season. No doubt you

have read about some of the more important, or at least spectacular, discoveries in several newspaper articles that appeared over the summer. Many of these investigations are still in the preliminary phases.

The Wyoming State Archaeologist's Office and the University of Wyoming have been involved in several projects during this past year. A second field season has been completed at the McKean type site on Keyhole reservoir. Investigations are continuing at the late Prehistoric Bugas-Holding site in Sunlight Basin. Preliminary analyses have begun on a late Prehistoric Bison kill (the Cache Hill site) in the central Powder River Basin; and on several cave and rockshelter sites in Albany and Washakie counties.

Fieldwork at the Split Rock pit house site is completed and the report is being prepared. This is the fourth site now known from Wyoming that contains pit house structures dating to the Early Plains Archaic. These sites promise to yield significant information regarding settlement practices of southern Wyoming during the Altithermal.

Other professional archaeologists have been just as busy and will also be spending much of the winter analyzing and reporting on the results of their fieldwork. We will try to keep you updated on the progress of their research as we can.

(signed)
Mark E. Miller,
State Archaeologist

SYMPOSIUM ON BIG HORN BASIN
ARCHAEOLOGY

The North Big Horn Basin Chap-

ter of the Wyoming Archaeological Society, Northwest Community College, and the Buffalo Bill Historical Center co-sponsored a symposium on Big Horn Basin Archaeology. The symposium was held April 5-8, 1984, in conjunction with the annual meeting of the Wyoming Archaeological Society and the Wyoming Association of Professional Archaeologists, and was funded in part by a grant from the Wyoming Council for the Humanities. Approximately 450 people attended the four day program, held at Northwest Community College in Powell. Dr. Bruce Bradley of Cortez, Colorado, presented an afternoon program in flintknapping on April 5. Dr. George Frison presented an evening lecture on Big Horn Basin archaeology.

Friday's program (April 6) at Buffalo Bill Historical Center concentrated on individually presented papers dealing primarily with Big Horn Basin archaeology, but covering other Wyoming sites as well. Saturday morning at Buffalo Bill Historical Center, Dr. Bradley again presented his flintknapping program, followed by a flintknapping workshop held in the courtyard of the Historical Center. This workshop included Dr. Bradley, Dr. Chuck Reher, Steve Moore and Paul Sanders, and afforded the public the opportunity to observe as well as participate in flintknapping. Dr. Frison repeated his program on Big Horn Basin archaeology on Saturday afternoon.

The Saturday night banquet was attended by approximately 130 people, who enjoyed Dr. Richard Morlan's talk on Pleistocene archaeology of eastern Beringia, earliest man sites in Alaska and the Yukon Territory.

On Sunday, field trips to the Horner site outside of Cody and the Dead Indian Creek site in Sunlight Basin were attended by about 125

people, and narrated by Dr. George Frison.

In connection with this symposium, the North Big Horn Basin chapter conducted a raffle of an oil painting by Bob Edgar, three historical prints by Larry Edgar, with an accompanying story by Bob Edgar, and a frame of Big Horn Basin projectile point reproductions by Milford Hanson, with frame by Jim Platt, President of the chapter.

Proceeds from the oil painting went towards Bob Edgar's Prehistoric Museum Fund. From the remaining proceeds, approximately \$140 was donated by the chapter to the Wyoming Archaeological Foundation. The winners of the raffle were: Joan Leeper, Powell, Bob Edgar's painting; Ken Feyhl, Billings, Jimmy Davis Billings, and Andi Howard of Cody were winners of the Larry Edgar prints. The frame of point reproductions was won by Marie Webber of Frannie. In addition, Dr. Bruce Bradley donated to the local Chapter points he made in the Powell and Buffalo Bill Historical Center flintknapping demonstrations. The winners of these points were: Ileana Miller, Powell; Alan Muller, Powell; Gail Gossett, Riverton; and Sue Wallschlaeger, Cody.

The North Big Horn Basin Chapter thanks all of those who helped make this symposium such a success, and appreciates the support and assistance of all who were involved.

(signed)
E. Jo Felts
North Big Horn Basin
Chapter, WAS
North Fork Star Route
Cody, Wyoming 82414

ANNOUNCEMENTS

1. Imogene Hanson wishes to inform the Society members and other interested persons that the 1985 Spring Meeting will be held in Torrington. A date has not been received as of this time. Additional information will be sent chapter presidents as it becomes available.

2. Students interested in applying for the Mulloy and Frison Scholarships should submit their applications as soon as possible. Application forms are available now from Danny Walker, Department of Anthropology, The University of Wyoming, Laramie, Wyoming 82071. Two letters of recommendation must accompany the application.

3. The Wyoming State Archaeologist Office wishes to announce the publication of two more issues of Occasional Papers on Wyoming Archaeology: Archaeological Salvage at 48FR1398: The Castle Gardens Access Road Site, Fremont County, Wyoming (\$5.00) and South Pass City: Changing perspectives on a Nineteenth Century Frontier Town. (\$7.00). Copies may be obtained by ordering from The Editor, Occasional Papers on Wyoming Archaeology, Department of Anthropology, The University of Wyoming, Laramie, Wyoming 82071. Please add 10% for shipping and handling.

4. Ada Jackson and the Saratoga Historical and Cultural Association announce the publication of How to Make and Use The Atlatl: The Ancient Weapon of the Ice Age Hunters, by Rod Laird. This book shows the reader what materials are needed and how to build an actual work-

ing copy of an ancient atlatl. Proceeds from the sale of the book will be used for activities and development of the Saratoga Historical and Cultural Association. Copies can be ordered for \$7.50 each, \$1.00 postage and handling and \$.30 sales tax for Wyoming residents. Discount price for six or more copies is \$5.50 each, with school and library discount being \$6.00 each. Order from ATLATL PRESS, P.O. Box 703, Saratoga, WY 82331.

THE CONTROVERSY SURROUNDING THE GRANGER STAGE STATION, WYOMING

BY

RUSSEL L. TANNER

ABSTRACT

A discussion of archival and archaeological investigations concerning the veracity of the Granger Stage Station is presented. It is probable the present building marked as such in Granger, Wyoming is the mid-nineteenth century way station along the 1862-1868 Overland Stage Route in southwestern Wyoming.

The Granger Stage Station site in western Sweetwater County, Wyoming has been, and is, an object of considerable historical controversy. The site presently consists of a stone building, an attached stone ruin, and a separate granite monument, all situated on one acre of land (Figure 1). The inscription on the granite monument reads:

The Old
South Bend
Stage Station
Built in 1850
Gift of
E. J. Brandly
And Family
To the State of Wyoming
In Memory Of
Mrs. E. J. Brandly
On The Oregon Trail
And Pony Express

Much of the controversy ap-

pears to be the result of this inscription, seemingly containing several historical errors. Legal documents indicate that the site was deeded to the Wyoming Landmark Commission in 1932, not by E. J. Brandly, but by Clarence E. and Roy B. Adams and their wives. The Adams brothers were grandsons of Mrs. Mary Brandly, and step-grandsons of Mr. Brandly, and had inherited the land from Mrs. Brandly (Office of the Sweetwater County Clerk, Green River, Wyoming).

The Oregon Trail historian

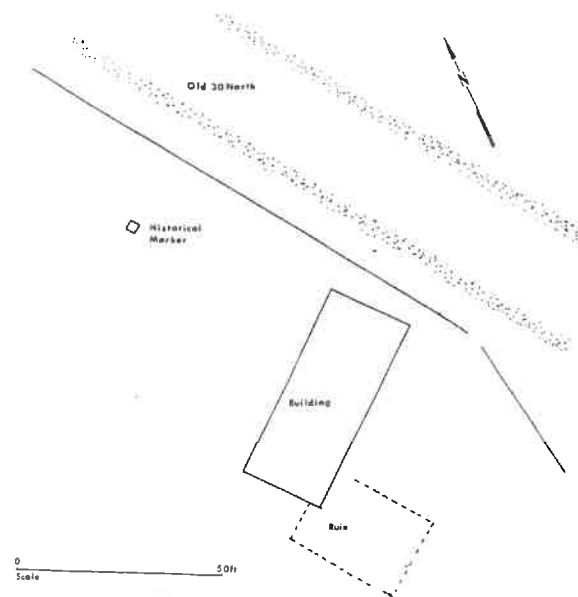


FIGURE 1: Plan map of Granger Stage Station site.

Aubrey L. Haines states that neither the complete building nor the attached ruin, "are in agreement with available descriptions of the South Bend Stage Station, nor authentic in regard to construction or situation" (Haines 1981:261). Haines believes the site is the remnants of a station serving points remote from the Union Pacific Railroad, "but neither [the building nor the ruin] would seem to be a part of the Overland Stage network or its predecessors" (Haines 1981:261). However, it must be noted there is no record of any remote freight operations originating from the Union Pacific at Granger.

The description of the South Bend Stage Station cited by Haines is by Sir Richard Burton in 1860, who states:

... reached Ham's Fork ... and there we found a station. The pleasant little stream called by the Indians Turugempa, the 'Blackfoot Water'. The station was kept by an Irishman and Scotchman--'Dawvid Lewis': It was a disgrace; the squalor and filth were worse almost than the two--Cold Springs and Rock Creek--which had called our horrors, and which had always seemed to be the ne plus ultra of western discomfort. The shanty was made of dry stone piled against a dwarf cliff to save backwall, and ignored doors and windows (Brodie 1963:192).

At this point, it is necessary to discuss the relationship of the various stagecoach and mail routes across the central plains and Rocky Mountains. The expansion of United States settlements in the west made it advisable for the government to promote communications between the east and new western settlements. Toward this end, mail contracts were issued to private organiza-

tions. Mail was first carried across the Oregon-California-Mormon Trail from St. Josephs, Missouri to Sacramento, California via South Pass by Major George Chorpenning (Chorpenning 1874). He held the mail contract throughout the 1850s, until the firm of Russell, Majors and Waddell started the Pony Express in 1860 (Majors 1893).

The Pony Express followed the same general route through Wyoming, i.e., along the North Platte to the Sweetwater River and up the Sweetwater to South Pass, and westward across the Green River to fort Bridger on the Black's Fork and on to Salt Lake City. The Pony Express lasted for only eighteen months and in 1862, Ben Holladay purchased the Russell, Majors and Waddell interests.

Holladay initiated a stagecoach service using a new route across southern Wyoming following essentially the route of the present day highway and railroad systems. This route comes into Wyoming at Virginia Dale south of Laramie, and crosses the Medicine Bow Mountains at Bridger Pass, near present day Walcott Junction. It then continues westward across the southern margin of the Red Desert. It follows Bitter Creek to the Green River and reunites with the Oregon-California-Mormon Trail route near present day Granger, Wyoming (Figure 2).

Haines' argument against the validity of the Granger site as the South Bend Stage Station continues:

"A number of facts indicate that the structures given to the state are not as old as claimed:

(a) Neither the site nor the structures agree with Sir Richard Burton's description of 1860;

(b) The structures are aligned with the town streets, which are laid out as a grid, oriented according

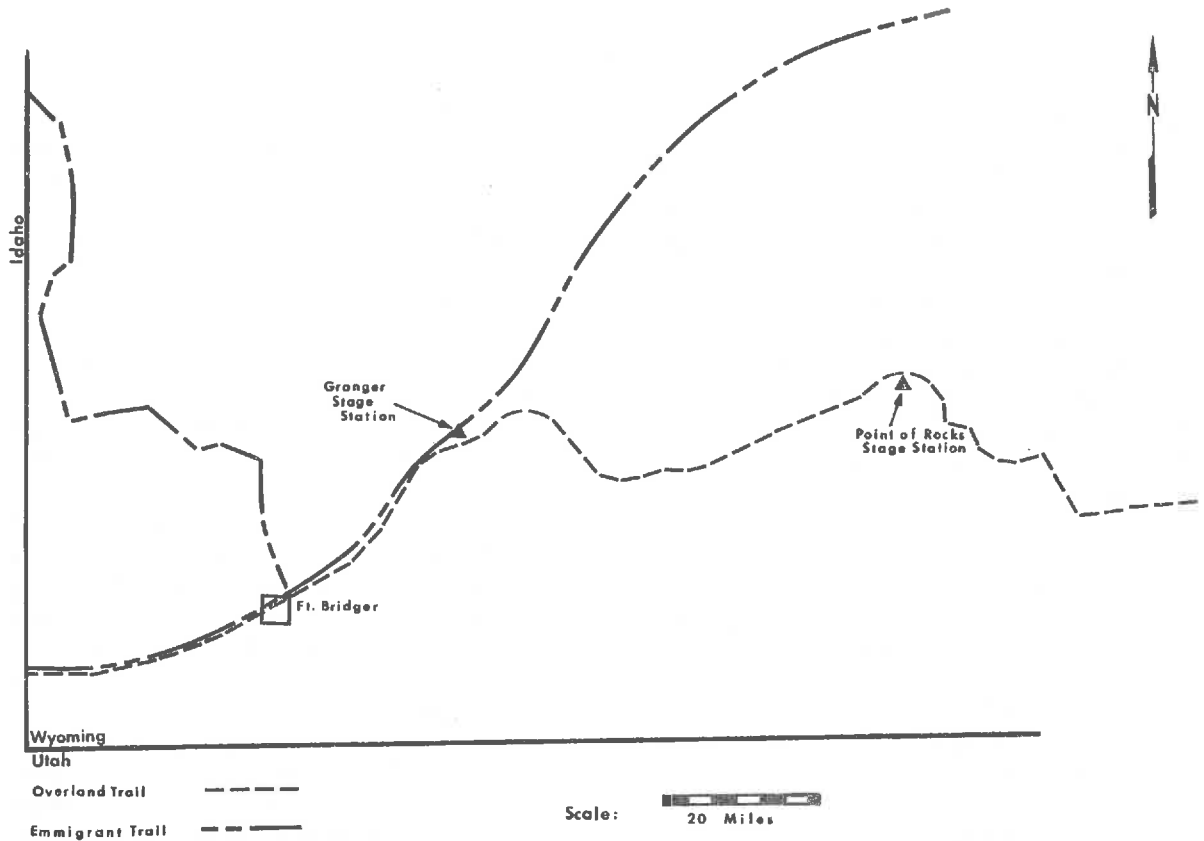


FIGURE 2: Oregon-California-Mormon Trails and the 1862 Overland Trail relative to the Granger Stage Station site.

to the direction of the railroad tracks. (The railroad was built through during the summer of 1868);

(c) An examination of door and window casings of the intact structure, and the framing and beams of the ruin, show only wire nails (manufacture of such nails began in 1892, hand-made square nails would be expected in an 1850 structure, and machine-forged square nails

after 1865);

(d) The main building is architecturally incongruous; that is its cut stone, brick chimneys and gabled roof would hardly be expected at an isolated stage station, although usual enough at frontier Army posts when they entered a 'permanent phase'" (Haines 1981:262).

Haines' book, Historic Sites Along the Oregon Trail, is a published version of a 1972 National Park Service study, with some updated information. Unfortunately, Haines did not avail himself of new information presented in the later Historic American Buildings Survey (HABS) 1974 report on the purported stage station at Granger. The HABS report agrees, in part, with Haines' contention that the present building was not there in 1860, "obviously not in 1850" (HABS 1974:43). At least it is obviously not the station described by Sir Richard Burton (Brodie 1963:192).

The HABS report cites western historian Paul Henderson who suggests that the 1850 era dugout

station along the Oregon Trail was replaced in 1862 with a new building when the more southerly Overland route was established (HABS 1974:44). According to the HABS report, "The name of the stop is known to have changed officially at that time from 'Hams Fork' to 'Granger' (it appears thus on 1862 time-tables)" (HABS 1974:44). The HABS report cites no documentation for this statement and it may be erroneous, since in 1867 a Wells Fargo time-table lists the "South Bend" stop, but neither "Ham's Fork" nor "Granger" (Jackson 1982:12-13). The actual name change to Granger may have occurred in 1868 with the arrival of the railroad, since the first postmaster at Granger was a man named Lafayette Granger. That post office was commissioned in February 1869 (Gallagher and Patera 1980:116). The issue of the name of the stage stop thus remains cloudy.

Haines' contention that the building is aligned with the street grid of the town is also questioned since the alignment is hardly precise. Furthermore, as the HABS report recognizes, "it would have been logical to align the station with the stage road, which is roughly parallel to the railroad along most of its route, but not at that point" (HABS 1974:44). Perhaps more importantly, the building is adjacent to the original route of U.S. Highway 30, which very likely followed an existing trail past the building.

Haines' second contention regarding the construction style of the buildings seem to be more substantial arguments against the building being old enough to be a station along the 1862 Overland Stage route. However, as the HABS report argues, the areas in which wire nails appear are superficial and are in fact areas, i.e., window

casings, door frames and the roof, that are prone to deterioration and would likely have been replaced with the best materials available at the time. In a related matter, the window casings and roof of the Point of Rocks Station, a documentable Overland Stage station, were replaced years after its construction (HABS 1974:44).

A "post card" photograph (Figure 3) taken of the Granger Stage Station (probably in the early 1900s, since U.S. Highway 30 North is not visible in the foreground) is remarkably similar to the photograph of the Point of Rocks Stage Station presented by Jackson (1982:25). This similarity could be an argument supporting the contention that the Granger station dates to the Overland era, especially if research could document that the two photographs were taken by the same photographer.

The argument that the building is too large and complex to have served as a stage station is tenuous at best. It is known that the station was used as a residence until the 1920s (R. B. Adams, personal communication). It is likely that additions to the building were made subsequent to its use as a stage station. A 1975 archaeological investigation by the Wyoming State Archaeologist's Office indicated that the western two rooms of the intact structure appeared to have been constructed earlier than the eastern-most rooms (Walker 1975:1).

Furthermore, that 1975 investigation revealed that the two chimneys questioned by Haines were also of later origin. Figure 3 shows the original chimney, remnants of which were found to be present in the east wall of the earliest portion of the building. It does not show the two stone chimneys present today. The archaeological study also found that

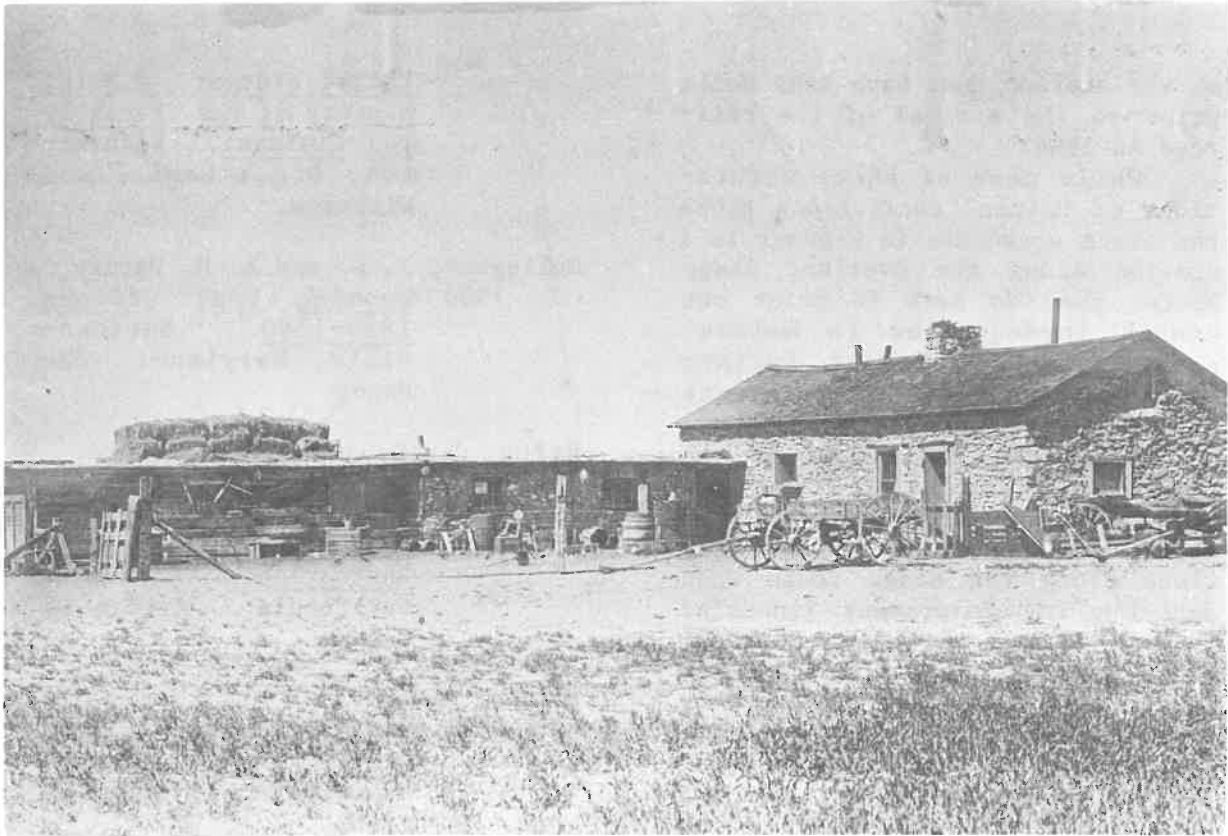


FIGURE 3: An early 1900s photograph of the Granger Stage Station.

the ruin south of the main structure appeared to have been constructed later than the main part of the building. The construction here appeared to have involved less precise laying of rock, with no shaping of the corner stones similar to that in the main building, and also noted at the Point of Rocks Station (Walker 1975:2). The roof supports in the ruin are railroad ties and telegraph poles, both of which would not have been available until after completion of the transcontinental railroad in 1863. Figure 3 also shows an additional railroad tie structure on the south end of this ruin which is no longer present.

The report also mentions a "less concrete" piece of evidence

supporting the contention that the building is indeed a station on the Overland Stage Route of 1862. Western photographer William Henry Jackson was present at the dedication ceremonies when the site was presented to the state in 1932, and donated a bronze plaque in commemoration of his experiences there.

As the HABS report states: "it is unlikely that he [Jackson] would have taken such effort if he knew the building to be the wrong one" (HABS 1974:45). In his diary, Jackson speaks of spending three weeks at the station hauling hay while waiting for a means to travel to Salt Lake City (Hafen and Hafen 1959:75). Jackson's recorded visit to the station on Ham's Fork (which he calls "South Bend") was in 1866,

so the station must have been built prior to the arrival of the railroad in 1868.

While none of these refutations of Haines' contentions prove the stone structure in Granger is a station along the Overland Stage Route, they do seem to point out enough inadequacies in Haines' conclusions to warrant further study of the matter. Documents should be available in the National Archives which could resolve the question. These would include Holladay's documentation of the status and condition of all stations along the stage route when applying for government financial relief because of Indian depredations against his property; and his listing and description of property when applying for federal mail contracts. To this author's knowledge, these documents have not been consulted with regard to the problem of the authenticity of the purported Granger, or South Bend, Stage Station.

The National Park Service followed the conclusion presented in the HABS report (that the building is probably an Overland Stage Station built in 1862) when they awarded a contract for restoration work on the building in 1978. This work was done under a contract administered by the Wyoming Recreation Commission with Park Service funds, and has apparently stabilized the building for preservation.

REFERENCES CITED

- Brodie, F. M., editor
1963 The City of the Saints, and Across the Rocky Mountains. New York: Alfred M. Knopf.
- Chorpenning, G.
1874 The Case of George Chorpenning vs. the United States: A Brief History of the Facts by the Claimant. Washington, D.C.: McGill and Witherow.
- Gallagher, J. S. and A. H. Patera
1980 Wyoming Post Offices 1850-1980. Burtonsville, Maryland: The Depot.
- Hafen, L. R. and A. W. Hafen, editors
1959 The Diaries of William Henry Jackson, Frontier Photographer. Glendale, California: Arthur H. Clark.
- Haines, A. L.
1981 Historic Sites Along the Oregon Trail. Gerald, Missouri: Patrice Press.
- Historic American Buildings Survey (HABS)
1974 "Granger Stage Station". pp. 39-56, unpublished manuscript on file, Wyoming State Historic Preservation Office, Cheyenne, Wyoming.
- Jackson, W. T.
1982 Wells Fargo in Colorado Territory. Colorado State Historical Society, Monograph.
- Majors, A.
1893 Seventy Years on the Frontier. Minneapolis: Ross and Haines.
- Walker, D. N.
1975 Report of Archaeological Investigations at the Granger Stage Station. On file, Office of the Wyoming State Archaeologist, Laramie.

ROCK ART AND HABITATION SITES AT WEATHERMAN DRAW,
CARBON COUNTY, MONTANA

BY

THOMAS H. LEWIS

Weatherman Draw is a spectacularly sculptured coulee on the western Pryor Mountain uplift of southern Montana. It extends eastward from Cottonwood Creek, into which its intermittent stream flows, toward the next great fault valley, Jack Creek. The coulee walls contain a variety of aboriginal rock art, some quite beautifully preserved. Many individual sites are known, but intensive studies in 1983 revealed other localities, previously unknown, which also merit recording.

The highest ridges of Weatherman Draw are covered with pine and juniper. The lower levels, approaching desert dryness, are badlands or short grass prairie with Artemisia, Ribes and Opuntia. Remnants of the long-abandoned Maki homestead and corral lie at the mouth of Weatherman Draw, and an ancient wagon road ascends toward a "gunsight" pass along the massive wadis and sandstone cliffs. Three kilometers up this road, a line of deeply dissected cliffs contain the first site.

SITE 24CB408

This site was originally called Provinse, for its discoverer (Conner 1964). The first panel faces east, and bears (Figure 1) a

shield 58 cm in diameter, deep brown in color, on a reddish patinated surface. The shield is decorated with round, now colorless, spots in horizontal rows. Below are an incised tipi/arrow 14.5 cm, an incised enigmatic figure 10.5 cm, and a group of "H" marks that are deeply incised in an area about 15.5 cm in diameter. An incised zoomorph is about 400 m to the northwest.

About 15 m west of Figure 1 is a large outfall boulder with a crypt-like space beneath. On the low ceiling is a rectangular-bodied human figure 92.5 cm long done in black pigment (Figure 2). On the east surface of the outfall boulder are two shields in bright colors. The first (Figure 3) is 54 cm in

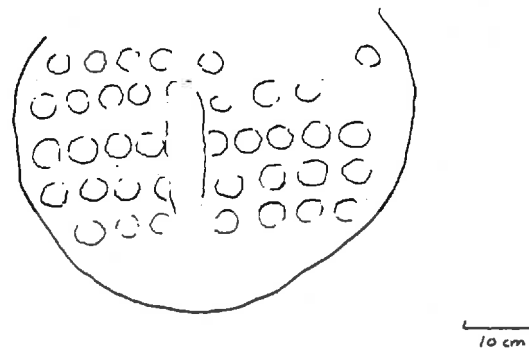


FIGURE 1: Figure from Provinse site, 24CB408.

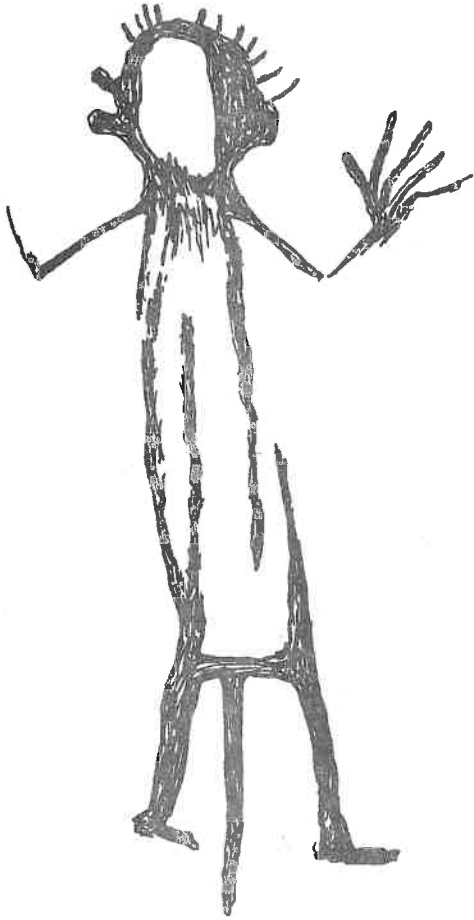


FIGURE 2: Human figure from Provinse site, 24CB408.

diameter. It is done in red paint. There is a head, a headdress, and a bear decoration on the shield.

The second shield is 50 cm in diameter (Figure 4) and is divided into segments, four yellow, two red, and two pink. Within the individual segments are four circular designs. the shield has a red and yellow fringe and has been "retouched" with black and white chalk lines since it was photographed by S. W. Conner in 1965. The colors and definitions are so vivid and clear that there seems to

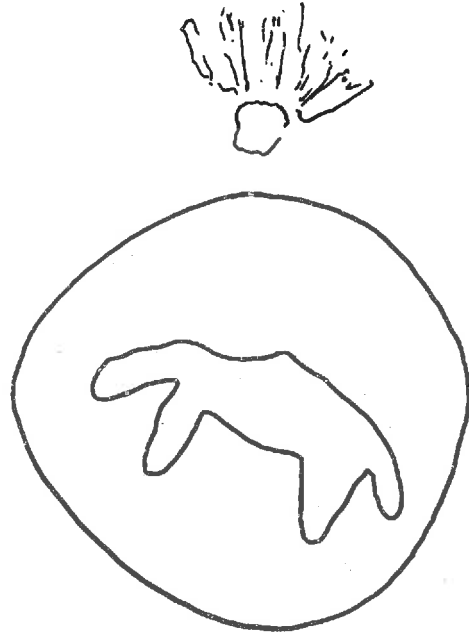


FIGURE 3: Shield figure from Provinse site, 24CB408.

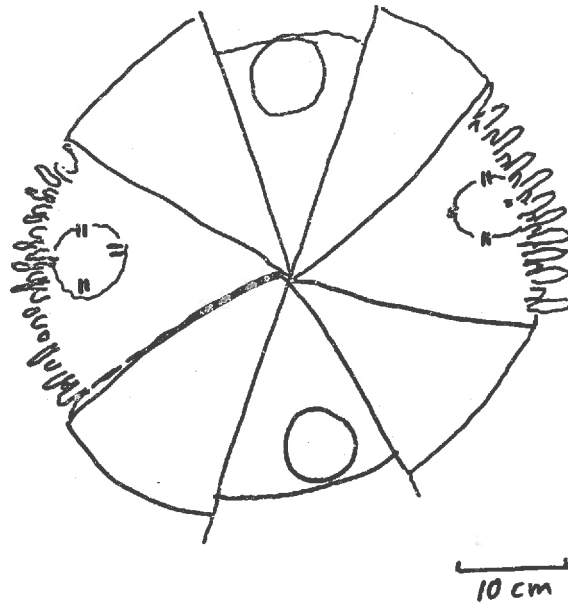


FIGURE 4: Shield figure from Provinse site, 24CB408.

be no reason for some photographer to have "improved" this pictograph. Is it possible the site is still actively "used" for offerings?

High on the broken cliffs above this outfall boulder are nine faded remnants, possibly all of shield figures done in red paint. One of these is a clear red circle 25 cm in diameter with several dim red fragments. Another is a smoothed area with two dim concentric circles. A third is a circular red-pigmented blotch without any clear outline. A shield figure outlined in red, 32.5 cm in diameter, with a fringed upper right quadrant, red interior coloring, and a leg below the lower margin, is one of the best preserved.

Another shield figure is 42 cm in diameter and outlined in red. There are two indistinct red areas within the outline, and a club-like weapon extends to the upper right. A smoothed, polished circle 33 cm in diameter, and a group of many incised lines radiating from a central point, are remnant glyphs.

Better preserved is a red shield with an inner red design and fringed left margin. It is painted on a pre-smoothed circular surface. Shallow grooved lines border many of the red painted lines, as if an incised figure was executed first, and then painted. This glyph faces west, most of the others east or south.

Figures on nearby surfaces include a faint red shield, partly red on the inside, and a "rayed sun" 30 cm in diameter. This has been crudely "augmented" in recent times and may or may not have been an aboriginal figure. Below it are dim fragments of a shield and an animal.

In a sandstone-walled ravine west of Figure 3 is a shallow alcove with many historic era initials and names. The alcove also contains a tipi-like object (24 cm

high) in bright orange paint. This crude figure seems to have been over-painted, and if so, may hide an aboriginal pictograph. An orange circle with an upper segment of solid color (19.5 cm in diameter) may also have been augmented. There are two other fragmentary glyphs in orange and an incised shield-bearer (20 cm across) (Figure 5).

Below is a series of glyphs (Figure 6a, 6b, 6c, 6d) done in razor-fine lines on a smooth, powdery surface. In direct sunlight they are virtually invisible. In side light, the glyphs are composed of so many fine, closely spaced lines that accurate tracing or photographs are difficult. These figures bear a stylistic resemblance to figures at 24LY81 on Dry Antelope Creek in Yellowstone County, Montana (see the discussion of Site 24CB466 below).

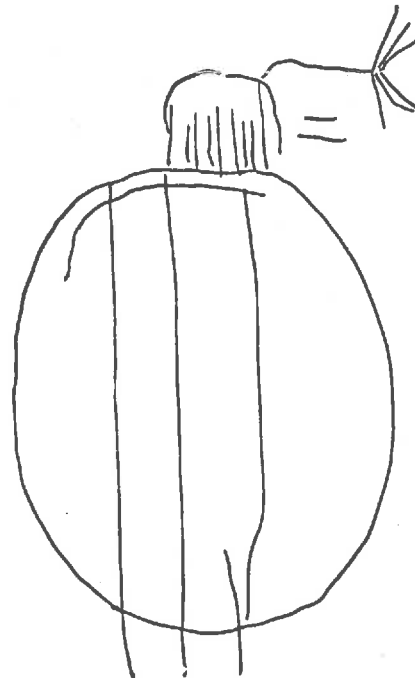


FIGURE 5: Shield figure from Provinse site, 24CB408.

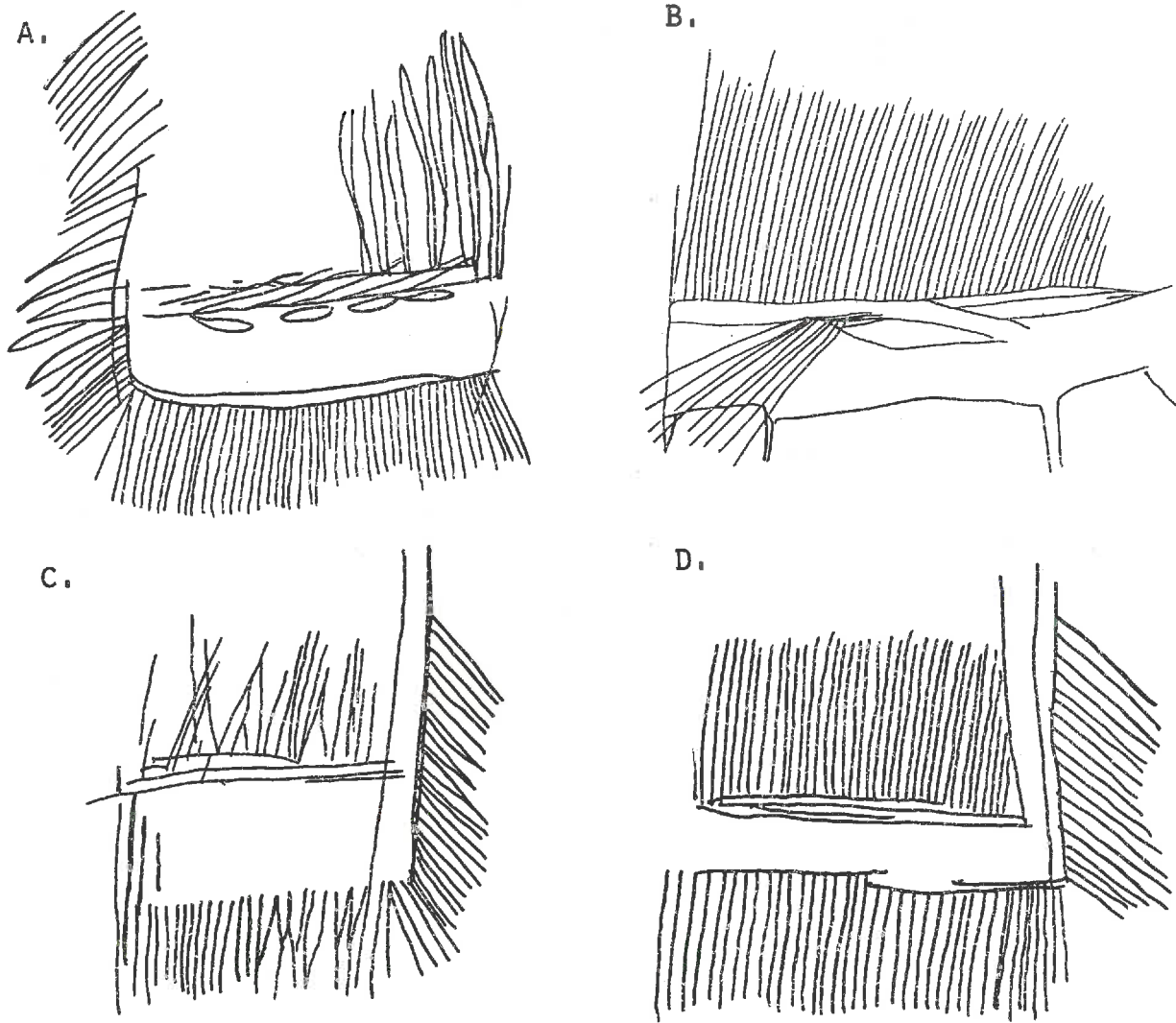


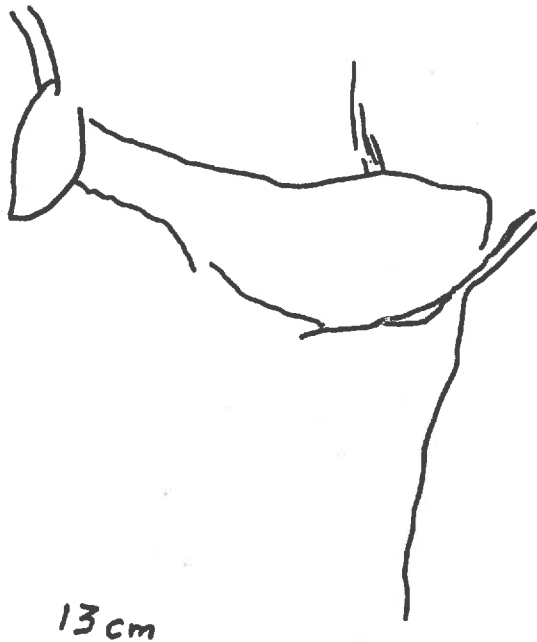
FIGURE 6: Incised line figures from Provinse site, 24CB408.

On a large outfall boulder further up this ravine are two crudely-done animal figures in fine incised lines (Figures 7 and 8). One suggests a horse with a halter rope.

To the west of this site about 90 m, the cliffs rise in several terraces. The uppermost terrace bears a panel 16 m in length which looks over a vast expanse of country to the south and southwest. On the panel is a horizontal row of seven shields, their tops now about

3 m above the ledge upon which a viewer can stand. Figure 9 is the best preserved. It is 60 cm in diameter and is painted on a pre-smoothed surface. There are two red outlines 2 cm apart, supporting a row of circumferential oval red marks. Above rises a head and neck in red and orange. A weapon (21 cm) emerges from the upper left, painted in red with an orange globe at the tip. Legs (9 cm) extend below.

Decorations within the shield



13cm

FIGURE 7: Animal figure from Provinse site, 24CB408.

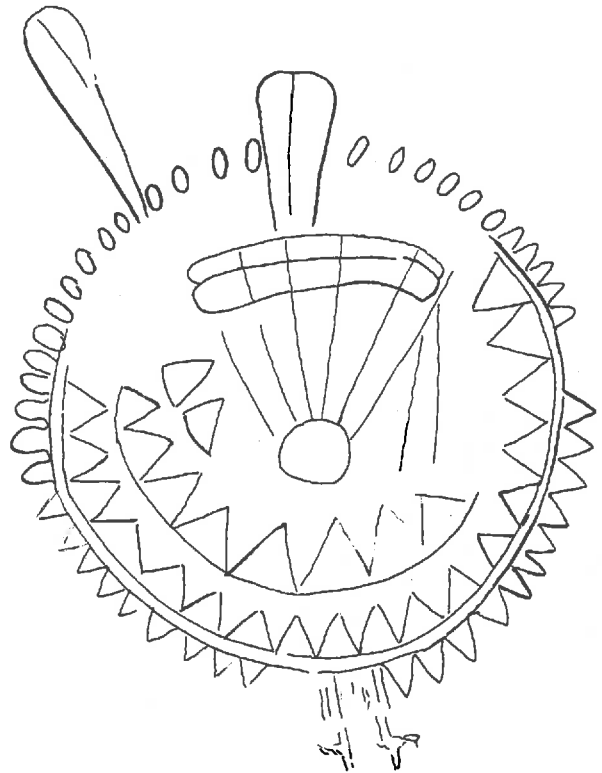
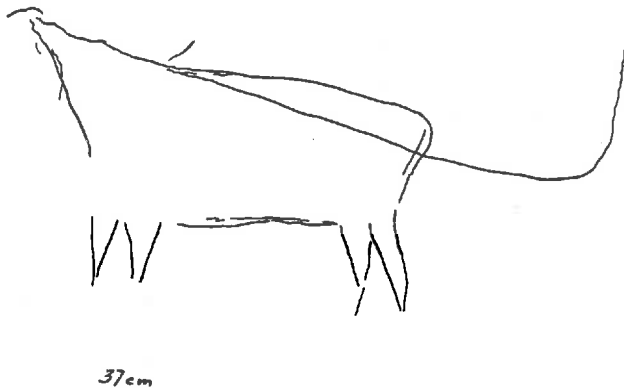


FIGURE 9: Shield figure from Provinse site, 24CB408.



37cm

FIGURE 8: Animal figure from Provinse site, 24CB408.

are an orange center spot and a red and orange horizontal curved bar in the upper portion. The lower half of the shield has two concentric rows of orange triangles. Six radial incised lines cut through the breast-bar and extend to the

center of the shield. Similar lines, perpendicular, descend in the right half of the shield.

The second shield is 69 cm in diameter. The lower right quadrant is eroded. The remainder has a grooved outline, especially well preserved along the right circumference. Within the shield outline are large orange circles and an unidentifiable animal. The lower left quadrant is orange with six paint-free circles. Above the upper margin is a smoothed surface in the uncertain shape of a squared head, now pain-free. It is evident in this glyph that the technique involved: 1) smoothing and polishing a surface, 2) making an incised outline on the polished surface,

and 3) painting the incised shield figure.

The third glyph is a smoothed but now eroded circle with three red and green lines. The fourth is a fragment of a shield on a smoothed but friable surface. This has a grooved double-line outline. In the right upper quadrant are five grooved lines, within and perpendicular to the outline, and six shorter, similar lines. Symmetrically placed on the left are six similar grooves. These contain (alternately) red and yellow paint. Water erosion and exfoliation of the stone have destroyed the surface in the lower half of the figure. To the right is a faintly visible square-bodied human figure, incised, 32 cm, on a pre-smoothed surface.

The fifth shield is on a smoothed, circular, drawing surface. An outline groove 2 cm wide encloses an outline of 50 cm. Faint orange and red legs or fringe extend below for 12 cm. The center of the shield has a double crescent in red with two lines slanting to 2 O'clock. The left half of the shield is orange, faint above and stronger below. Along the margin are six red triangles. The lower quadrant has a 7 cm paintless circle. A small red oval is placed as a superscript on the inner upper point of the quadrant. Much of the outline of the left upper quadrant of the shield is eroded. The right lower quadrant is red, with a paint-free spot in which are two small ovals, the left one orange, the right green. An orange line bisects the entire shield vertically. To the right of the shield, a shallow, smoothed groove measures 25 x 4 cm.

The sixth shield is now exceedingly faded. There is green pigment in the upper right outline, and a red line and splotches below.

The seventh shield is now

almost obliterated. On a round, smoothed surface 30 cm in diameter, the shield is painted in pale orange, divided into three pie-shaped sections. A head in red paint, with indications of a headdress is above. The shield has a circumferential decoration of triangular points. The figure is best discerned when the panel is rain-wetted.

BEAR TWO SHIELD SITE 24CB630

About 400 m to the west and north of 24CB408, and in the same mass of dissected cliffs, a narrow ravine leads to a box canyon heavily grown with large pines and dense thickets. Near the hidden head of this ravine is what may have been a habitation area, with shallow rock shelters and well-protected sites for camps (Lewis 1983a).

On the left wall is a low, gray sandstone panel 172 cm long, containing a line of red paint dots, each fingertip sized (Figure 10a). The first 16, reading right to left, are in pairs. Below this row are two "horns" in red (Figure 10b), a vertical series of four red dots (Figure 10c), a vertical line (Figure 10d) and several dim, black figures of lines and smudges. On a boulder just up-canyon are many fine, incised lines and scratches, in part in rectangular patterns.

Across the head of the ravine is a vertical gray panel, now partly buried by a rill which has put down a mass of sand and detritus at its base. Other figures, besides those described below, or cultural elements might be revealed by excavation here.

A human figure in black is 65 cm tall, V-necked, with smudges above the shoulders which may indicate hands. A shield-bearer (Fig-

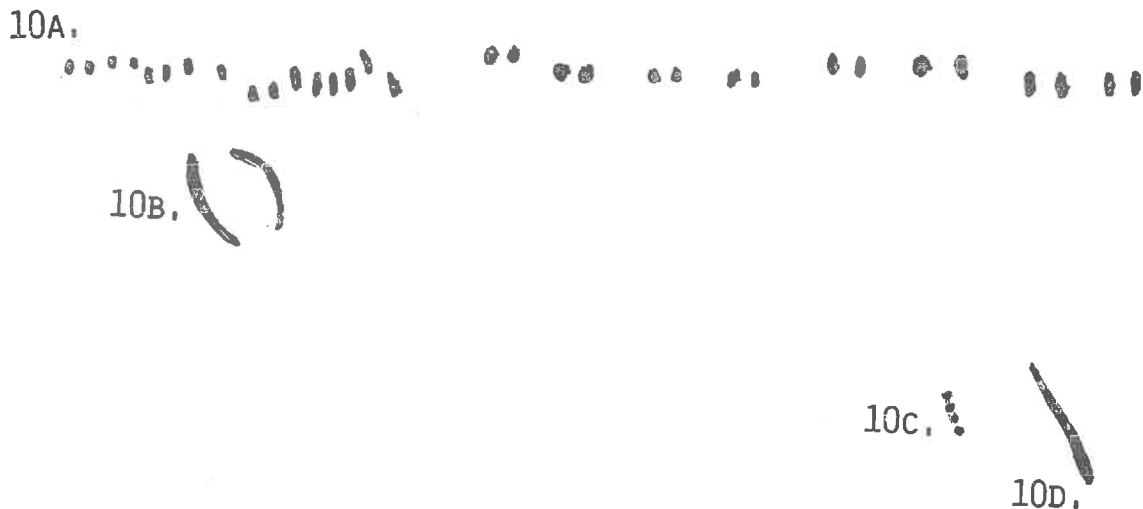


FIGURE 10: Rock art from Bear Two Shield site, 24CB630.

ure 11) is 68 cm. The upper left segment of the shield is orange, the middle segment is colorless, with a small orange center point. The left segment is lemon yellow. A dark red serrated weapon extends up to the left. Above is a four-part figure and a hat-like figure (30 cm), both in deep red pigment (Figure 12).

A bear, 135 cm in length, is done in black and red paints (Figure 12). Now eroded and water damaged, the fragments suggest the original figure was animated and colorful. The forelegs with claws remain, along with two ears, a belly line, a red object beneath the foreleg, red in the torso and above the dorsum, and four horizontal curving lines, passing through and beyond the body, patterned in the rock, but augmented by red and black color.

To the right is a shield carrier 66 cm in diameter, in black pigment (Figure 13). There is a "heartline", an obscure design in the right lower quadrant, a weapon on the left, and head and legs. This warrior faces the bear. Above, a shallow vertical "tool groove" extends 30 cm.

The north branch of Weatherman Draw leads steeply to massive cliffs and several large, shallow caves. Above these caves, the ridge climbs to a divide area beyond which lies Castle Coulee to the north and east. The ridge has an alpine aspect, with extensive exposed pavement strata sloping

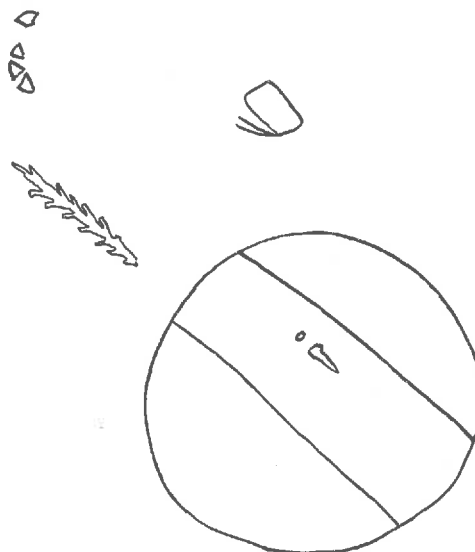


FIGURE 11: Closeup of rock art panel at Bear Two Shield site, 24CB630.



FIGURE 12: Rock art panel at Bear Two Shield site, 24CB630.

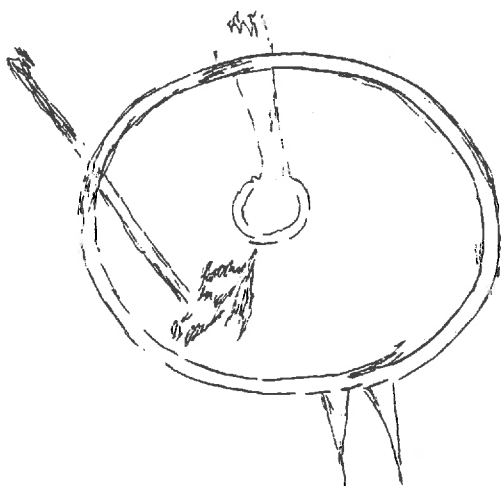


FIGURE 13: Human/Shield figure at Bear Two Shield site, 24CB630.

toward the Pryor Mountains, eccentric boulders, and wind-swept vegetation.

CASTLE DIVIDE SITE
24CB621

This was discovered and des-

cribed by Gary Leppert in March 1983. It was previously designated High Corral. On a large boulder are many tool lines, a "square with feathers", an oval bisected by parallel lines, a half circle, and three pairs of deeply incised (3 mm) short lines (Figure 14). An adjoining panel has a maze-like structure of fine, incised lines cut into a deep-red patina. The lines include ovals and straight lines, some suggesting arrows. A sandy area below the panel had many worked chips of gray or purple porcellanite.

HALF-BEAR SITE
24CB198

Also discovered and described by Gary Leppert, this is a large, isolated boulder, weathered into shelters and caves and set in a sandy basin. A number of large, unworked pine logs have been placed close to the walls, seemingly having been brought from the wooded areas below. The pine timbers are placed so as to suggest that natur-



FIGURE 14: Rock art panel at Castle Divide Site, 24CB624.

al caves were converted into a habitation complex. A bough structure is still in place across the opening of one cave.

About 2 m above the ground a red patinated surface has a well-executed bear glyph 95 cm (Figure 15). The rear half of the body was never completed. The front half is worked into the surface for 2-3 mm. The outline is sharply angled to the "carved-out" interior. A head, two ears, two eyes, and forelegs are depicted, as well as a vertical line separating the fore-torso from the unworked rock. The entire worked surface has been darkly repatinated.

WEATHERMAN OVERLOOK SITE
24CB631

On the highest ridge, in a dense juniper thicket growing against a vertical cliff, Gary Leppert found a panel of six pecked men, four with genitals (Figure 16). Figure 16a is 37.5 cm; 16b is 26 cm; 16c is 35 cm; 16d is 37 cm; 16e is 43 cm; and 16f is 19.5 cm (Lewis 1983b).

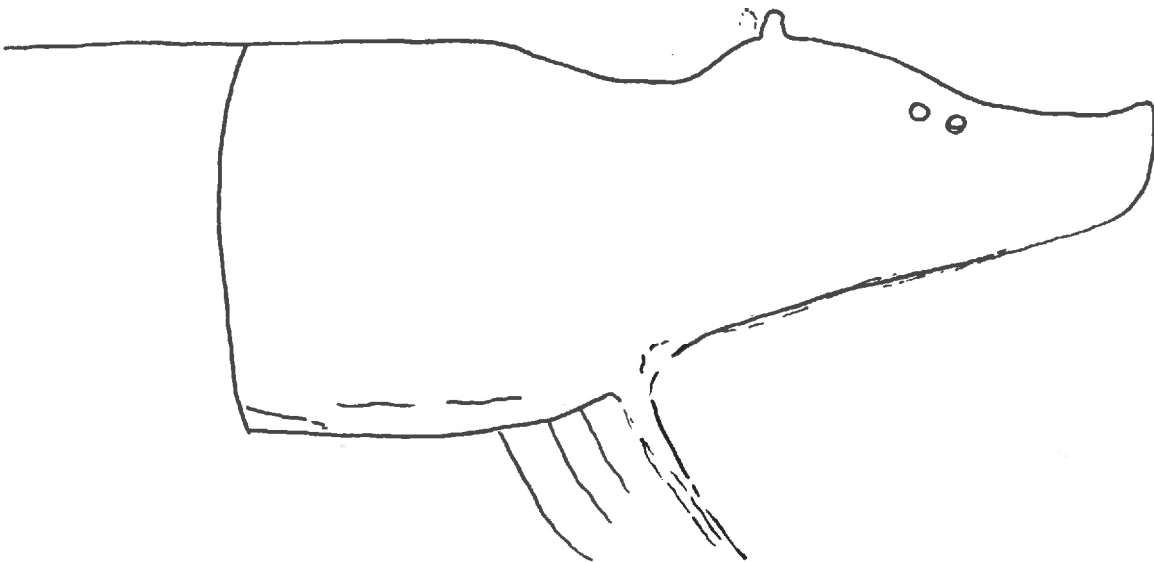


FIGURE 15: Animal figure at Half Bear site, 24CB198.

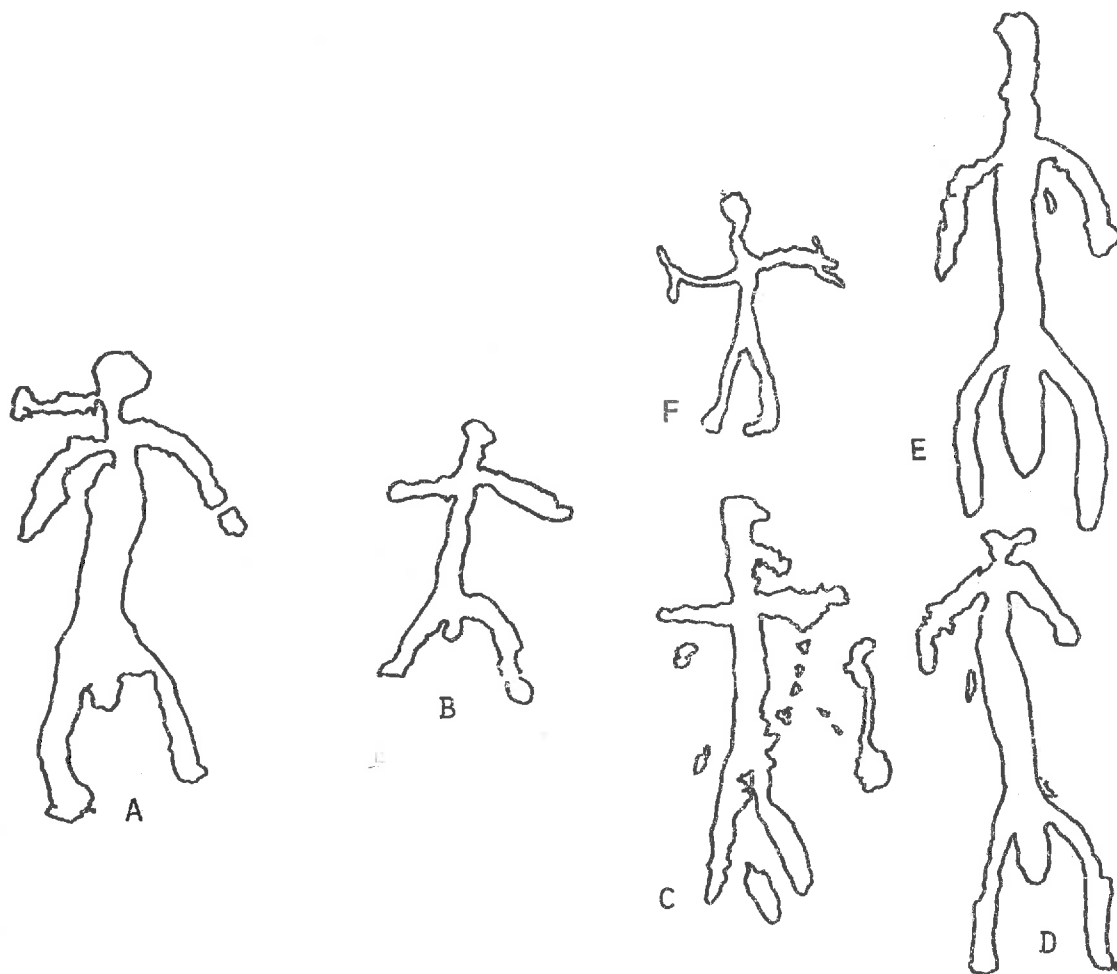


FIGURE 16: Panel of human figures at Weatherman Overlook site, 24CB631.

Further along this cliff face is a panel with three life-size human hands done in red pigment (15 cm), other dim, red glyphs, many scores of incised lines, and on an outfall boulder, five incised "tipis."

SITE 24CB466

This habitation site within a cave was first reported by Dr. Larry Loendorf (1976). He reported it as 270 feet long, 46 feet deep and described its contents. Notes taken by myself on 15 April 1983 and 22 April 1983 are supplement-

tary. The roof now has an 80 foot crack, signaling the eventual fall of a great rock mass. This crack now allows dung and feathers from feral rock dove nests to sift to the cave floor. A deep midden has collected, in one place over 12 m in breadth.

On the outer lip of the roof is an eagle nest. Immediately beneath this is a great and apparently ancient midden of sticks, feathers, bone and dung 6 m x 10 m and about 1.5 m deep. Bits of eagle egg shell and a fresh pine twig suggest recent nest use. Eagles were not seen but the nest is in good repair.

In this midden, below the eagle nest, is an ancient human structure, now an integral part of the midden. Then heavy pine poles, silvered with age, are in a tipi-like, erect position. The tips and all side branches have been trimmed(?) off. The largest pole has a butt diameter of 21 cm. Seven of the poles are tightly jammed against a large downslope boulder. Three are spread (a meter or less) at the butt ends to prop the remainder. Large stones have been wedged tightly between and against the butts, and these are piled in three to four "courses" to a height of 1 m. The longest poles are 5-6 m tall. The structure is covered with detritus from the eagle nest. Would eagles pause here on the way to the nest? Is this a structure to facilitate shooting at eagles or to place offerings to eagles? We have no ethnological or historical data to supplement speculation, but site 24YL81, Dry Antelope Creek, Yellowstone County, also contains a panel of petroglyphs directly below an ancient eagle nest and may have had a similar use.

The cave has a vertical wall at its right extremity. On the left, stones have been rearranged to make a smoother pathway along the cliff base. Access from directly below is steep, difficult, and brush-choked.

On the cave floor are five rock wall structures. The first "room" has walls composed of flat stones, some on edge and some piled 2-3 deep. In the center is a large dished hearth. The second structure is a small room with intact walls. The third is built against the back wall of the cave, but the walls have fallen and the original size is hard to estimate. The fourth room is small with collapsed walls. There is a deep central hearth with charcoal. Logs and sticks are built into the stone

wall. One of the logs is 3 m long, 26 cm in diameter with the outer end burned. The inner end has a retained mass of root structure. The fifth room has several logs built into the rock walls. The logs are both perpendicular and parallel to the back wall and one log forms the outer wall. Some stones are on edge, some are piled 3-4 stones high. There is a large central hearth.

The back wall of the cave has a pseudoglyph of a man-bow-animal-trail done in fresh charcoal. Possibly this overlies an original glyph. There are two dim, but authentic V-neck figures done in incised lines with black paint in the grooves (Figure 17). There are many other eroded, incised lines. The pseudoglyph may represent a recent effort to restore a dim figure.

From the cave mouth, exceed-

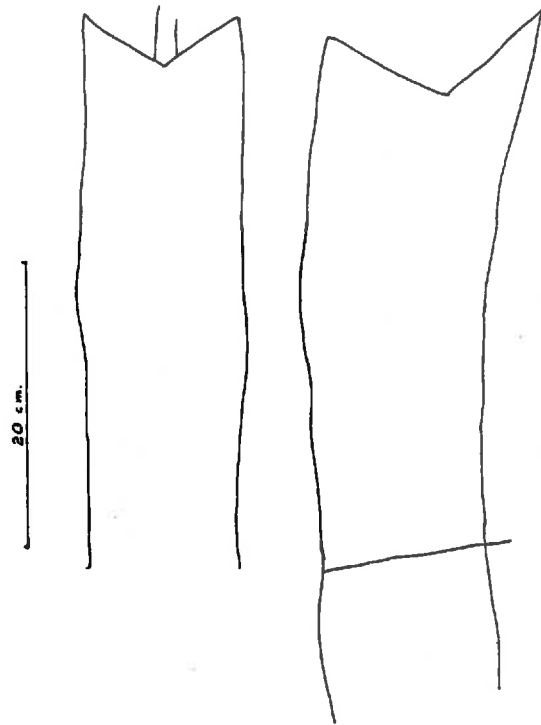


FIGURE 17: Incised, V-necked figures at Weatherman site, 24CB466.

ingly rough terrain drops past several caves (at least one habitable) toward the Provinse site. At the bottom of the canyon is a circular cairn (a white grave?) of large, pinkish, gray and orange granitic boulders. There is no other rock of this type within miles, and the stones must have been transported at great effort.

Weatherman Draw, since homestead times, has been sparse and arid range land not occupied by humans. Its isolation and forbidding aspects have protected the profusion of remnants of its aboriginal inhabitants.

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REFERENCES CITED

- Conner, S. W.
1964 Provinse Pictographs.
Trowel & Screen 3.
- Leppert, G.
1983 Site report 24CB198,
Half Bear. On file,
University of Montana,
Missoula.
- Lewis, T. H.
1983a Site report 24CB630,
Bear Two Shield. On
file, University of
Montana, Missoula.
- 1983b Site Report 24CB631,
Weatherman Overlook. On
file, University of
Montana, Missoula.
- Loendorf, L. L.
1976 A preliminary archaeo-
logical survey of the
Clark Fork River, Car-
bon County, Montana.
Master's Thesis, Uni-
versity of Montana,
Missoula.

A STUDY OF SHOSHONEAN CERAMICS OF WYOMING: THE BUGAS-HOLDING CERAMIC ASSEMBLAGE

BY

HOWARD HASPEL

ABSTRACT

Ceramics with Shoshonean affiliations were recovered from the Bugas-Holding site in northwestern Wyoming. This assemblage is compared to other assemblages with Shoshonean affiliations from various parts of Wyoming, followed by a functional analysis and interpretation of the Bugas-Holding site ceramics. Finally, a discussion on Shoshonean assemblage variability will be undertaken.

INTRODUCTION

The Bugas-Holding site (48PA563) is a Late Prehistoric period habitation site with Shoshonean ethnic affiliation in the Sunlight Basin of northwestern Wyoming. The site is located on the floodplain of Sunlight Creek at an elevation of 2050 meters. The site was discovered in the early 1970s by Mr. John Burns, an amateur archeologist from Cody, Wyoming during excavations for a gas-line trench. At that time, ceramic, lithic, and faunal materials were collected. During the summer of 1983, Dr. George C. Frison and a crew from the University of Wyoming carried out preliminary archeological testing of the site area. The single cultural level was found at a

depth of slightly over 50 cm below the present ground surface, and had a variable thickness of approximately 3 to 10 cm. Faunal remains, lithic artifacts, hearths, and possible remnants of wooden structures were contained within the level. Only five small ceramic sherds were found during the 1983 investigations at the site.

During the 1983 fieldwork, Mr. Burns agreed to turn over his 1970s collection to the Department of Anthropology at the University of Wyoming for study and analysis. A large part of the collection consisted of 144 pot-sherds. All of these sherds came from the area of the gas-line trench in the northern-most section of the site. Although most of these sherds do not have specific provenience data, they do comprise the majority of the Bugas-Holding site ceramic assemblage.

This paper will involve an analysis and description of the Bugas-Holding ceramic assemblage, and other Shoshonean ceramic assemblages from the state of Wyoming. These assemblages will be compared and contrasted, and then a general discussion of Shoshonean ceramic attributes will be made. A functional analysis and interpretation of the Bugas-Holding assemblage will be presented. Finally, a brief

interpretation of Shoshonean ceramic assemblage variability in Wyoming will conclude the paper.

METHODOLOGY

During the course of this study, a series of variables and measurements were chosen in order to analyze the ceramics from several sites with Shoshonean ethnic affiliation. Analysis of sherds involved both physical measurement and visual inspection. All measurements were taken to the nearest tenth of a millimeter, using standard sliding-dial calipers. Measurements included sherd length, sherd width, sherd thickness, base thickness, and rim thickness. Temper size was also determined in the same manner and with the same instrument. The measurements were taken according to standard procedures as defined by Coale (1963), Shepard (1956), and Bennett (1974).

Color, paste texture/composition, and temper types were determined by visual inspection of sherds. Shepard provided a handy reference in determining the terminology used in size-grading and describing paste and temper variables (Shepard 1956:117-122). Color variables were established in order to gain an understanding of the firing atmosphere in which the vessels were prepared. The color code established in this report was based on a comparison of actual ceramic coloration with the scheme present in a standard Munsell soil color chart.

THE BUGAS SITE CERAMIC ASSEMBLAGE

A total of 150 potsherds have been recovered from the Bugas-Holding site. A breakdown of these sherds into various classes is provided in Table 1. From

partial reconstructions and the rim types present in the assemblage, a minimum of two vessels (and probably more due to base and rim types present in the assemblage) are represented by the collection. Because no complete or nearly complete vessel reconstructions are present, information on vessel dimensions is lacking at the present time.

The Bugas-Holding pottery is generally composed of a fine to coarse textured paste of clay and sand. Most of the sherds are tempered with large, coarse sand and quartz gravel. Some of the gravel temper is as large as 7.0 mm in diameter.

Although sherd color was looked at in three manners - internal surface, external surface, and sherd core - the general conclusion reached was that most sherds fell in a grey to black color range. These colors would seem to indicate that firing

Number of sherds:	base	7
	rim	2
	shoulder	15
	body	119
	indeterminate	7
	Total	150

Rim shape(s): simple and flat-lipped types represented

Average sherd thickness: 5.5-13.2 mm
 Base thicknesses: 9.0-12.9 mm
 Rim thickness: approximately 9.6 mm

Color - external surface: variable, mostly grey or grey-buff
 internal surface: variable, mostly grey, black or mixed gray-black
 core: variable, mostly grey-black

Firing Atmosphere: probably reducing

Paste: fine to coarse-grained with very fine sand inclusions
 crystalline appearance
 intrusive organic matter (root fibers, etc.)

Temper: little or no preparation
 composition - gravel: quartz; white, pink and orange color; up to 7.0 mm
 sand: some large coarse grains; mostly orange, pink or clear in color

Construction Techniques: paddle and anvil evident
 possibly some modeling

Surface Treatment: brushing on interior and exterior vessel surfaces.
 This brushing is in a horizontal motion on the vessel surfaces.

Special Characteristics: patching holes are present on several shoulder-sherds indicating that cracks and breaks were repaired to prolong vessel use-life.

TABLE 1: Ceramics from the Bugas-Holding site (48PA563), Wyoming.

was in a reducing rather than an oxidizing atmosphere.

Table 1 provides information on sherd classification. All of the bases recovered at the Bugas-Holding site are flat and round in shape, which is considered a diagnostic feature of Shoshonean ceramics (Mulloy 1958). Most of these bases are approximately 11.0 mm thick. The rims in the Bugas-Holding collection are either simple or flat-lipped types. The simple rims generally are rounded at the lip and flared or everted in profile. The flat-lipped rim form was possibly a result of placing the vessel in an inverted position while the clay was still somewhat wet. All of the rims in the collection are approximately 9.6 mm thick, regardless of shape. The functional aspect of various rim forms will be discussed elsewhere in this paper. Most of the remaining sherds are from vessel bodies and shoulders. All of these latter sherds tend to have an average thickness of 9.35 mm.

The fact that there are two different forms of basal flanging and some shoulder-sherds (Figure 1) present in the Bugas-Holding assemblage also indicates that at least two different vessel forms are represented in the sample.

Although no actual decoration is present on sherds from the Bugas-Holding site, surface finishing techniques were practiced. Vessels were apparently smoothed, scraped, or brushed, probably with grass, straw, or twigs. This surface treatment is noted on vessel interiors and exteriors as a series of parallel, horizontal grooved lines or spirally oriented lines. These appear to have been made prior to firing while the clay was still soft, moist, and pliable.



FIGURE 1: Shoulder sherds from Bugas-Holding site.

Construction of the vessels in the Bugas-Holding assemblage was probably a result of mixed paddle-anvil and modeling techniques. Many of the body and shoulder sherds have shallow depressions on the interior vessel surface. These depressions represent the use of an anvil to build-up and even-out the clay during vessel construction. The paddle marks on the exterior vessel surface appear to have been obliterated during surface treatment while the clay was still moist.

On some sherds in this assemblage, biconical patching holes are present (Figure 2). These holes were drilled into a vessel when a crack was noticed, with one hole placed on each side of the crack. The holes were then connected with wet fibers which would shrink and act as a bonding mechanism when dry. These patching holes would indicate an attempt to prolong a vessel's use-life (Coale 1963; Frison 1971).



FIGURE 2: Shoulder sherds from Bugas-Holding site. Sherd on upper left shows biconical patching holes.

Another interesting characteristic of the Bugas-Holding site ceramics is the presence of carbonized food residues on the interior vessel surface of sherds. These residues will be discussed further below.

A RED DESERT AREA SHOSHONEAN ASSEMBLAGE

Another ceramic collection of thirty-six sherds was donated to the University of Wyoming's Department of Anthropology by the Fisher family of Pine Bluffs, Wyoming (Figure 3). These sherds and some lithic material were found at a surface site in the Red Desert area of Wyoming. The general characteristics of the

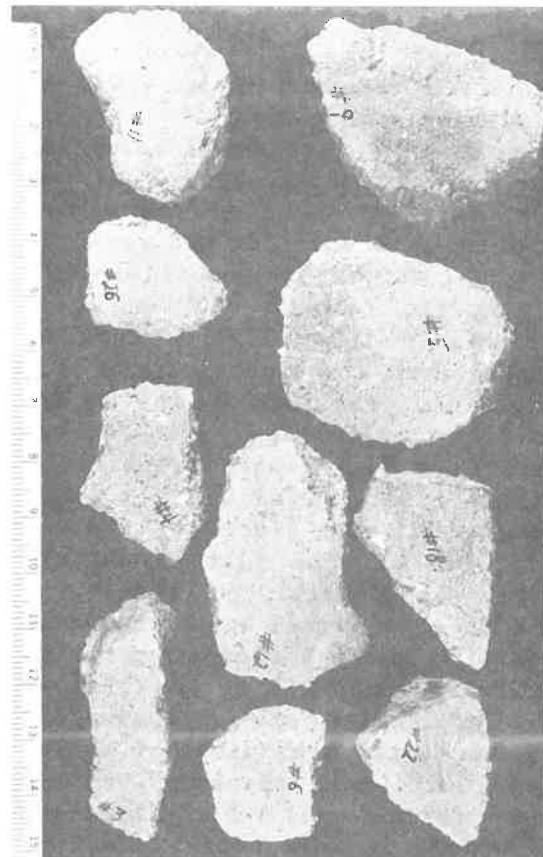


FIGURE 3: Sherds from Red Desert area, Wyoming.

sherds in this assemblage also suggest a Shoshonean ethnic affiliation.

The sherds in this assemblage had a medium to coarse-grained paste texture, composed of clay and very fine to fine-grained sand. Most of the temper was sand or large quartz gravel up to 7.5 mm in diameter. The temper shows little or no preparation, and varied in color from clear to white and/or pink. Because of the friable and crumbly nature of this pottery, no reconstructions were attempted.

Five of the sherds in the collection were portions of one or more vessel bases. These sherds varied in base thickness from 12.3

to 16.6 mm. The bases were flat and probably round or oval in shape. All but one of the remaining sherds were from a vessel (or vessels) body. No shoulder sherds or rims were present in the collection. Body sherds averaged 10.9 mm in thickness. All the sherds in this collection were from one area of the site and from the numbers of types of sherds in the collection, this author hypothesizes that only one vessel is represented by the assemblage. This vessel is most-likely of the "classic" Shoshone flower-pot shape.

The sherds generally had a grey or grey-buff color throughout. This would probably still represent firing in a reducing or slightly reducing atmosphere.

Most of the pottery in this assemblage appears to have been made by paddle and anvil construction techniques. Shallow depressions are found on the interior vessel surface of many sherds. Paddle marks on exterior vessel surface of sherds have been obliterated by surface treatment of the vessel while wet. Surface treatment was in the form of brushing or scraping. Brushing was horizontal on the vessels external surface, but had no consistent direction on the vessels internal surface. No decoration was present on any of the sherds in the collection.

No food residues are present on the interior vessel surface of any sherd. This suggests that the vessel may have been used for storage rather than cooking, or had some other function, or had been exposed to the elements for so long as to remove any evidence of such residues. The implications of this will be discussed later in this paper. For a summary of the general

Number of sherds:	base:	5
	body	30
	indeterminate	1
	Total	36
Average sherd thickness:	8.1-13.7 mm	
Base thickness:	12.3-16.6 mm	
Color - external surface:	grey-buff or buff	
internal surface:	grey	
core:	grey-buff	
Firing Atmosphere:	probably reducing	
Paste:	medium to coarse-grained with very fine to fine-grained sand inclusions	
Temper:	little or no preparation	
composition - gravel:	quartz, white and pink color, up to 7.5 mm	
sand:	medium to coarse-grained, clear color	
Construction Techniques:	probably paddle and anvil	
Surface Treatment:	brushing on interior and exterior vessel surfaces	

TABLE 2: Shoshonean-type ceramics from Red Desert area, Wyoming.

characteristics of this assemblage see Table 2.

CERAMICS WITH SHOSHONEAN
AFFILIATION FROM
ALBANY COUNTY, WYOMING

A sample of 29 sherds present in the University of Wyoming collection are from a surface site approximately 23 miles north of Laramie, Wyoming, and seem to be of Shoshonean origin. Many of these sherds have probably been exposed for some time as lichen colonies are beginning to settle on them.

The sherds in this sample have a fine to coarse-grained paste texture of clay and very fine to fine-grained sand inclusions. The temper is composed of both sand and gravel. The sand is very coarse-grained and clear, orange or pink in color. The pebbles are also of quartz, are white and pink colored, and are up to 5.7 mm in diameter.

In this collection there are one base and two rim sherds. The base is flat and its curve suggests a round shape with a thickness of 9.4 mm. The two rims are both of a simple, rounded and everted form. Both rims had a

thickness of 7.6 mm and are probably from the same vessel. All other sherds in the collection had an average thickness of 8.0 mm (Figure 4). The fact that only one base sherd and two similar rim sherds are present in this assemblage, and that reconstruction has resulted in only two very small portions of vessel being put together, suggests that only one vessel is represented by the sample. Because there is no good section of sherds to view, dimensions and shape of the vessel are unknown.

Although sherd color is variable, it tends to be grey to black on both the internal vessel surface and the core of sherds. This will most-likely result from firing in a reducing atmosphere.

Many of the sherds in this assemblage show evidence of surface treatment. Brushing and/or scraping is present on both internal and external vessel surfaces of sherds. It appears that grass and twigs may have been used together to smooth vessel

surfaces while the clay was still wet. Grass and twigs are suggested as the items used in surface treatment due to the visible impressions examined. These impressions are mostly smaller, finer, regular lines interspersed with deeper, more curved lines (Figure 5).

Vessel construction at this site again seems to involve the paddle and anvil technique. Anvil depressions are noted on the internal vessel surface of many sherds. Paddle marks have been obliterated by surface treatment prior to firing.

Some food residues with properties similar to the food residues from the Bugas-Holding site ceramics have been noted. These are found caked onto the internal vessel surface of many sherds and may be as much as 2 mm thick. Table 3 presents a summary of the general characteristics of this assemblage.



FIGURE 4: Cross-sectional view of sherds from Albany County, Wyoming.



FIGURE 5: Sherd from Albany County Wyoming. This sherd shows surface treatment marks on interior portion.

Number of sherds:	base	1
	rim	2
	body	22
	indeterminate	4
	Total	29

Rim shape(s): both rims present were simple, everted types

Average sherd thickness: 4.9-11.1 mm
 Base thickness: 9.4 mm
 Rim thickness: 7.6 mm

Color - external surface: variable, mostly grey-buff
 internal surface: variable, mostly grey or black
 core: variable, mostly grey-black

Firing Atmosphere: probably reducing

Paste: fine to coarse-grained with very fine and fine sand inclusions

Temper: little to no preparation
 composition - gravel: quartz; mostly white to pink color; up to 5.7 mm; some crushed rock possibly
 sand: very coarse-grained, clear and orange-pink color

Construction Technique: paddle and anvil

Surface Treatment: brushing on interior and exterior vessel surfaces

Other Characteristics: the presence of lichen colonies on some sherds may indicate prolonged exposure to elements on the surface
 some food residues are present on vessels interior surface

TABLE 3: Shoshonean-type ceramics from north of Laramie, Wyoming.

THE EDEN-FARSON SITE CERAMICS

The Eden-Farson site is a Proto-historic Shoshonean campsite in the Green River Basin in Wyoming (Frison 1971). The remains of over 200 antelope were recovered from twelve lodge structures at the site. The animals appear to have been taken by communal trapping methods, during a short period of time in the fall. It appears to have been a single use occupation. Along with the faunal remains, a large stone-tool assemblage, and a large ceramic sample were recovered at Eden-Farson (Frison, 1971).

The ceramics from the Eden-Farson site were first described and analyzed in 1971 by Frison. He noted that the pottery in this assemblage had the flat bottoms and flanged bases characteristic of Mulloy's Intermountain Ceramics Tradition and regarded as diagnostic of Shoshonean groups (Mulloy 1958).

Although total sherd number

and sherd type numbers are not given, Frison does suggest that at least parts of 13 vessels are represented in the collection. Several reconstructions have yielded nearly-complete and partially complete vessels. From these reconstructions, at least several different vessel shapes are noted, including "classic" Shoshone shouldered and flower-pot-like forms (Figures 6, 7).

Examining figures from Frison's 1971 report, all body sherds analyzed had variable thickness ranging from 3.5-9.5 mm. However, each sherd was surprisingly uniform. Vessel bases were all flat-bottomed and mostly round in shape. Bases also varied in thickness ranging from 6.5-10.1 mm. Because rim forms were variable, so was their



FIGURE 6: Classic Shoshonean "Flowerpot" style vessel from the Eden-Farson site, Green River Basin, Wyoming. Note carbonized food residues along vessel's upper margin.



FIGURE 7: Classic Shoshonean "Shouldered" vessel from the Eden-Farson site, Green River Basin Wyoming. Note double folded rim.

thickness. Two major rim types were noted however. One was a simple rounded form. This was the thinner of the two forms and appeared in either unflared or flared forms on different vessels. The thicker forms were lipped and varied from single to double folds of clay and were as thick as 11.5 mm.

Most of the Eden-Farson pottery is made of a fine-grained paste of clay and sand. Temper was variable in both type and size. Sand was one form of temper and was generally medium to coarse-grained. Other types of temper included pebbles of quartz (up to 3.5 mm in diameter), limestone (up to 2 mm in diameter)

and granite (up to 5.0 mm in diameter). Most of the quartz temper shows little or no preparation, while the granite and limestone appear to have been prepared by crushing (Frison, 1971).

Most of the sherds from the Eden-Farson site showed color variations from grey to black. Since all sherd areas examined had this coloration, firing in a reducing atmosphere is suggested.

No decoration is found on any of the sherds from this site, however, there is good evidence for surface treatment. Both individual sherds and vessel reconstructions show brushing or scraping lines on interior and exterior vessel surfaces.

Many sherds show evidence of paddle and anvil construction in the form of shallow depressions on interior vessel surfaces. Frison also suggests some coiling due to the horizontal type of breakage noted on many sherds. Paddle marks from paddle and anvil construction would have been obliterated by surface treatment of the vessel while still wet (Frison 1971).

Patching holes are present on some sherds. These often appear as two or three biconical holes placed around cracks or breaks. These were connected by fibers which tightened and hardened as they dried.

Food residues are present on some vessel and sherd interior surfaces. These are composed mostly of animal proteins, and provide evidence that at least some of the vessels in this assemblage were cooking pots of some type. Table 4 presents a summary of the general characteristics of this assemblage.

Number and type breakdown of sherds unknown at present

Average body sherd thickness: 3.5-9.5 mm
Base thickness: 6.5-10.1 mm
Rim thickness: 4.2-11.5 mm

Rim type(s): simple round everted form and double-folded lip form

Color - external surface: variable, grey, black, or grey-black
internal surface: variable, grey-black to black
core: variable, grey-black

Firing Atmosphere: most probably reducing

Paste: fine-grained with sand inclusions

Temper: some preparation in the form of crushing rocks
composition - sand: medium to coarse-grained, color is
unknown
gravel: limestone; up to 2 mm
granite; up to 3 mm
quartz; up to 3.5 mm

Construction Techniques: appears to be paddle and anvil

Surface Treatment: brushing on external and internal vessel surfaces

Other characteristics: patching holes (biconical) are present on some
sherds food residues are built up on the vessels
interior surface - these residues are of animal
protein

TABLE 4: Shoshonean-type ceramics
from Eden-Farson site (48SW304).
Data from Frison (1971) and personal
observations.

A BRIEF COMPARISON OF THE SAMPLE ASSEMBLAGES

The four assemblages reviewed and analyzed seem to have more similarities than differences. In most of the assemblages, paste texture is relatively coarse and contains sand inclusions along with the clay. Only the pottery from the Bugas-Holding and Eden-Farson sites has some fine paste texture.

Temper in these assemblages is often a mix of both gravel and finer materials. The finer materials are generally sands of medium to coarse-grain. The pebbles and gravels are mostly quartz as well, although granite, limestone, and other rock may be used. Quartz temper is the most frequent type found in all the Shoshonean ceramics examined. Most of this type of temper is often rounded in shape and shows little evidence for preparation of any type. Other rock materials occurring as temper often have

sharp, faceted edges. These pieces appear to have been crushed or ground in some manner in preparation for use.

In physical appearance, most of these types do show some variability however. The Red Desert sample has a very coarse, heavy and crude looking appearance. The sample from Albany County, while still coarse looking, is much thinner and seems better made. The materials from Bugas and Eden-Farson are very similar in texture and appearance. These samples both seem to be very strong, sturdy pottery while retaining a certain level of thinness. Both the Eden-Farson and Bugas-Holding pottery appear to be much better made than the other samples.

Generally, all of the assemblages have pottery with similar color variations. Blacks, greys and mixes of these are the major colors noted on all vessels and sherds. Although these colors may be the result of clay type, or use wear, they may be suggestive of firing at relatively low temperatures in a reducing atmosphere (Shepard 1956:28-224).

All of the assemblages show evidence of construction by either paddle and anvil or modeling techniques. Also, all of these assemblages show internal and external vessel surface treatment in the form of brushing and/or scraping. This was probably done to smooth out surface irregularities which may have created structural weaknesses in vessels.

One last item of interest here is that all of the assemblages, with the exception of the Red Desert material, seemed to have some form of food residue, generally carbonized, on internal vessel surfaces. These residues and their interpretations will be

examined more fully later in this paper.

SHOSHONEAN CERAMIC ATTRIBUTES

In 1958, William T. Mulloy named the "Intermountain Pottery Tradition". He saw this pottery as unique and different from other known "types" on the plains. Mulloy felt that this tradition was indigenous to the intermountain regions of the Wyoming area, and that it was the product of Shoshonean ethnic groups (Mulloy 1958). Since then, Mulloy and others have attempted to define the basic attributes of this Shoshonean/Intermountain pottery.

Several authors (including: Wedel 1954; Mulloy 1958; Coale 1963; Fowler 1965; and Frison 1978) have defined this tradition by wares with distinctive flat bottoms and flanged bases. Vessel shapes are generally some variant of the flowerpot style, although shouldered forms are recognized. Most pottery in this tradition is grey to black in color, probably indicating firing at low temperatures in a reducing atmosphere. Most of the pottery in this tradition lacks any formal decoration. Vessels and sherds do, however, reveal evidence of surface finishing treatments in the form of lines in various directions. These generally indicate smoothing by scraping or brushing. One other set of attributes similar to all Shoshonean pottery are construction techniques. Generally, some mix of modeling, coiling, and paddle and anvil techniques are used in the construction of Shoshonean vessels (Coale 1963), with paste, temper and other attributes more variable.

It can now be proposed that the four assemblages examined earlier in this paper all seem to have the basic attributes of Shoshonean-type pottery as it has been defined by previous authors, regardless of the lack of contextual information for some of the samples.

Table 5 presents a more complete summary of the general attributes of Shoshonean ceramics. This table is composed of data that the author has personally collected, as well as the data from previous researchers in this area (Coale 1963; Frison 1971b; Wedel 1954).

FUNCTIONAL ANALYSIS AND INTERPRETATION OF THE BUGAS-HOLDING CERAMICS

The Bugas-Holding ceramic assemblage is interesting in that it may provide some insight into pottery functions at this, as well as at other, Shoshonean sites. Some of the areas of ceramic analysis to be examined in relation to pottery function in this section are: vessel shape, rim/lip form, base type, vessel coloration, residues, the relationship between pottery and other activities at a site, and use-wear.

It was mentioned previously that Shoshonean vessels were generally either flowerpot-like or shouldered forms. These two vessel forms may have different characteristics related to their functional uses (C.A. Reher, personal communication 1983). It was also mentioned earlier that at least two vessels are represented in the Bugas-Holding collection. I believe that one of the Bugas-Holding vessels was a shouldered form and that the other vessel was some variant of the flowerpot form.

PASTE:

Hardness: 3.0-4.0 for both interior and exterior (from references)
Texture: very variable, yet generally coarse
Porosity: unknown at present
Strength: unknown at present

TEMPER:

Material Type: generally sand, grit, or crushed rock
Color: variable - clear, pinks, and orange tints
Size: appears to be variable between sites; range extends from less than 0.1 mm to several mm in size
Density: unknown at present; variable
Preparation: most larger temper does not appear to have been prepared. The angular character of some of the smaller temper may suggest some grinding or crushing as a form of preparation.

FIRING ATMOSPHERE:

Shoshone pottery was generally fired at low temperatures in a reducing atmosphere
Colors: interior = grey to black (may be a result of use)
exterior = varies from buff to grey
core = varies from greys to black generally, however, a few orange to buff cores have been noted.
Consistency: is variable; some pots have splorches of brown or buff color which probably indicates oxidation at higher temperatures (cooking or poorly controlled, uneven firing).

GENERAL CONSTRUCTION TECHNIQUES:

Forming Method: paddle and anvil, limited coiling and modeling
Surface Treatment: generally plain finish; some smoothing is apparent on the exterior and interior vessel surfaces; use has left residues on many interior surfaces and obscured any visual evidence of treatment.

VESSEL FORM:

Body Shape: often flowerpot-like in shape; some are in the shape of truncated cones. Some pots have shoulders.
Base Shape: Flat-bottomed - either circular or elliptic in shape; some bases are flanged.
Rim Shape: variation is evident within this tradition - rims are collared, lipped, everted, etc.
Wall Thickness: variable between vessels and sites; range from 3.0-13.0 mm.

DECORATION:

Techniques: In Wyoming, Shoshone pottery is generally undecorated. Pottery from areas further west may be incised, pinched, or indented.
Location: pinching and indentation are found exclusively on the rim; incising has been found above the shoulder or on the rims of particular pots.

BREAKAGE:

Many sherds show horizontal breakage along definite lines. This may be linked to structural properties of Shoshone pottery construction. There is some evidence for breakage during use in the form of patching holes. These are often found as two biconical holes, one on each side of a crack or break. Some sherds may have been a result of breakage during firing or secondary heating (during cooking).

The size of broken sherds is variable and may be related to depositional factors, reuse of sites, weathering/exposure, etc. Small sherds seem to have a more angular shape and crushed edges. Larger sherds seem to have "cleaner" edge breaks and are more regularly squarish to rectangular in shape.

TABLE 5: Attributes of Shoshone ceramics.

My examination of the four assemblages described earlier has led me to notice all of the shouldered vessels I examined were mottled grey to black in color and that they generally contained carbonized food residues on their internal vessel surfaces. I now

make the suggestion that shouldered Shoshonean vessels may have functioned in two manners, cooking or food preparation, and the storage of liquids. These functions are suggested because on these vessels, the greatest vessel diameter is at the shoulder and not the mouth. A vessel whose mouth was not its widest point would face less of a chance of evaporation or boiling over than a vessel whose mouth was its widest point. This is because the surface area exposed to the opening is decreased in shouldered forms.

The flowerpot styles of Shoshone pottery examined often do not appear to contain food residues, although flower pot shaped vessels from Eden-Farson do contain food residues. Generally, these vessels are physically similar to bark or fiber baskets known to be used ethnohistorically by Shoshonean groups (Brackett 1880). These vessels have their widest diameter at the mouth. I suggest that these vessels were most likely used as storage containers for dry or processed foods. These vessels are generally a more uniform grey or grey-buff color as compared to the mottled grey-black shouldered forms. The color variation is important because it seems to indicate reheating and/or refiring for shouldered forms. The flowerpot vessels are not seen as storage containers for liquids because they have wide mouths and a large surface area which would provide an increased potential for evaporation.

In attempting to gain an understanding of lip/rim form variability, I have noticed that most flowerpot variants seem to have simple rounded lips in everted or flared form (see Shepard 1956:245-248). A vessel

with this rim form would have a wide aperture into which various items can be placed and/or removed with much ease. The shouldered vessels generally have rims which are lipped or even collared to some degree. Lipping is variable in size, shape and form. Two forms have been noted in the assemblages examined, a flat type, and a double reinforced type. True lips may serve one of several functions. Lips generally seem to reinforce rim areas of vessels, which may be necessary in removing cooking vessels from a fire. It has been asserted that sticks may have been wedged under a vessel's lip by several persons in order to lift the vessel out of a fire while it and its contents were still hot (C.A. Reher, personal communication 1983). Another suggestion about the function of rims with true lips is that they may have been important in keeping content flow even and uniform, with less spillage, while vessels were being emptied of their contents (Shepard 1956:247).

Another interesting aspect of the Bugas-Holding and other Shoshone pottery, in relation to function, are their distinctive flat bases. In attempting to explain the variation between flat-Shoshonean bases and the globular or conical bases of Crow, Upper Republican or Woodland tradition ceramics, a certain amount of speculation must be engaged in. This is true because only a few studies have been carried out to try and assess the structural and functional properties of vessel base forms. The only major variation I can detect is that the flat-bottomed Shoshonean wares would have been more "free-standing" than the other types. They would not necessarily have required implantation into the ground or

coals of a fire, nor would they have required other supports to keep them upright as globular or conical shaped vessels would. Environmental factors may have had something to do with base forms also. A speculation here may involve inability to implant pottery in many Shoshonean affiliated territories during colder parts of the year.

One separate part of the functional analysis of the Bugas-Holding site assemblage involved an attempt to discover the nature of the food residues found on the internal vessel surface of many sherds. In general appearance and texture, these residues were quite similar to the residues examined by Frison from the Eden-Farson ceramics (Frison 1971). A chemical analysis of the Eden-Farson assemblage cooking residues revealed a protein content of 41.5 percent (Frison 1971). At the present time, a similar chemical analysis of the food residues from the Bugas-Holding ceramics has not been undertaken. Microscopic analysis of residue cell structures has tended to support an animal rather than a vegetable/floral origin for the material. Residue cells are apparently lacking cell wall structure, which is generally characteristic of floral materials (Y. Makino, personal communication 1983).

A good bit of supportive evidence for these residues being mainly of animal origin comes from other activities occurring at the site. A large bone bed discovered at the Bugas-Holding site contained the remains of bison and mountain sheep which had been butchered and processed. Further indications for the use of these animals appears on the pottery in the form of cooking residues. Although this argument appears

somewhat circular, it is offered as a possible explanation of vessel function and residue composition.

Use of Shoshone vessels is also indicated by the presence of patching holes. These represent an attempt by Shoshone potters to prolong the use-life of a vessel, before final discard. In some ways, these holes appear to be a form of conservation, practiced to keep an item useful as long as it is possible. Food residues are often found around these holes. The cracks which they act to repair once again may be a result of cooking activities.

SHOSHONEAN CERAMIC VARIABILITY - SOME SPECULATIONS AND IMPLICATIONS

Two major types of variability seem to be suggested in Shoshone ceramic assemblages, spatial variability and temporal variability. Although I will attempt to discuss both forms, it is my belief that temporal variability will turn out to be the more important of the two in understanding Shoshone ceramics.

Spatial variability is best detected in Shoshone assemblages by two factors, site location, and resource types and availability. Shoshonean pottery assemblages are known from various areas throughout the state of Wyoming including the Powder River Basin (Zeimens *et al.* 1977), the Green River Basin (Frison 1971), the Sunlight Basin Region (G.C. Frison, personal communication 1983), the Red Desert Area, and areas in the southeastern portion of the state. Some variation in the assemblages from these different areas may be linked to site location and its proximity to ceramic resources (clays, tempering materials, etc.).

Each of the four assemblages

reviewed earlier in this paper had more similarities than dissimilarities. The basic differences in these assemblages revolved around paste composition and texture, as well as temper types and sizes. The Red Desert assemblage is the thickest, bulkiest and most "crude" form of Shoshone pottery examined. Its paste texture is generally coarse, and of the four assemblages, it contains the largest temper particles. The Albany County assemblage also has a relatively coarse-paste texture, however, its temper is more variable in size and type. This pottery is much thinner than that from the Red Desert sample. The Albany County pottery may be intermediate in form between the Red Desert sample and the Bugas-Holding and Eden-Farson collections. The Bugas-Holding and Eden-Farson assemblages are most alike. These two assemblages have a finer paste texture which is relatively more homogenous in composition than the other assemblages. Temper in the Bugas-Holding and Eden-Farson assemblages is generally smaller and more uniform in size than the other assemblages as well. We can make the inference from the above information that some variation is evident for spatial location. Variability in paste and temper may reflect access to different clays and sands used in pottery manufacture.

It is my belief that temporal variation may be more important in interpreting Shoshone ceramics than spatial variation. As mentioned earlier in this paper, the technological aspects of construction, firing method, surface treatment, vessel shapes, rim forms, and use of quartz temper are very similar in all four sites examined. I suggest here, that this implies some

temporal continuity. Ceramic technology may have been similar through time, but increasing control over this technology would account for the noted assemblage variability.

If we are willing to accept the argument that changes over time are generally toward refinement and progress, these four sites reviewed can be placed into a basic time oriented model. Quite often, in models of this type, larger "cruder" forms of technology generally seem to temporally proceed smaller "finer" forms. Placing the four study sites into a continuum of this type, I would suggest that the Red Desert pottery is older than the Albany County pottery, which is in turn older than either the Bugas-Holding or Eden-Farson assemblages. Of these four sites, only the Eden-Farson and Bugas-Holding sites have been chronometrically dated. The Bugas-Holding site has been dated at A.D. 1510±100. The Eden-Farson site was a Proto-historic period site dated to A.D. 1720 ± 100 years (Frison, 1971).

Because many Shoshone sites containing pottery are surface manifestations, temporal context is lacking. Because two of the four sites examined have no temporal context, this temporal hypothesis is not verifiable at the present time. Technological similarities and the different physical appearances of these four assemblages seem to be best explained as temporal variants within a single tradition. More sites with good, dateable assemblages are needed to test the stated hypothesis. It is hoped future investigations in this area will be undertaken.

One other possible interpretation of these Shoshone ceramic assemblages and their

variability has to deal with the type of sites they are associated with. Both the Bugas-Holding and Eden-Farson sites represent some form of residential occupation. The Red Desert and Albany County materials came from surface sites. These two surface sites may represent special task or limited activity sites. The variation present between these assemblages may reflect this fact. It is quite possible that short duration, limited activity sites may have required ceramics of a more disposable and therefore "cruder" nature than habitation sites. At residential sites, pottery may have been needed for a variety of activities involving longer time periods and therefore may have been made "better" and with more control (L.C. Todd and E. Ingbar, personal communication 1984). More research is needed in this area as well.

CONCLUSIONS

This paper has examined and compared four ceramic assemblages with Shoshonean affiliation. Both similarities and dissimilarities were discussed. The general conclusion was that all four assemblages had more similarities than dissimilarities. These assemblages were examined in relation to Shoshone ceramics in general. A table listing general Shoshone ceramic attributes was presented.

The second part of this paper involved a functional analysis and interpretation of the Bugas-Holding and other Shoshonean pottery. Although more conclusive evidence is needed, I suggest that vessel form was related to vessel function. I also suggest roles that other vessel attributes may have played in vessel function.

The final section of this

paper attempted to gain an understanding of Shoshonean ceramic assemblage variability. I suggest here that most variation appears to be temporal in nature. I support this assumption with the similar technological base apparent in all Shoshone ceramic assemblages examined.

In concluding, I would like to emphasize the need for further investigations in the areas I have discussed. More sites with good, dateable contexts must be excavated and analyzed before any of my hypotheses can be tested, or before any significant understanding of Shoshone ceramics can come about.

ACKNOWLEDGEMENTS

I would like to thank Mrs. Joan Bugas AND Mr. Earl Holding who gave permission for and supported work at the Bugas-Holding site. I would also like to thank Mr. John Burns of Cody, Mr. Peter Burns of Albany County, and the Fisher family of Pine Bluffs for their generous contributions of the ceramic materials examined in this report. Of major importance in my analysis of the Bugas-Holding collection were Dr. Charles A. Reher and Dr. George C. Frison of the Department of Anthropology at the University of Wyoming, and much thanks goes to both of them. Finally, I would like to thank Dr. Lawrence C. Todd, Marcel Kornfeld, and Danny N. Walker for their encouragement and endorsement of this study.

REFERENCES CITED

Beckes, M.R., and J.D. Keyser
1983 The Prehistory of the Custer National Forest: An Overview. U.S. Forest Service, Washington, D.C.

Bennett, M.A.
1974 Basic Ceramic Analysis. Eastern New Mexico University Contributions in Anthropology, Vol. 6, No. 1. San Juan Valley Archeological Project Technical Series No. 1. Portales, New Mexico.

Brackett, A.G.
1880 The Shoshonis or Snake Indians. Smithsonian Institution, Annual Report for 1879:328-333. Washington, D.C.

Butler, B.R.
1981 When Did the Shoshone Begin to Occupy Southern Idaho?: Essays on Late Prehistoric Cultural Remains from the Upper Snake and Salmon River Country. Occasional Papers of the Idaho Museum of Natural History, No. 32, Pocatello, Idaho.

Coale, G.L.
1963 A Study of Shoshonean Pottery. Tebiwa 6(2):1-11. Pocatello, Idaho.

Fowler, D.D.
1965 Cultural Ecology and Culture History of the Eastern Shoshoni Indians. University of Pittsburgh Ph.D. dissertation. University Microfilms, Inc. Ann Arbor, Michigan.

Frison, G.C.
1971 Shoshonean Antelope Procurement in the Upper Green River Basin, Wyoming. Plains Anthropologist, Vol. 16, No. 54, Pt. 1, 258-284.

- 1978 Prehistoric Hunters of the High Plains. Academic Press, New York.
- Jennings, J.D.
1978 Prehistory of Utah and the Eastern Great Basin. University of Utah Anthropological Papers, No. 98:235-238. Salt Lake City, Utah.
- Lowie, R.H.
1909 The Northern Shoshone. Anthropological Papers, American Museum of Natural History, Vol. 2, Pt. 2:165-306. New York, New York.
- Magee, M.
1964 A Flat-bottomed Earthenware Vessel from Central Nevada. American Antiquity 30(1):96-98. Salt Lake City, Utah.
- Mulloy, W.T.
1958 A Preliminary Historical Outline for the Northwestern Plains. University of Wyoming Publications in Science Vol. XXII, No.1 and 2. Laramie, Wyoming.
- Steward, J.H.
1968 The Great Basin Shoshonean Indians as an example of a Family level of sociocultural integration. In Man and Adaptation. Ed. Yehude Cohen. Aldine Publishing Company, Chicago, Illinois.
- Shepard, A.O.
1954 Ceramics for the Archeologist. Publication 609 Carnegie Institution of Washington. Washington, D.C.
- Tuohy, D.R.
1956 Shoshone Ware from Idaho. Davidson Journal of Anthropology 2:55-71. Seattle, Washington.
- Wedel, W.R.
1954 Earthenware and Steatite Vessels from Northwestern Wyoming. American Antiquity 19(4):403-409. Salt Lake City, Utah.
1961 Prehistoric Man on the Great Plains. University of Oklahoma Press. Norman, Oklahoma.
- Wright, G.A.
1978 The Shoshonean Migration Problem. Plains Anthropologist 23(80):113-137. Lincoln, Nebraska.
- Zeimens, G.M., et al.
1977 Archaeology of the Eastern Powder River Basin, Wyoming. Prepared for the Bureau of Land Management, Contract Number YA-512-RFPG-104. Wyoming.
- Howard Haspel
Department of Anthropology
University of Wyoming
Laramie, Wyoming 82071

ETHNOHISTORIC ANALOGY IN THE WASHAKIE BASIN, WYOMING

BY

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ABSTRACT

Historical sources relevant to the aboriginal inhabitants of the Washakie Basin of Wyoming provide a basis for an ethnohistoric analogy for prehistoric aboriginal sites in the region. In view of the paucity of local ethnohistoric materials, comparable sources from surrounding areas are also utilized. Travelers and expeditioners in or near the arid interior basins of Wyoming make note either of swiftly moving raiding parties, or small groups of Shoshones or Utes. Raiding parties would have left only sparse and ambiguous material remains, if any at all. Historical references indicate for the early historical period, the characteristic aboriginal occupants of these arid interior basins were the Eastern Shoshone. The best ethnohistoric analogy for the pre-horse aboriginal occupations of the Washakie Basin and other arid interior basins of Wyoming is to be found among the Ute and Shoshone of the Great Basin.

ETHNOHISTORY AS A DISCIPLINE

Ethnohistory as an approach encompasses studies of ethnic groups using historical sources. In practice, the ethnic groups most often studied are conquered, re-

pressed or minority groups. In most cases, these groups are also non-literate, or their literature has been destroyed or lost, so that the available historical sources are written from the viewpoint of outsiders. In addition, many of these ethnic groups no longer exist, and thus cannot be studied firsthand.

The ethnohistoric approach as it now exists in the literature has been dominated by anthropologists for several decades, but is clearly not the exclusive realm of anthropologists (see, Axtell 1981:3-6). In the use of historical sources, ethnohistory must conform to the standards of historical research. In addition, this type of research deals most directly with the comparison and evaluation of nonliterate ethnic groups and must conform to the standards of ethnology. Ethnology, as the comparative study of human cultures, relies heavily on its sister discipline, ethnography, or the descriptive study of cultures.

Ethnohistory uses historical descriptions and oral or written traditions of ethnic groups, and is confined in its scope only by the availability of these sources of documentation. In terms of volume of published material, ethnohistory appears to be dominated by archaeologists. Ethnohistory and archaeology can be a particularly reward-

ing combination of disciplines, because each field can potentially amplify or verify the findings of the other (Murra 1976:271-273).

Over the past 20 to 30 years, ethnohistory has been applied to a variety of research problems, including comparative linguistics, culture change, demography, cultural ecology, structural and institutional analysis and studies of ideology and cosmology (Schwerin 1976:329-336). Most of these studies require detailed documentation and extended periods of archival research. In many regions, including the northern Rocky Mountains, historical documentation of aboriginal groups is relatively meager and scattered. Research on a particular ethnic group can be a time intensive endeavor in which the return of data is quite small and inconclusive in comparison to the volume of material which must be gleaned through.

This limited ethnohistoric study of the Washakie Basin of southcentral Wyoming is restricted to an arbitrarily defined "early contact period," roughly AD 1805-1850. This period encompasses events from the Lewis and Clark Expedition passing through the Rocky Mountains, to an approximate point in time when emigrant traffic across Wyoming had reached a level which had irreversibly altered the environment of the region, and had consequently drastically altered the lifeways of the aboriginal inhabitants. The 1850s also correspond to the crystallization of hostilities between the United States and the Teton Lakota (White 1978); i.e., the beginning of the Plains Indians Wars. The specific goal of this study is to glean from readily available historical accounts clues which can be used to predict and interpret the nature of the aboriginal cultural resources of this region.

The types of clues sought by this study included: 1) Indian groups anticipated or encountered by Euroamerican travelers in or near the Washakie Basin; 2) the activities of the aboriginal groups actually observed in this region; 3) observation on the size, composition and physical aspects of these observed groups; and 4) observations on the physical environment in comparison to present conditions in the same area. Prediction and interpretation from these clues are based on an interpretive method known as ethnographic analogy. Ethnographic analogy uses descriptions and analyses of known cultures as parallels to develop interpretations of fragmentary evidence pertaining to unknown cultures. The most appropriate analogy or parallel for a given archaeological culture is considered to be a documented group which is historically related and exists in the same or a similar environment. There is no ethnographically documented aboriginal culture from the Washakie Basin which would form the most appropriate analogy to the prehistoric cultures of the region. Consequently, it must be determined what cultures from similar regions would be most appropriate to formulate an ethnographic analogy.

The arid interior basins of Wyoming (hereafter, interior basins) are adjoining, environmentally similar structural or drainage basins. These basins tend to be poorly defined and, in historical sources, there is no standardized distinction of the individual basins. Therefore, all of the early accounts pertaining to the interior basins are considered together as dealing with the same environmental region. The resources available in these basins are generally similar. None of them occur in particularly dense or consistently predictable

concentrations. In terms of aboriginal subsistence patterns, the entire region of the interior basins is viewed as a contiguous environmental region.

HISTORICAL SOURCES

Background

The earliest recorded Euroamerican activities in the Wyoming region involved fur traders, trappers and explorers. These early activities left scarcely any material remains to correspond with the trappers' tales and written accounts. It is frequently asserted the Verendry brothers reached Northeastern Wyoming early in 1743. However,

"discrepancies in dates and distances render it impossible to state positively whether their most westerly point was in southeastern Montana, northeastern Wyoming or southwestern South Dakota " (Oregon Historical Society 1925:19-20).

Even the discovery in 1913 near Fort Pierre, South Dakota, of the lead plate left by the Verendryes during their return journey has not clarified the problem. It is clear however the Verendryes did not leave the Plains and enter the arid interior of southcentral Wyoming.

A trapping party affiliated with Manuel Lisa is alleged to have passed through southcentral Wyoming in 1811 (Markoff et al. 1981:13), presumably around the time of the dissolution of the Missouri Fur Company. Also, John Colter, who was frequently employed by Lisa, spent much time travelling about the Wyoming region prior to 1810. We have no accurate record of where Colter travelled, but it might be assumed that he kept largely to the regions richer in fur-bearing ani-

mals, and did not venture extensively into the interior basins. It is highly likely that a number of trapping parties out of Montreal, such as some of "MacKenzies Nor'Westers," penetrated into Wyoming late in the 18th or early 19th century. No direct historical documentation for this has been found. However, George Frison recorded, in 1980, an historic inscription south of Big Trails, Wyoming consisting of a name, a Christian cross and the date 1784 (Skylar Scott, personal communication, 1984). At this time, the inscription has not been associated with any documented trapper or traveler in this region, but it could be considered possible evidence one or more Euroamericans had penetrated into the Wyoming region by this time.

There were several early French and Spanish expeditions into the northern Rocky Mountain region in the 17th and 18th centuries, but there is no firm record of any of these parties penetrating into the interior basins. Published English language accounts of the northern Rocky Mountains begin with the American government sponsored expedition of Lewis and Clark from 1804 to 1806. After Lewis and Clark, and prior to government involvement in Indian hostilities in the Wyoming region, accounts are dominated by the journals and diaries of trappers. In all of the readily available accounts, even those which purport to describe the Rocky Mountain Indians, there are only fleeting glimpses of cultures already profoundly affected by the fur trade. The Wyoming region lacks completely the insight into pre-contact cultures provided by the native chroniclers in regions such as Mesoamerica and Peru. In addition, the nomadic northern tribes were generally ignored by

the great scholars and geographers of the conquest period.

Some of the few early published Spanish accounts of the Rocky Mountain region provide glimpses of pre-horse pedestrian cultures of the Plains and Great Basin. However, only the Dominguez-Escalante expedition of 1776, which reached the Ouray-Uncompaghe area of northeast Utah, reached anywhere near the interior basins. Spanish expeditions into the northern territories occurred sporadically from the Narvaez expedition of 1528, documented by Cabeza de Vaca, to the Treaty of Guadalupe Hidalgo in 1821, with a substantial hiatus after the Pueblo Revolt of 1680 (Sauer 1971; Weber 1979). Dominguez and Escalante (1976 [1776]) provide a brief description of Ute and Shoshone settlement around the salt lakes, and to the surprise of some scholars, the observation of large herds of "vaca de cibola," or bison.

Official Reports and Relations

The earliest sustained and successful inroad into Wyoming was initiated by Andrew Henry and William Ashley in 1823 (Dale 1941). Henry had previously been involved with the troubled ventures of the Missouri Fur Company from 1807 to 1811 on the upper tributaries of the Missouri River. The early Ashley-Henry ventures employed an impressive list of legendary figures in later western history, including Jedediah Smith, James Bridger, James Beckwourth, William Sublette, Thomas Fitzpatrick, James Clyman, Hugh Glass, Zachariah Ham, Edward Rose, Louis Vasquez, and Etienne Provot. The party with Ashley crossed from the Laramie Plains and through the Great Divide Basin early in 1825, providing the first published description of the interior basins of Wyoming.

The fur trade dominated the Euroamerican and native economy of Wyoming from the mid-1820s to the early 1840s, overlapping in time and space with the early emigrant trains through Wyoming to Oregon and California. During this period, the fur-bearing fauna of Wyoming was heavily depleted, and bison populations significantly reduced. Wyoming offered few attractions to the emigrants, and southcentral Wyoming offered few attractions to the fur trade. The majority of early emigrant traffic passed through Wyoming along the Sweetwater River, stopping only briefly for rest or supplies. Southern routes approximating the Overland and Cherokee Trails were in use in the 1840s, but written accounts of these emigrants are scarce and difficult to obtain.

After Ashley, potential routes across southern Wyoming were explored by Bonneville in 1832, Fremont in 1843, and 1844, and Stansbury in 1850. Irving's condensed account of Bonneville's 1832 expedition gives no reference to Indians between the Crow "pickpockets" encountered near the Laramie Range, and remarks about Blackfeet after reaching the Green River (Irving 1961 [1837]:38-50). The Stansbury and Fremont accounts are the earliest readily available published accounts of the Washakie Basin itself. Both provide descriptions of the environment and anticipation of what Indians might have been there, rather than any direct observation of particular Indian groups.

Ashley's party came north from Cache la Poudre in late February 1825. The Great Divide Basin near present-day Rawlins is described as rough and destitute of wood and water, except for small pools of snowmelt (Morgan 1964:104-105). The party crossed most of the Great

Divide Basin without comment, and camped roughly ten miles east of Steamboat Mountain on the 4th or 5th of April. There they were overtaken by a party of Crow, initially mistaken for Snakes (i.e., Shoshones), who ran off with seventeen horses and mules (Morgan 1954-55:28). There is no other mention of Indians, other than the pursuit of this group of Crows, until the party reached the Green River.

When Ashley's party approached the Green River on the 12th of April, Ashley notes the margins of the river were extensively wooded, in sharp contrast to the land they had passed through during the previous week and there were some fresh sign and abundant old signs of beaver in the area (Morgan 1954-55:33). Ashley speculates "MacKenzie's Nor'Westers" of 1821 and 1822 had largely trapped out this valley. The description is consistent with entering the Green River Valley roughly where the present Seedska-dee Wildlife Refuge is located. A small group with Ashley proceeded down the Green River, while other small groups dispersed to trap beaver. When Ashley's group reached Brown's Hole, they found a large abandoned Indian camp, which they presumed to have been left by a few thousand Shoshone who had wintered there (Dale 1941:142). The wickiups were made of poles bent over into domes and covered with cedar (i.e., juniper) bark.

The group which left with James Clyman included James Beckwourth and a man named LaBarge. They encountered "a small family of digger or Shoshone Indians" along the upper tributaries of the Green River (Clyman 1928 [1871]:33). In the spring, this party was attacked near Labarge Creek where LaBarge was killed. Clyman remembered the marauders as Arapaho (1928

[1871]:225), while other accounts of the encounter, including that of Beckwourth, identify the Indians as Blackfeet or Gros Ventres who taunted the trappers in Spanish (Morgan 1954-55:38, footnote 47). The latter identification would be more consistent with other accounts of the region for this general time period.

The next party to leave a published account of the interior basins was the Fremont expedition of 1843-1844. During the westward leg of the expedition in August of 1843, Fremont notes the presence of 30 Sioux and Cheyenne warriors on the Laramie Plains near the Medicine Bow Mountains (Fremont 1850:153; Jackson and Spence 1970:457). On the "most western fork of the Laramie river [Four Mile Creek]," Fremont notes numerous lodge poles along the floodplain and three recently occupied "forts" in the edge of the timber (1850:154). In this same passage, Fremont states a Shoshone woman with the party acquainted him with "yampah," and that the Yampah River Valley was the favorite annual collecting grounds for this root among the Shoshone tribes (Jackson and Spence 1970:458).

On the 3rd of August, the expedition had crossed between Elk Mountain, referred to as Medicine Bow Butte, and the Medicine Bow Range along Pass Creek, and upon entering the edge of the North Platte Valley, Fremont notes numerous bands of bison (Jackson and Spence 1970:460). Near the North Platte River, Fremont decided to encamp and lay in a supply of dried meat, because bison were abundant in this area and he did not expect to find many bison or other game in the interior basins to the west (Fremont 1850:158).

While camped in this location, Fremont's party was charged by a

war party of about 70 Cheyenne and Arapaho, who were returning from an unsuccessful attack on a Shoshone village near Fort Bridger (Fremont 1850:158-159). Fremont halted the Indians with a demonstration of a small Howitzer field cannon. Later, as the expedition approached the Great Divide Basin near Atlantic Rim, Fremont decided the dense sage and "extremely rugged country, barren and uninteresting" of the interior basins were not worth the effort to cross (Fremont 1850:159-160). The expedition turned north and headed for Muddy Gap, which they could discern in the distance. They crossed "a vast saline plain," probably Separation Flats, and entered the Sweetwater Valley "about twenty miles above the Devil's Gate" (Jackson and Spence 1970:464). This would place them within eight or ten miles of Split Rock.

When Fremont's expedition approached Ham's Fork along the Green River, the Shoshone woman left them to seek her band (Fremont 1850:165). At this point, Fremont notes

"By the Shoshone and Utah Indians, to whom belongs, for a considerable distance below, the country we were now traveling, it [Green River] was called the Bitter Root river, from the great abundance in the valley of a plant which affords them one of their favorite roots" (Jackson and Spence 1970:466-467).

Fremont's expedition returned to the Rocky Mountain region in the area of Brown's Park in June of 1844. From there they proceeded up Vermillion Creek and across "an ugly, barren and broken country" at the south edge of the Washakie Basin (Jackson and Spence 1970:709). Preuss (1958 [1848]) has no entries in his diary for these few days. The expedition

then travelled up the Little Snake River to "St. Vrain's Fork," now known as Battle Creek, where they feared encountering "war parties of the Sioux and other Indians" (Jackson and Spence 1970:709).

"The country on either side [of the Little Snake River] was sandy and poor, scantily wooded with cedars [junipers], but the river bottoms afforded good pasture" (Jackson and Spence 1970:709).

Later, upon entering the Sierra Madre Range, Fremont states,

"In the course of the morning we had the first glad view of buffalo [since the previous year], and welcomed the appearance of two old bulls with as much joy as if they had been messengers from home...The country here appeared more variously stocked with game than any other part of the Rocky Mountains we had visited; and its abundance is owing to the excellent pasturage and its

dangerous character as a war ground" (Jackson and Spence 1970:709-710).

Though Fremont apparently did not initiate the idea, he did more than anyone else to publicize the idea the Sierra Madre Range and the interior basins were the common war grounds of the Plains tribes and the Shoshone and Crow. When Stansbury entered the Sierra Madre Range from the west in 1850, with James Bridger as his guide, he followed Fremont's description of this area as the war ground of several hostile tribes (Stansbury 1972 [1852]:303). Stansbury's expedition had come east from Fort Bridger in the late fall of 1850, passing along Bitter Creek and across the northern end of the Washakie Basin. Several days earlier, on Black's Fork near Muddy Creek, the expedition had met 20 Shoshone warriors "well-mounted upon small, but apparently excel-

lent horses" and armed with a mixture of rifles, bows and arrows, and old bayonets fastened to long poles (Stansbury 1972 [1852]:298). This was their last encounter with Indians until entering the Laramie Basin.

Upon entering the western end of the valley of Bitter Creek, Stansbury notes this region in the past had little snow and abundant bison, and had been a favorite wintering area for trappers, traders, and presumably, Indians (Stansbury 1972 [1852]:298). It is not made clear whether Bridger or some other "oldtimer" may have been the source of this revelation. A few days later, descending into the north edge of the Washakie Basin, Stansbury complained of the alkalinity of the streams, the numerous gullies and ravines, and the sparse forage, but he also noted there were abundant signs of bison, antelope and large bears (Stansbury 1972 [1852]:301-302).

Prior to Stansbury, the references to the arid interior basins suggest the only Indians to be found in the region would be small war parties passing through. Stansbury was the first to note this was a potential wintering ground for bison and antelope, and the valleys such as Bitter Creek were good winter quarters. The interior basins apparently never supported large aboriginal villages, and were quickly hunted out with the increased use of the Overland and Cherokee Trails after 1850.

Chronicles and Compendia

Schoolcraft, in his first volume on the Indian tribes of the United States, comments the territory of the Shoshone extended east to the mouth of the Sweetwater River (1851:198-201), presumably including the interior basins.

However, the Eastman map of the Indian tribes in Volume III shows the Crow in the northcentral portion of the Great Divide Basin, and the Washakie Basin as a buffer zone among the Utes, Arapahoes, and Cheyennes, with no indication of the Shoshone this far east (Schoolcraft 1853:96). In Volume V, Schoolcraft again lists Shoshone territory as extending from the North Platte River to the Bear River, and comments the Crows and Utes were intrusive to the region (Schoolcraft 1865:197-199). In Volume VI, a more complete description of the territory of the Shoshone is given, definitely encompassing the interior basins of Wyoming (Schoolcraft 1860:697).

As noted by Robert and Yolanda Murphy (1960:298-299) the terms Snake and Shoshone tended to be applied in this region to mounted bands of Indians other than Crow and Blackfeet, while the poorer groups with few or no horses were called Digger, Shoshocoe, or Utah. The criteria used for these distinctions are not comparable to the formal criteria used by anthropologists and government officials in this century. This can be partially illustrated by the later inclusion of such groups as the Weber Utes, Northern Paiutes, and Gosiutes in the category of Shoshones. In no case do these terms "refer to any sort of political group maintaining a stable territory" (Murphy and Murphy 1960:300).

It appears from a perusal of the early sources the boundaries of the aboriginal groups of the Northwest Plains and Rocky Mountains were relatively fluid. The economic demands of the fur trade and the aggressive expansion of the Western Sioux increased the conceptualization of ownership of hunting grounds (White 1978). However, it was the demands of government nego-

tiators for territorial claims which finally crystallized the concept of boundaries among the Indians. Certain collecting and hunting grounds had been conceived of as belonging more to one group than to others, but this in no way excluded other bands or tribes from using these areas. Thus the Sioux hesitated to hunt in the Shoshone hunting grounds around the Medicine Bow Mountains, not because these grounds "belonged" to the Shoshone, but because there was a high probability the Shoshone might be present if force (see Cowie 1958:48). These buffer zones effectively provided sanctuary for game animals where hunting pressure was less intense (Hickerson 1965).

INFERRED PATTERNS OF EXPLOITATION

Early Expectations

The overall picture presented by the early sightings and anticipations of Indians in the interior basins is there were small family groups of Shoshones, Utes, or anonymous "Diggers" hunting and foraging, and war parties of Crow, Arapahoe, Cheyenne, or Sioux passing through. The latter groups would leave few archaeological remains reflecting patterns of exploitation, therefore the essential concern in terms of interpretation of archaeological remains is with the former groups.

Many of the early descriptions of the Shoshone noted a mixture or alternating use of wickiups and tipis, the use of both dogs and horses as pack animals and yearly rounds covering extensive territories. Very often, especially in more arid areas or in the spring or early summer, Shoshones or Utes were encountered in small family groups. Some of the observers commented these small family groups

continued year round in poorer, more remote areas, and they almost always used wickiups covered with brush, bark, blankets, or a combination of these items. The small groups thus described were involved in gathering roots and berries, and in hunting occasional game. They would fit easily into the classic general foraging patterns described for the Ute or Great Basin Shoshone (see Steward 1938; Lowie 1924).

The consensus of the early references to the interior basins is they were the territory of the Eastern Shoshone or Green River Snakes, while other groups, particularly Utes, made forays into this region. A few contradictions to these observations seem to derive from the observations of Fremont and his expedition, which indicate the interior basins, particularly the eastern portions, were the war grounds of the Sioux and Shoshone. The apparent contradictions may be accounted for by the fact these accounts span the period of active Sioux expansion into this region. Most of the exploring parties entering the basins anticipated encountering Shoshones, Crow war parties, or an occasional Sioux or Cheyenne war party.

Observed Ranges

The most abundant sightings of Shoshone east of the Bear River Divide occurred in the Green River Basin. Numerous travelers noted the presence of Shoshone at Fort Bridger or at the annual trappers' rendezvous. Also present at the rendezvous were Utes and various Plateau groups such as Flatheads and Nez Percés (see Parker 1938:76; Irving 1961 [1837]:156; Chittenden and Richardson 1905:216-217; Field 1957 [1844]:139-141; Ferris 1940 [1836]:310; and others). The Shoshones were also frequently noted in the Bear River Valley, which

Farnham referred to as "the grain-field and root-garden of the Shoshonie Indians (Farnham 1843, Vol. II:74).

The Crow, although sporadically allied with the Shoshones, were rarely noted south of the Sweetwater River Valley, except in small raiding parties. Most often, they were observed in the Sweetwater, Big Horn, or Yellowstone Valleys. The only first hand reference to the Crow in the arid interior basins was that of Ashley in 1825 (Morgan 1964:105). Shoshone territory was generally given as extending south to the salt lakes, Brown's Hole, and the Yampah River Valley. However, it would not have been out of place to encounter Uintah or White River Utes in the interior basins of Wyoming, and these groups might well have been difficult to distinguish from small groups of Shoshones.

None of the early chroniclers include the interior basins in the range of the communal bison hunts, largely because this area was not part of the regular range of the large bison herds, such as those found on the Plains. According to Farnham (1843:28) the Shoshones who could be found in Wyoming "live on roots, buffalo, elk, deer, the mountain sheep, and antelope." Russel (1955 [1848]:144) says of the Shoshones in general

"their population amts to between 5 and 6,000 about half of which live in large villages and range among the Buffaloe: the remainder live in small detached companies comprising of from 2 to 10 families who subsist upon roots fish seeds and berries."

Graham and Smith, in 1843, noted the "Snakes" often gathered in villages of about 300 lodges, but there were also many "Diggers" in the mountains who subsisted on roots and did not venture onto the

plains (Sunder 1954-55:49). They further mentioned the Snakes subsisted at that time primarily on antelope and elk, because the bison had become scarce in their territory.

Ethnic Groups

Siebert (1961:36) concludes from reading the early sources, that prior to the introduction of firearms into the Rocky Mountain region, the Shoshones had generally roved in small bands. It was the introduction of guns and horses, and the increase in military pressure most directly from the allied Lakota, Cheyenne and Arapaho, that led to the amalgamation of the Shoshones under powerful chiefs. However, these associations among the Shoshones remained highly fluid. Murphy and Murphy (1960:311), although they place the present location of Rawlins, Wyoming firmly within Shoshone territory, assert the dry interior basins were never used intensively by any group.

Hultkrantz (1974 [1956]) asserts that band or group associations among the Eastern Shoshone had always been fluid and remained so in the early historical period. He felt it was significant that Indian agents and travelers characteristically failed to distinguish the mounted, bison hunting Shoshones from other Shoshone groups. The United States government category of Eastern Shoshone included not only the resident bison hunters (Kucundika) of Wyoming, but also sheep eaters (Tucudika) of the mountains, a mixed collection of "dust eaters" (Hukandikas) and fish eaters (Pongwidikas) from the region of the salt lakes, impoverished Black's Fork or Fort Bridger Shoshone known as dove eaters (Haivodikas), and fluctuating groups of Plateau Shoshone, Bannock, Flathead, Nez Percés, Lemhi, Northern

Paiute and others (Hultkrantz 1974 [1956]:181-200).

A moderately stable core group of this assortment were frequently encountered in the Green River region, and were early dubbed Green River Snakes. This same group, which was territorially ancestral to Washakie's Band, ranged regularly to the Bitterroot Range and the prairies of Montana in the north, and the salt lakes, Uintah Mountains and southern Wyoming and northern Colorado to the south (Hultkrantz 1974 [1956]:204). They often travelled through vast portions of this area in a single year (e.g., Wilson 1910). After the extermination of the bison in the Green River Basin, this group was often found wintering in the Bear River Valley, in the mountain areas of eastern Idaho, at Brown's Hole, or less often, near Black's Fork or on the Shoshone or Wind Rivers.

The Shoshone who captured the most attention in Wyoming were the mounted bison hunters. However, there apparently had also always been a scattered population of "digger" or rabbit eater Shoshone in southern Wyoming. Included in this latter group were the Black's Fork Shoshone, or dove eaters, who lived most of the year along the tributaries of the Green River, especially in the area of the Bridger Basin.

Influence of the Horse

The implications of early historical observations for the interpretation of archaeological remains which might be encountered in the Washakie Basin are readily applied only to the Proto-Historic Period, after the introduction of the horse. Many of the historical patterns of mobility and amalgamation or disintegration of villages were due at least as much to the foraging and water needs of the

horse as to any traditional pattern of resource exploitation. Shimkin (1947:266-267) has convincingly argued the horse was a considerable liability in Wyoming, and decreased the potential efficiency of Shoshone exploitation of the bison. It is likely more arid zones, like the Washakie and Great Divide Basins, would have been used less, rather than more, after the introduction of the horse.

Certain aspects of the observed historical pattern of exploitation would have been less pronounced in the pre-horse, pre-fur trade periods. The market for beaver and bison hides and tongues would have been absent. The capacity for large scale slaughter and butchering of bison would have been significantly less in the absence of horses, guns and steel knives. Also, disruption and destruction of wide swaths of the natural environment by the emigrants significantly altered the availability of resources.

Pre-horse Pattern

The spring bison hunt mentioned in reservation period sources was of minimal importance in the early historical period. The essential emphasis on bison hunting in the aboriginal society of the Shoshones was the securing of dried meat and skins for the winter. In the spring, the hides and meat of the bison would not have been of adequate quality to justify any but an occasional isolated kill. The fall communal hunt held in the bison rich valleys or plains to the north and east was critical to determining the relative ease of subsistence over the winter months. Subsistence activities over the winter would be influenced by the relative success of the fall hunt, and by the severity of the winter.

Shoshone place names, particu-

larly those noted by Fremont (Jackson and Spence 1970:458, 466-467, etc.) suggest seasonal rounds for most of the year focused on plant resources. If this were the case, spring and summer hunting would have been secondary to this collecting and dependent on the fortuitous availability of game in the collecting areas. Most of the larger game is of poor quality in the spring, and if exploited at all, would have been carefully selected.

Late Prehistoric resource procurement in an arid interior basin, such as the Washakie Basin, would thus be expected to reflect a seasonal broad spectrum foraging strategy. No resource would have been sufficiently concentrated or reliable to justify specialization. Under these circumstances, dispersed small family groups foraging for a wide range of roots, seeds, greens, small game, and occasional large game, would have been far more productive than any concentrated or intensive collecting strategy (see Steward 1938:230-232). This pattern would most closely parallel that recorded for the Great Basin Shoshone. Such a subsistence pattern probably existed well back into the Middle Archaic Period, and remained viable until increased military and economic pressure of the Protohistoric and Early Historic periods made travel in small groups hazardous.

Observed Habitations and Site Types

The observations of Lewis and Clark (Lewis 1959 [1814]) and the Astorians (Hunt 1935 [1821]; Stuart 1935 [1821]) indicate the skin lodge was a late acquisition in Shoshone culture. Apparently the wickiup was the more common abode, even in the winter. Even well into the historical period, the wickiup was the more common shelter in small camps. The most common arch-

aeological manifestation in this region, therefore, would be small campsites and processing areas represented by hearth remnants and small surficial lithic scatters. Less common, but no less important, would be plant processing and kill sites. Stone circles and large base camps should be scarce. When apparently large sites are encountered in the arid interior basins, they should prove to be the successive accumulation of small temporary camps and processing areas.

Past Habitat

Subsequent to the climatic changes of the late Pleistocene, early Post-Pleistocene and Altithermal (roughly equivalent in time to the PaleoIndian and Early Archaic cultural Periods) the available resources of the Washakie Basin were similar to those of the early historical period. Irregular fluctuations in precipitation would have resulted in fairly insignificant differences in overall annual productivity. However localized productivity may have varied strongly. Long-term differences in bison populations in surrounding areas probably strongly influenced differences in human population in the Northwest Plains and Rocky Mountains. For the later prehistoric periods, it is not likely the remains of large-scale cooperative hunts, such as jumps, impounds, or surrounds, will be found in the interior basins. Unfortunately, the late Pleistocene and early Post-Pleistocene periods are not well enough understood at the present time to make the same assertion of these periods.

Appropriate Analogies

Prior to the introduction of the horse, Eastern Shoshone and Northern Ute subsistence would have

been comparable to the later patterns of the Ute, Paiute, and Western Shoshone in relatively game-rich areas of the Great Basin. Bison were an extremely important aspect of the resource base in the Rocky Mountain region, but no more so than antelope, or rabbit in the Great Basin. The factors which made the Eastern Shoshone and some of the Northern Utes critically different from their relatives in the Great Basin were the horse, the fur trade, and the displacement of eastern tribes by Euroamerican settlement and influences. The Utes and Shoshones of the Great Basin are also closely akin to the Eastern Shoshone and Northern Ute. Therefore, the most appropriate ethnographic analogies for the Washakie Basin can be drawn from the ethnographies of the Great Basin Shoshone and Ute (see Steward 1938; Lowie 1924; Malouf 1974; and others).

SUMMARY

Few Indians were noted by early travelers and explorers in the arid interior basins of Wyoming. Observations from surrounding areas, like the Sweetwater, Green, and Yampah River Valleys, suggest small bands or family groups of Shoshone were often present in these interior basins. Mounted war parties of many different Indian groups passed through the interior basins of Wyoming, but war parties made little use of the resources of these basins, and endeavored to leave no traces of their activities.

The prehistoric resources of the interior basins of Wyoming were apparently comparable to those of the Great Basin. During that portion of the seasonal rounds in which aboriginal groups collected

and hunted in the interior basins, their settlement and subsistence patterns were analogous to those of the Ute and Shoshone of the Great Basin. Other portions of the seasonal rounds of the aboriginal Wyoming groups were not as similar to those of the Indians of the Great Basin. The major differences in these seasonal rounds involved exploitation of the large bison herds on the Northwest Plains.

The Washakie Basin probably never supported large herds of bison, and consequently large communal bison hunts probably never occurred there. Large encampments were not a common pattern in any of the arid interior basins of Wyoming. Some of the lush valleys near the Washakie Basin, such as Bitter Creek, may have supported winter camps along portions of their length. However, the aboriginal pattern most characteristic of the Washakie Basin would have been one of generalized foraging by small nomadic family groups.

Because we have no complete ethnography of aboriginal groups in the Washakie Basin, interpretation of prehistoric cultural resources must draw its analogies from other areas. The information which is available from historic sources indicates the most appropriate analogies can be drawn from the Ute and Shoshone of the Great Basin.

NOTE

The dates given in square brackets, [], in the reference citations indicate the original year of writing or publication of the work, while the first year given indicates the year of publication of the edition or version used by the author.

ACKNOWLEDGEMENTS

This paper is a revised version of one presented at the 54th Annual Meeting of the Colorado-Wyoming Academy of Sciences, April 28-30, 1983, Laramie, Wyoming. The paper was originally prepared as a portion of a contract report for Northwest Central Pipeline Company, formerly Cities Service Gas Corporation. I would like to thank Dr. Peter Iverson, Department of History, University of Wyoming, Dr. Charles Reher, Department of Anthropology, University of Wyoming and Dr. Diane Hopkins, Department of Sociology and Anthropology, Albion College, Michigan for comments and advice on earlier versions of this paper.

REFERENCES CITED

- Axtell, J.
1981 The European and the Indian: Essays in the ethnohistory of colonial North America. Oxford: Oxford University Press.
- Chittenden, H. M., and A. T. Richardson (editors)
1905 Life, letters and travels of Father Pierre-Jean DeSmet, S.J., 1801-1873.... Translated and edited from letters written from 1840 to 1873. New York: Francis P. Harper.
- Clyman, J.
1928 James Clyman, American frontiersman, 1792-1881: The adventures of a trapper and covered wagon emigrant as told in his own reminiscences and diaries. Edited by C. L. Camp. Originally published in 1871. San Francisco: California Historical Society.
- Cowie, J. E.
1958 The areal distribution of the Eastern Shoshone. Unpublished M.A. thesis, Department of Anthropology, University of Colorado, Boulder.
- Dale, H. C.
1941 The Ashley-Smith explorations and the discovery of a central route to the Pacific, 1822-1829. Glendale, California: The Arthur H. Clark Company.
- Dominguez, F. A. and S. V. Escalante
1976 The Dominguez-Escalante Journal. Spanish text and English translation of Derrotero y diario. Originally written in 1776. Translated by A. Chavez and edited by T. J. Warner. Provo: Brigham Young University Press.
- Farnham, T. J.
1843 Travels in the Great Western Prairies, the Anahuac and Rocky Mountains, and in Oregon Territory. London: Richard Bentley.
- Ferris, W. A.
1940 Life in the Rocky Mountains: A diary of wanderings on the sources of the rivers Missouri, Columbia, and Colorado from February, 1830 to November, 1835.... originally published in 1836. Edited by P. C.

- Phillips. Denver: The Old West Publishing Company.
- Field, M. C.
1957 Prairie and mountain sketches. Originally published in 1844. Norman: University of Oklahoma Press.
- Fremont, J. C.
1850 The exploring expedition to the Rocky Mountains, Oregon and California... Buffalo: Geo. H. Derby and Co.
- Hickerson, H.
1965 The Virginia deer and intertribal buffer zones in the Upper Mississippi Valley. In Man, culture and animals: the role of animals in human ecological adjustments. Publications of the American Association for the Advancement of Science 78.
- Hultkrantz, A.
1974 The Shoshones in the Rocky Mountain Area. Translated by Dr. A. Magnus from a 1956 article. In D. A. Horr (editor) Shoshone Indians. New York and London: Garland Publishing, Inc.
- Hunt, W. P.
1935 Wilson Price Hunt's diary of his overland trip westward to Astoria in 1811-1812. First published in 1821. In P. A. Rollins (editor) The Discovery of the Oregon Trail. New York and London: C. Scribner's Sons.
- Irving, W.
1961 The adventures of Captain Bonneville, U.S.A., in the Rocky Mountains and the Far West. Originally published in 1837. Edited by E. W. Todd. Norman: University of Oklahoma Press.
- 1964 Astoria: or anecdotes of an enterprise beyond the Rocky Mountains. Originally published in 1836. Edited by E. W. Todd. Norman: University of Oklahoma Press.
- Jackson, D. and M. L. Spence
1970 The expeditions of John Charles Fremont, Vol. 1: Travels from 1838-1844. Urbana: University of Illinois Press.
- Lewis, M.
1959 The original journals of the Lewis and Clark expedition, 1804-1806. Originally published in 1814. Edited by R. G. Thwaites. New York: Antiquarian Press.
- Lowie, R. H.
1924 Notes on Shoshonean ethnography. Anthropological Papers of the American Museum of Natural History 20:185-314.
- Malouf, C. I.
1974 The Gosiute Indians. In D. A. Horr (editor) Shoshone Indians. New York and London: Garland Publishing, Inc.
- Markoff, D. S., L. K. Ciavonne and R. K. Simons
1981 Class I inventory: Historical cultural resources of the E. N.

- Q. project area, Sweetwater County, Wyoming. Unpublished contract report prepared for Union Energy Mining Division, Union Oil of California. On file, Office of the Wyoming State Archaeologist, Laramie.
- Morgan, D. L.
 1954-55 The diary of William H. Ashley, March 25-June 27, 1825. Bulletin of the Missouri Historical Society XI(1):9-40.
- 1964 The West of William H. Ashley: The international struggle for the fur trade of the Missouri, the Rocky Mountains, and the Columbia, with explorations beyond the Continental Divide, recorded in the diaries and letters of William H. Ashley and his contemporaries. Denver: The Old West Publishing Company.
- Murphy, R. and Y. Murphy
 1960 Shoshone-Bannock subsistence and society. Anthropological Records 16(7):293-338.
- Murra, J. V.
 1976 Dynastic oral tradition, administrative records and archaeology in the Andes. World Archaeology 7(3):269-279.
- Oregon Historical Society
 1925 The Verendrye Overland Quest of the Pacific. Reprinted by Great Northern Railway. Oregon Historical Society Quarterly 26(2).
- Parker, Rev. S.
 1838 Journal of an exploring tour beyond the Rocky Mountains, under the direction of A.B.C.F.M., performed in the years 1835, '36 and '37.... Ithaca: privately printed.
- Preuss, C.
 1858 Exploring with Fremont: The private diaries of Charles Preuss, cartographer for John C. Fremont on his first, second, and fourth expeditions to the Far West. Originally written from 1842 to 1848. Translated and edited by E. G. and E. K. Gudde. Norman: University of Oklahoma Press.
- Russel, O.
 1955 Journal of a trapper during the years 1834-1843. Originally published in 1848. Edited by A. L. Haines. Portland: Oregon Historical Society.
- Sauer, C. O.
 1971 Sixteenth Century North America: The land and the people as seen by the Europeans. Berkeley and Los Angeles: University of California Press.
- Schoolcraft, H. R.
 1851-65 Historical and statistical information respecting the history, condition and prospects of the Indian tribes of the United States. 6 volumes. Philadelphia: Lippincott, Grambo, & Co.

- Schwerin, K. H.
1976 The future of ethnohistory. Ethnohistory 23(4):323-341. London: C. Scribner's Sons.
- Shimkin, D. B.
1947 Wind River Shoshone ethnogeography. Anthropological Records 5(4):245-288. Bulletin of the Missouri Historical Society XI(1):41-53.
- Siebert, R. D.
1961 A history of the Shoshoni Indians of Wyoming. Unpublished M. A. thesis, Department of American Studies, University of Wyoming, Laramie.
- Stansbury, Captain H.
1972 Expedition and survey of the valley of the Great Salt Lake of Utah. Senate document, Executive No. 3, special session. Originally published in 1852. In T. C. Cochran (editor) The New American State Papers, Exploration and Surveys, vol. 5: Continental North America. Philadelphia: Lippincott, Grambo, & Co.
- Steward, J. H.
1938 Basin-Plateau aboriginal sociopolitical groups. Smithsonian Institution, Bureau of American Ethnology, Bulletin 120.
- Stuart, R.
1935 Robert Stuart's narratives of his overland trip eastward from Astoria in 1812-1813. Originally published in French in 1821. In P. A. Rollins (editor) The discovery of the Oregon Trail. New York and
- Sunder, J. E.
1954-55 Report of a journey to the Rocky Mountains. Bulletin of the Missouri Historical Society XI(1):41-53.
- Weber, D. J.
1979 New Spain's far northern US ON versity of New Mexico Press.
- White, R.
1978 The Winning of the West: The expansion of the Western Sioux in the eighteenth and nineteenth centuries. The Journal of American History 56(2):319-343.
- Wilson, E. J.
1910 Among the Shoshones. Salt Lake City: Skeleton Publishing Co.

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ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS AT THE
WAGON BOX FIGHT, SHERIDAN COUNTY, WYOMING

BY

DAVID REISS AND SKYLAR S. SCOTT

ABSTRACT

Combined archeological and historical investigations were conducted at the Wagon Box Fight located in Sheridan County, Wyoming during 1982. The Wagon Box Fight occurred on August 2, 1867 when Dakota and Cheyenne Indians attacked soldiers and civilians from Fort Phil Kearny. Thirty-two men took refuge in a corral of wagon boxes and withstood mounted and foot attacks until their relief arrived approximately three to four hours after the battle began. Many of the early accounts of the battle have been exaggerated. Misinformation, including two different locations for the site, has been publicized. The combined archeological and historical investigations have attempted to correct some of the misinformation surrounding the battle and have provided evidence as to the exact location of the site.

INTRODUCTION

At the request of the Wyoming Recreation Commission, historical and archeological investigations were conducted at the location of the Wagon Box Fight Monument by the Office of the Wyoming State Archeologist. The location of the

Wagon Box fight (48SH129) is in Sheridan County, Wyoming and is a National Historic Landmark on the National Register of Historic Places. The primary objectives of this investigation were to document the precise location of the site and to evaluate the potential for further archeological research of the monument area located on State of Wyoming lands.

The Wagon Box Fight has attracted considerable attention. Many of the early accounts have been exaggerated and misinformation has been publicized. For instance, survivors of the fight and other writers have located the battle in at least two different places. Figure 1 shows two possible locations of the battle site. One is marked by the state "Wagon Box Battle Monument", and the other is marked "Wagon Box Site". Historic research and archeological examinations indicate that the location of the state monument, marking the fight, is the correct one.

The Wagon Box Fight occurred on August 1867 when Dakota and Cheyenne Indians attacked soldiers and civilians from Fort Phil Kearny at the Pinery, approximately five miles northwest of the fort. Thirty-two whites

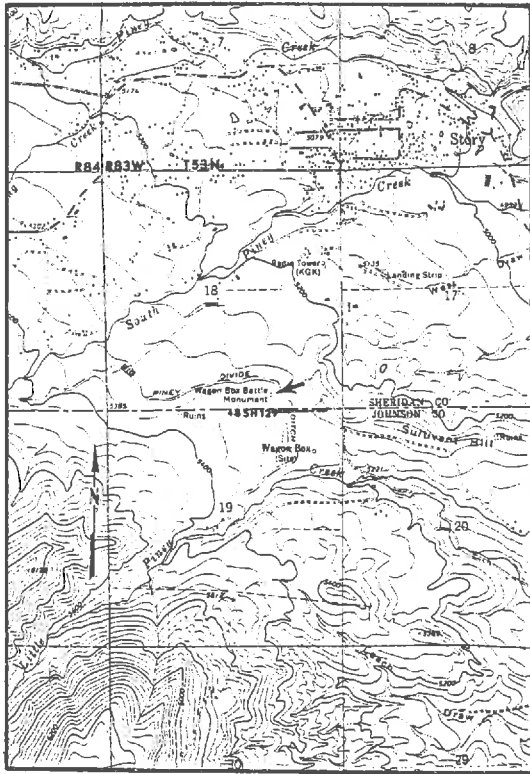


FIGURE 1: Topographic map showing locations of the state "Wagon Box Battle Monument" and the "Wagon Box (site)".

took refuge in a corral of wagon boxes and withstood mounted and foot attacks until relief arrived approximately three and one-half to four hours after the battle began. This engagement proved significant for several reasons. First, following the Fetterman Massacre in December, 1866, and ongoing Indian harassment, morale of the United States Army troops at Fort Phil Kearny and in the Powder River Basin had fallen drastically. After the small number of men at the Wagon Box battle successfully defended themselves against a numerically far superior Indian force, morale increased dramatically; the soldiers realized that their position in hostile Indian country

could be protected. Despite the success of the Army in defending themselves in this fight, the United States government was not dissuaded from closing the Bozeman Trail forts and ceding the Powder River country to the Indians in 1868.

Second, the battle was important because of a new weapon which proved to be the key to success. Using new Springfield breech-loading rifles which allowed more rapid fire than the old muzzle-loading rifles, the defenders kept the Indians from overrunning their position. Though the Indians who participated in the battle did not view it as a defeat, they could not draw the whites out from behind their defenses and did not successfully storm the wagon box corral. Third, the fight is representative of Indian battle tactics, their organization, deployment and fighting methods (Smith 1980:2).

The combined historical information and archeological fieldwork has provided a more definitive history of this important battle, indicating why the battle took place, the action at the fight, and the effects of the battle on the participants and on later events in the Powder River Basin of Wyoming and Montana.

HISTORICAL BACKGROUND OF THE WAGON BOX FIGHT

The wars between the Dakota Indians and their Indian allies and the Euro-Americans and their Indian allies arose from the clash of two expanding powers. These wars were not the armed resistance of a people driven to the wall by American expansion (Scott 1980:12). Rather, the Dakota, Cheyenne and Arapaho, who

considered the Crow and Shoshoni their enemies, had wrested the Powder River Basin away from the Crow. When the whites began to expand into Wyoming and the Powder River country, the Crow and Shoshoni allied themselves with the side who, in their view, would prevail against their mortal enemies, the Dakota, Cheyenne and Arapaho. Thus, the scene was set for war with two powers competing for country which both felt should be their own.

The first significant white intrusion into the Powder River country came with the establishment of the Bozeman Trail in 1863 (Figure 2). The Dakota and their allies realized that this trail would cut their prime hunting area in half. They also concluded that the trail would only lead to increased white occupation and use of the basin. Under Red Cloud and other chiefs, the Dakota and Northern Cheyenne combined their efforts to close the trail and destroy the forts the United States Army had built in 1866 (Stands In Timber 1972:170). The Indians fought for two years to remove the whites from the Powder River Basin. In 1866, fighting centered on Fort Phil Kearny located on Piney Creek, a tributary of the Powder River. The fort experienced continual harassment since its opening in 1866 to its closing in March, 1868. The most notable engagements at the fort were of the Fetterman Massacre in December, 1866, and the Wagon Box Fight in August, 1867.

In July 1867, the Dakota and Cheyenne camped together on the Rosebud River in present-day Montana, their first joint activity since the Fetterman fight (Sandoz 1961:210). While assembled for the Sun Dance, they decided to launch their second,

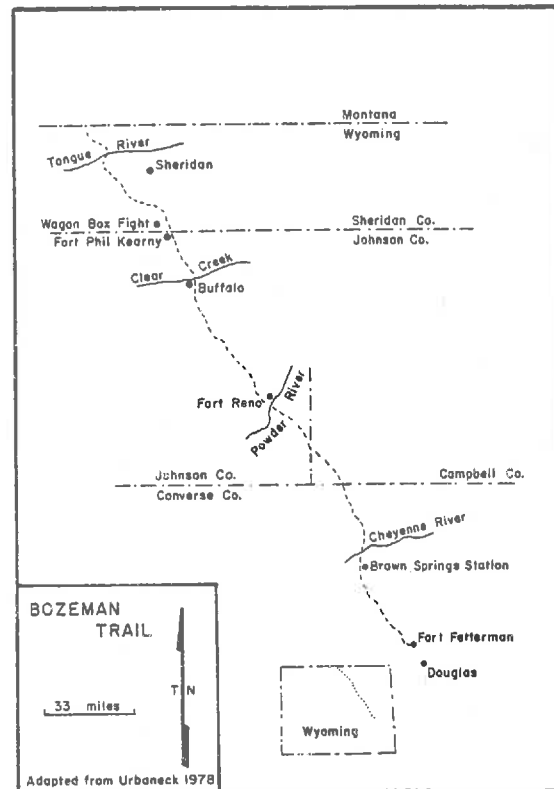


FIGURE 2: Route of the Bozeman Trail and significant landmarks.

and what would be their last, concerted effort in the Bozeman Trail area. When the ceremonies ended, the Indians sent approximately 500 warriors, mainly Cheyenne, against Fort C.F. Smith and approximately 1,000 men, primarily Minneconjou and Hunkpapa Dakota, against Fort Phil Kearny (Murray 1969:95). On August 1, the Cheyenne attacked Fort C. F. Smith, resulting in the Hay Field Fight. The Dakota, Oglala under Crazy Horse, and Minneconjou, under High Hump, left the Rosebud camp on July 31, camping about 5 mi north of Fort Phil Kearny on August 1 to prepare for their battle (White 1972:154).

According to the Cheyenne, only about 300 Dakota and 100 Cheyenne had analyzed the

situation at Fort Phil Kearny and made battle plans the night before the attack. Two Cheyenne, Wolf Chief and Braid Locks, told George Grinnell about their strategy. The chiefs of the two tribes decided to try to draw the soldiers from their defensive positions. They ordered ten young men to charge the troops, and when they met resistance to retreat gradually in hopes that the soldiers would follow them. The retreating warriors were to lead the soldiers toward the hills where other Indians waited in hiding. As soon as the soldiers would reach the hills and become surrounded, the real fighting would begin. This was similar strategy to that employed at the Fetterman Massacre (Grinnell 1928:6-7).

Besides the Indians and soldiers, civilians were also engaged in the battle. These were woodcutters from the firm of Gilmore and Porter, who had a contract to supply Fort Phil Kearny with logs for firewood and construction. The contractor's employees and their protective escort from the fort had constructed a corral of wagon boxes near Piney Island, an island-like area enclosed by North and South Piney Creeks, early in July, 1867 to protect their stock from Indian raids. The corral was located near the northern edge of Piney Island about 1/2 mi west of the western end of the Sullivant Hills (Figure 3). From this position, the roads into the upper and lower pineries, located about 1 mi from the corral (Potomac Corral 1960:152), were visible (Figure 3). Captain Powell, commander of the U.S. Army forces at the wood camp, reported that the position was "well selected for defense and the best security that the country afforded for the

stock" (White 1972:153). Level ground stretched from the corral on the west, south and east for roughly 1/2 mi. On the north side, level ground extended to about 100 yd to where the plain dropped off into the valley of the Big Piney. A drainage had eroded through this rim, and this provided the best protection for the Indians after they attacked (Potomac Corral 1960:151).

The corral itself was constructed of 14 wagon boxes set in an oval approximately 70 ft wide and 100 ft long (White 1972:153). The contractors owned four or five of the boxes and the rest belonged to the Army (Gibson 1917). These boxes were between 4 and 6 ft high. When transporting the timber, the cutters used only the running gears of the wagons, and therefore the boxes themselves formed the corral. A wagon box with its canvas still attached containing the civilian rations was at the east end of the oval, and one containing military rations was located at the west end. Between the wagon boxes, sacks of grain, beans and other supplies were stacked filling in the empty spaces. The civilians and soldiers slept in tents pitched on the outside of the corral.

On July 31, Captain James Powell, with one other officer and 51 enlisted men of Company C, Twenty-seventh Infantry, left Fort Phil Kearny with one month's supplies and marched across the Sullivant Hills to relieve Company A at the wood camp. When Powell arrived at the corral, he discovered that he had to divide his command. Some civilians had established their own camp of seven wagon boxes nearer the cuttings. This side camp lay 1.5 mi southwest of the corral across the Little Piney Creek at the foot

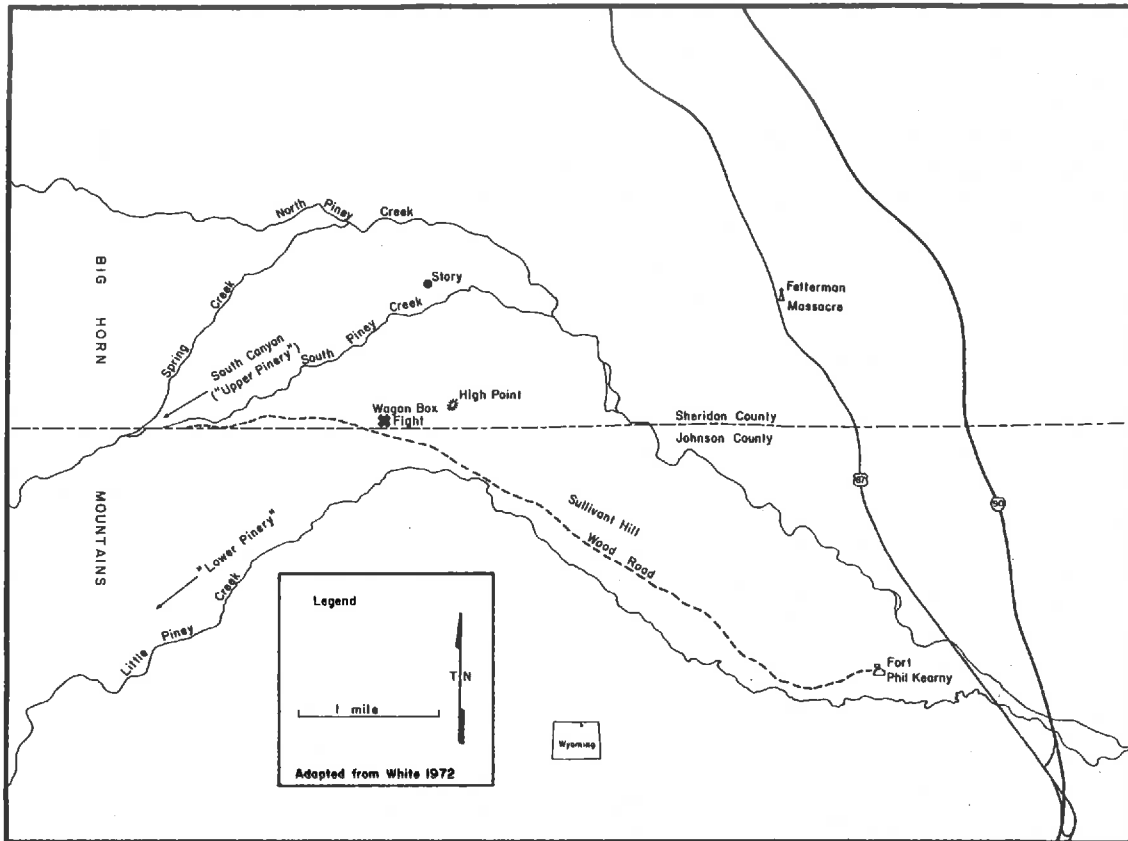


FIGURE 3: Sketch map of the general location of the Wagon Box Fight and significant landmarks.

of the mountains. Powell assigned one non-commissioned officer and 13 men to escort the wood train to and from the fort. One non-commissioned officer and 12 men were sent to the side camp. Powell divided this group even further, nine men being assigned to the men cutting timber and four to guard the side camp. This left Powell with 24 men at the corral, including the other officer, Lieutenant John C. Jenness.

According to Sergeant Samuel Gibson, who was at the fight, on the morning of August 2, everyone except the pickets still on duty around the corral ate breakfast. The men at the corral scanned the hills, but did not see any Indians. Several years later,

Chief Rain-in-the-Face told Gibson that the Indians were watching the activities of the whites from the hills (Brininstool 1953:54). After breakfast, two wagon trains set out for different destinations. Porter, the contractor, along with an escort, left for Fort Phil Kearny with a train loaded with logs cut the day before. The other train started for the lower pinery with an escort. Gibson reports that John "Portugee" Phillips worked for Porter and went with this last train (Brininstool 1953:55). Phillips had achieved a hero's status after riding to Fort Laramie to report the Fetterman Massacre.

About the time reveille

sounded at the corral, a civilian teamster, R. J. Smyth, and an unnamed partner left the fort to hunt deer in the nearby hills. Shortly after sunrise, the two men saw smoke signals in the hills and decided they should return to the fort. They soon realized it would be safer to try to reach the wood train, but Indians were between them and the train. Smyth and his partner then decided to try to reach the corral, which they managed to do. Smyth said that he had two Spencer carbines and two six-shot Army Colt revolvers with him, which he later used when the Indians attacked the corral (Weaver 1974:4).

At about 6:45 a.m., Samuel Gibson relieved the picket post on the banks of the Little Piney. Two other pickets, Garrett and Deming, were also on duty. Garrett saw some Indians and shouted a warning. He and Deming saw seven mounted Indians riding toward Little Piney. To the north over the Big Piney, they sighted many Indians, more than they had ever seen before. Gibson sent Deming to warn the side camp. Meanwhile, the side camp was already under attack by 500 warriors. The Indians set fire to the wagons there, forcing the four wood cutters and four soldiers to retreat to the mountains. Apparently the Indians killed three soldiers during this retreat. But then, the Indians turned their attention to the wagon box corral and left the remaining men from the side camp alone (White 1972:156).

Deming reported to Gibson that Indians had scattered the mule herd and attacked the side camp. The attack on the mule herd and herders had taken place first with approximately 200 Indians participating. A civilian herder joined the pickets at this time,

leading his horse across the creek. The other herders tried to join the men fleeing from the side camp. During the initial attack, Powell was down at the creek bathing (Hebard 1922:73). However, upon learning of the attack, he and Lieutenant Jenness assembled the rest of the company, distributed ammunition and told the men to take up positions. The Indians meanwhile attempted to cut off the fleeing herders, but Powell and part of his force left the corral and attacked the Indians from behind, causing the warriors to turn and fight. At this point, Powell and his men returned to the corral safely. The herders joined the men from the side camp hiding in the mountains (Brady 1912:47).

The three pickets and the civilian with them decided to try to reach the corral. They had to skirmish their way through with Indians pursuing them. Max Littman, a soldier, ran out from the corral and began shooting at the Indians, enabling the four men to reach the corral exhausted but safe (Brininstool 1953:58).

The force in the corral then numbered two officers, 24 enlisted men and six civilians; 32 men in all. Some of the men got inside the wagon boxes, others behind them, and others between the boxes behind barrels or other objects. According to Max Littman, no entrenchment was done at the corral because there was not enough time (Hebard 1922:80). Some of the men who were poor rifle shots were told to do nothing but load rifles. The men who were to do the shooting each had two rifles.

Within 15 minutes after the attacks on the herders, side camp and wood train, approximately 800 mounted warriors attacked the corral. After the first charge,

the Indians pulled back to a hill about 600 yd away, and a small amount of sniping by both sides continued. With their second charge, approximately 700 warriors on foot advanced from the north and west. At the same time, mounted Indians appeared to be readying for a charge from the south. During this second attack, Indian snipers concealed by the brow of the hill along the northwest killed Lieutenant Jenness with a bullet in the head. The same snipers also killed Privates Henry Haggerty and Thomas Doyle (White 1972:160).

The fighting did not consist of one head-on assault after another. The major attacks probably lasted one hour at most. The rest of the time involved threatening demonstrations by the Indians and harassing rifle fire by both sides. Samuel Gibson writes:

The time between each charge dragged on. Yet the Indians on the north side of us, hidden under the ridge, kept them on the alert, and some on the east end of the ridge, about 200 yards from the east side of the corral, would run out every once-in-awhile. The main body of Indians were around the big hill at the end of the ridge east of us where Red Cloud was stationed (Brininstool 1953:73).

Captain Powell stated that the hills out of range were "covered with Indians who merely acted as spectators" (Murray 1967:105). The Indians had brought their families with them, and many of the women held horses for the men while foot charges were made. The warriors also engaged in false charges and skirmishing action to rescue their

wounded and dead from around the corral. On the plain to the southeast, a large number of warriors signaled with pocket mirrors toward the large ridge to the east, while couriers rode back and forth across the Big Piney Valley (Brininstool 1953:66).

By this time, it was nearly noon and Powell's men had repulsed two major attacks and kept the Indians from overrunning the corral for nearly three hours. The sun beat down on the men in the corral and lack of water created additional problems. Max Littman said that the battle could not have lasted much longer because the men were almost completely exhausted by the heat and smoke from fire arrows which caught the hay and dry manure on fire in the corral (Hebard 1922:76).

With the third assault, foot warriors attacked from the northwest. Powell's men responded with concentrated fire. The Indians broke off and withdrew. Around 12:30 p.m., some of the men in the corral noticed that several Indians on one of the nearby hills had scattered and were streaking across the valley. Then, from the east end of the corral, a shout went up that relief had come from the fort.

The commanding officer at Fort Phil Kearny, Colonel John Smith, had become aware of the plight of the men at the wagon box corral. Some accounts relate that someone from the wood train or side camp escaped to the fort and related the news. There is no documentation for this and no mention of it in the official reports. Probably, the soldiers heard the gun fire and realized that the wood crews were under attack. This seems confirmed because Sergeant Gibson later said that the reason the rescue party

did not arrive sooner was due to the fact the wind was blowing from the wrong direction for the battle sounds to reach the fort (Weaver 1974:1-2). Major Smith's report also confirms this.

Colonel Smith ordered Major Benjamin Smith to proceed with a relief column. In his report, Major Smith states:

About 11 o'clock developments indicated that the wood party and its guard, 5 miles in the Pinery were in imminent danger. Bvt. Major Gen'l John E. Smith Commanding, directed me to proceed to their relief with Lieutenants Connolly, Paulus and McCarthy of the Twenty-seventh Infantry and 100 enlisted men of the same regiment from Companies A and F. I also took a Mountain Howitzer and 10 ox wagons, the citizen teamsters being armed. My command started about 11:30 a.m. and proceeded cautiously to the Pinery with skirmishers and flankers thrown out. On nearing the corral of the wood party and about a mile and a half from it, I discovered a high hill near the road and over looking the corral of the wood party was occupied by a large party of Indians, in my estimation five or six hundred were in sight, many more probably concealed. The grass was burning in every direction. The Indians appearing disposed to make a stand I turned off the road to the right, some few hundred yards, to occupy the extreme right point of the hill, which was flanked

on that side by a steep precipice, with the intention after securing it to follow the ridge to the corral of the wood party, commanded by Bvt. Major Powell, Twenty-seventh Infantry. Before turning from the road, in obedience to instructions, I fired a shot from the Howitzer, as a signal to inform Bvt. Major Powell's command that assistance was near. The shell fired was in the direction of the Indians, but fell short, as I anticipated, but seemed to disconcert them as a number of mounted Indians who were riding rapidly toward my command turned and fled. Upon my ascending to the crest of the hill all had disappeared from it and were seen across the creek, on an opposite hill about three-fourths of a mile away leaving all clear to Bvt. Major Powell's corral . . . (Murray 1967:106).

Shortly after Smith's arrival at the corral, four wood cutters and 14 soldiers came to the corral from their hiding places in the woods. Smith then sent a company under Lieutenant Connolly to look for other survivors at the side camp. Connolly reported back that all the wagons had been burned and the men had left. Four other surviving wood cutters from the side camp remained in hiding in the mountains until thirst drove them to risk sneaking back to the fort.

Not wanting to give the Indians another chance to attack, Smith and Powell decided not to linger at the corral. The men loaded the wounded and all portable property in Smith's wagon

train and left for the fort. When the train arrived at the large hill on the west end of the ridge, east of the corral, the men halted and looked back up the Big Piney Valley and saw a long line of Indian ponies (Brininstool 1953:78). Max Littman said that the warriors fled to the northwest after Smith fired the howitzer (Hebard 1922:79). R.J. Smyth reported that many of the soldiers took scalps and other things from the bodies of the Indians near the corral. Dr. Horton, the post surgeon, said that the "soldiers brought back to the fort the head of an Indian for scientific study of Indian skulls". He later sent the skull to Washington. When Horton and other officers visited the site the next day, no bodies were found, not even the headless one (Brady 1912:69).

One source reports that Indians at the battle later said they had given up the fight before the relief party arrived, and that their actions by that time only served to rescue their wounded (Potomac Corral 1960:162). Most sources, both from the Indian and white viewpoint, report that the Indians retreated when the rescue party arrived. Estimates of Indian losses at the battle range from six to 1,500 (Wyoming Recreation Commission 1976:125). The Dakota reported that six of their warriors had been killed (Sandoz 1961:212). Years later, Red Cloud said that he had lost the "flower of his fighting warriors at the battle" (Brown 1962:223). Captain Powell estimated that 60 Indians had been killed and 120 severely wounded. Though some men at the corral felt this estimate was low, it is probably the maximum, since the soldiers were unfamiliar with their new rifles and the Indians would retreat rather than suffer

heavy losses (Murray 1969:96). Grinnell agrees with this, saying that the average soldier was a poor marksman and the moving Indians did not make easy targets (Grinnell 1928:4).

Claus, another survivor, later wrote, "We had to contend with a rifle with which we were not acquainted. They were breech-loaders, and we had received them only two weeks previously" (Hebard 1922:84). On July 3, 1867, J. R. Porter, the civilian contractor representing the firm of Gilmore and Porter, brought 700 Springfield-Allin breech-loading rifles and 100,000 rounds of 50-70-450 Martin bar-anvil-primed cartridges, along with the other supplies, to Fort Phil Kearny. This rifle represented a dramatic improvement over the old .58 caliber Springfield muzzle-loaders the soldiers had been using (White 1972:151-52). Reportedly, the men at the corral also had a large number of new Colt revolvers (Brady 1912:46).

Most of the Indians were armed with bows and arrows and a few had outdated fire arms (Grinnell 1926:6). Powell noted that many of the attacking warriors had breech-loading arms of various types (Murray 1967:107). The Indians had the arms that they had taken from the soldiers after the Fetterman Massacre, but they were poorly armed compared to the soldiers in the corral. The Indians did not know if they had killed or wounded anyone in the corral (Grinnell 1928:6). Three men had been killed at the side camp, three in the corral and two privates wounded at the corral.

After the Wagon Box Fight, which the Dakota called "The Attacking of the Wagons" (Niehardt 1972:13), the hay and wood parties

improved their training and organization, and experienced no additional major conflicts with the Indians. However, with the continual harassment along the Bozeman Trail, the United States government finally realized the opposition they faced. The government had to either defeat the Dakota or give in to their demands. The government found many plausible reasons for submitting to the Indians. One official said that by giving in to Indian demands and keeping them happy and quiet, the Union Pacific Railroad could be rapidly completed. Then the Bozeman Trail would no longer be important because a better road could be built north from the railroad line west of the Big Horn Mountains. Then, the Powder River country would be of no interest to the whites and a costly war could be avoided. This view did not take into account that the whites were already interested in the Powder River Basin, and that rumors had begun to circulate about gold in the Black Hills and Big Horns (Hyde 1937:160-61).

In the Fort Laramie Treaty of 1868, the federal government agreed to abandon the three Bozeman Trail forts and regard the Powder River country as "unceded Indian territory, the Great Sioux Reservation" (Stands In Timber 1972:173). This successful outcome was one of the few, if not the only, times that the Indians forced the Army to abandon a region, if only temporarily, and marked the high point of Indian power in the region (Mattison 1959:1-4).

Myths and Confusion Surrounding the Wagon Box Fight: Setting the Record Straight

Historical accounts differ on

the facts of the Wagon Box Fight on many counts; the time the fight began and ended, how many Indians were involved, the sequence and nature of the fighting, the number of losses on both sides, and the location of the battle. Even the survivors' accounts differ. Accounts can be partially reconciled by the fact that men in different positions see different things and that the action is not the same everywhere. For example, terrain factors at the corral could well explain the fact that some of the men stated they did not experience any mounted attack, while others stress mounted attack. Also, accounts may differ because many of the survivors recounted their experiences nearly 50 or more years after the event. This factor is particularly important in the controversy about the location of the battle.

Basically, two sites have been involved in this mix-up. A third has occasionally been mistakenly identified as the remains of the corral. Men from Fort Phil Kearny began construction of this third site on August 7, 1867. According to the diary of Lieutenant Alexander Wishart, who was stationed there at the time, on that date they moved the wagon box corral about 225 yd west of the fight site and about 50 ft higher up the slope of the mountains. They also entrenched this site, piling dirt works against the wagon beds (Spear 1967:11). Of the other two sites, one is the official site, marked by the state, and lies approximately 1 mi south of Story in Sheridan County (Figure 1). Just across the county line from this site, in Johnson County, is a 4" diameter pipe which marks the location mistakenly identified in the past as the Wagon Box site (Figure 1).

W. M. Camp of Chicago obtained separate interviews with Max Littman and Samuel Gibson. In 1916, using notes from these interviews, Camp and a number of men from Sheridan searched over the area and located what they thought was the site, later marking it with the pipe. However, even at that time, this site was considered doubtful. The Sheridan Post carried an article which stated that this was not the spot commonly accepted as the battlefield, and that the site lay north, almost on the county line. At that time, the commonly accepted site was occupied by a stock corral (Sheridan Post 1916:June 30).

Max Littman visited the area in August, 1916 and identified the location marked by the pipe as the correct site (Buffalo Voice 1916:August 16). Though the people accompanying him claimed that Littman located the site without interference, and the pipe was hidden from his view (his daughter hid the marker with her skirt), this was questioned. A local historian, Vie Garber, talked to Littman right after he located this site. He said that when he felt the site was near, his daughter showed him the marker. Littman also said the country did not look familiar to him, and that his daughter was in a hurry because she was not feeling well (Garber 1920).

Samuel Gibson visited Sheridan in 1908. With local resident Charles E. Bezold, Gibson went to visit the fight scene, but time ran out before they could reach the site itself. The two men did get close enough for Gibson to point out various landmarks. Gibson advised Bezold that if he would look in a certain spot, he would find shell casings which would identify the location

of the corral. Bezold returned later and did indeed find the type of casings used in the battle (White 1972:169). Gibson returned to Sheridan in 1919. He and Bezold went to the site which is today the official state site. Vie Garber wrote that Gibson sank an iron peg to mark the correct location, as well as a broom stick handle. By the next year, the handle had been removed and 40 ft to the northwest a new pile of stones had been erected. But the iron peg had not been moved. A campfire ring had also been located on the west end of the corral (Garber 1920).

Empty shells have been found at both sites by amateur collectors, but those found at the pipe marker post-date the Wagon Box Fight. The shells found at the official state site are the Martin bar-anvil type, while those found at the pipe marker featured the Benet-cup primer which was not manufactured until 1868 (White 1972:170). J. W. Vaughn found 11 .50-70 Springfield shell casings buried deeply in the shape of an oval (Figure 4). The oval begins at the large monument on the west and extends approximately 30 ft east of the fence marking the state property at the fight site. Vaughn has also seen other shells found around the base of the large rock monument--Spencers, .44s, and .50-70 casings. Vaughn discovered a brass buckle from a carbine sling between the east fence and Big Piney Creek (Figure 4). He says that the small rock marker sits at what would be the north center of the corral edge (Vaughn 1967). The Oregon Trail Commission erected the smaller rock monument in 1920. Lonnie White also confirms that the corral extends beyond the present state enclosures, and that the large monument stands at what was

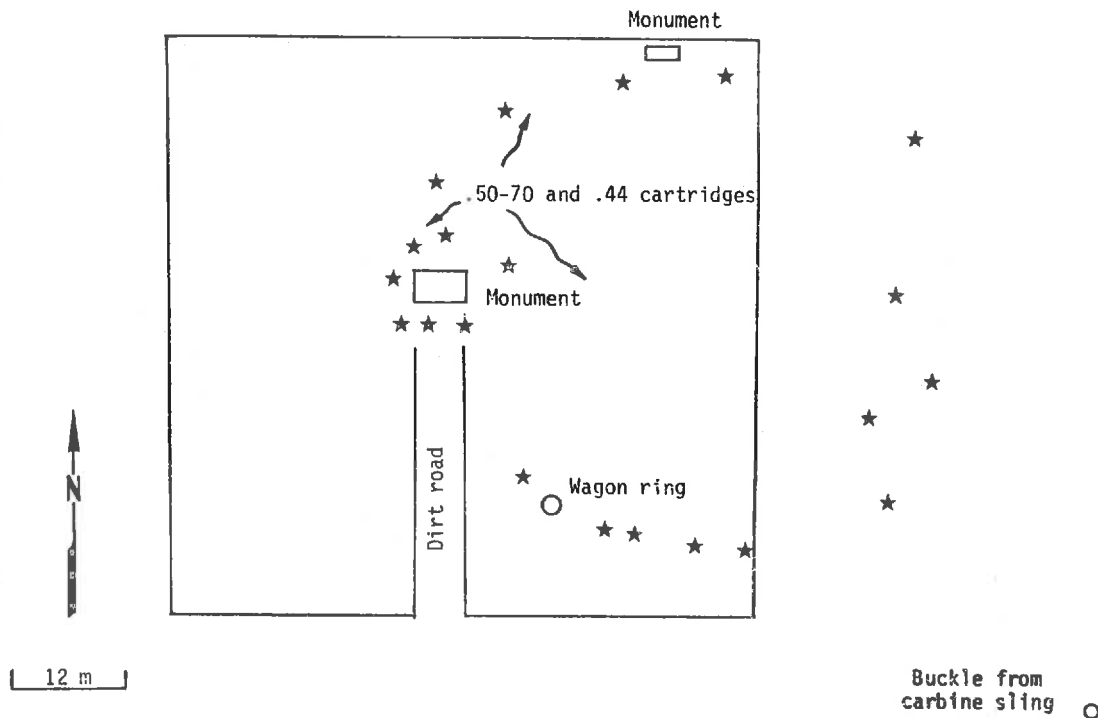


FIGURE 4: Map of cartridge shells and artifacts found by J.W. Vaughn at the state monument to the Wagon Box Fight (adapted from Vaughn 1967).

the west edge of the corral (White 1972:170). The large monument was erected by the state of Wyoming in 1936.

Murray (personal communication 1983) states that the large rock monument marks the southwest corner of the corral, and that the corral extends north-northeast and northeast of that point, coming close to the rim on the north side. He says that the smaller rock monument lays at about the eastern edge of the defense area. Rickey (personal communication 1983) also states that the state monument marks the general defense area. He reports that the pipe site had been searched with a metal detector and no shells were found. At the monument, he located six to eight .50-70 shells and four to five .50 caliber Spencer carbine shells (rimfire, for Model 1865 carbine). The

shells were found within the fenced enclosure (Figure 5). Some 1865 Spencers were in use at Fort Phil Kearny. Rickey located these shells in 1956-58 (Rickey 1983). All of this evidence indicates strongly that the official state site is the correct one, though the present enclosure may not include all of the corral itself.

METHODOLOGY AND RESULTS OF THE ARCHEOLOGICAL INVESTIGATIONS

Methodology

The methods utilized for these investigations were largely determined by the time and budgetary constraints of the project. Historical work included archival research at the University of Wyoming Western History Research Center and the Wyoming State Archives in Cheyenne. Secondary materials,

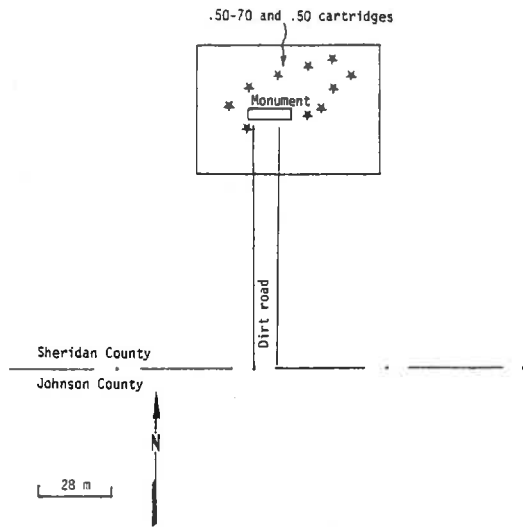


FIGURE 5: Map of cartridge shells found by Dr. Don Rickey, from 1956-1958, at the state monument to the Wagon Box Fight (adapted from Rickey 1983).

such as books, journals and newspapers were examined, and knowledgeable historians were consulted. Several sketch maps of the fight scene and amateur collectors maps were also utilized.

The one acre of land owned by the State of Wyoming, where the battle monument is situated, is fenced and surrounded by privately owned land. Therefore, the majority of the archeological investigations were confined to the fenced acre. The area was first surveyed on foot with no more than 2 m spacing between crew members. Thick grass cover, approximately 95%, impeded the location of any surface artifacts during the visual survey. Since many of the artifacts which could be present at the site are made from metal (e.g. cartridges and wagon parts), the site was then surveyed with a metal detector. A "White 6000D Series 2" metal

detector was utilized. This has a range of approximately 15 cm (6 in) below the surface for a metal item the size of a nickel.

Originally, it was planned to excavate test units wherever the metal detector indicated a potential artifact. It soon became apparent that there was a considerable amount of recently deposited metal items (e.g. bottle caps, wire, and tin cans) which made formal excavations of each item prohibitive because of time limitations. In order to differentiate the older artifacts from the more recent, a small hole (5 cm x 5 cm) was excavated with a trowel at each location until the artifact was recovered. If the artifact dated to the approximate period of the Wagon Box Fight (ca. 1867) it was mapped using a transit and stadia rod. Modern materials (post 1900) were collected, but not mapped.

The privately owned land outside of the fence was not systematically investigated with the metal detector. However, a small area stretching from the northern fenced boundary of the site to the edge of the ridge was haphazardly investigated with the metal detector to locate any artifacts.

After the metal detector survey was completed, three 1 m x 1 m test units were excavated in the areas where concentrations of artifacts had been recovered. These test units were designed to recover any non-metallic artifacts and to determine the soil depths present at the site. All matrix from these excavations was screened through 1/4" wire mesh.

Results

The current archeological investigations at the Wagon Box Fight recovered a total of 46 artifacts which date to the latter

part of the nineteenth century. These artifacts include square nails, rivets, horseshoe nails, round lead musket balls, a .50-70 cartridge shell (the type of cartridge issued for a 700 Springfield-Allin breech-loading rifle which was utilized at the fight), a metal buckle, and a metal ring.

Temporally, none of these artifacts can be assigned an exact date. However, the ammunition recovered can be rather closely dated to the time of the battle. For instance, the .50-70 cartridge was the United States military cartridge from 1866 to 1873 when it was replaced by the .45-70 cartridge (Barnes 1980:127). In fact, by historical accounts, the .50-70 cartridges arrived at Fort Phil Kearny on July 3, 1867, about one month prior to the battle (Hebard 1922:24). Since Fort Phil Kearny was abandoned in March, 1868 (David 1937:213), the .50-70 shell recovered probably dates between July 3, 1867 to March, 1868. The lead round balls can not be dated quite as specifically, but the calibers recovered were in use at the time of the battle, as will be discussed in more detail later in this section.

Unfortunately, the other artifacts recovered (i.e. cut nails, horseshoes and miscellaneous items) could date to the period of the battle, but they also could date to the period of a stock corral which reportedly occupied the site area by 1916 (Sheridan Post 1916).

The distribution pattern of these artifacts is perhaps the most convincing archeological evidence that the state monument is the location of the wagon box corral. The location of the artifacts recovered from the current investigations is shown in

Figure 6. With few exceptions, the artifacts tend to be aligned to a northwest-southeast linear pattern within the fenced, state-owned land. This linear patterning of the artifacts may represent a portion of the actual wagon box corral, although this pattern could also represent the remains of the stock corral reported in 1916 (Sheridan Post 1916, June 30). However, the presence of cartridge shells and round lead balls in this pattern adds support to the hypothesis that this pattern represents the remains of a portion of the wagon box corral. White (1972:153) reports that there were 14 wagon boxes arranged in an oval pattern approximately 70 ft wide and 100 ft long. The linear alignment of

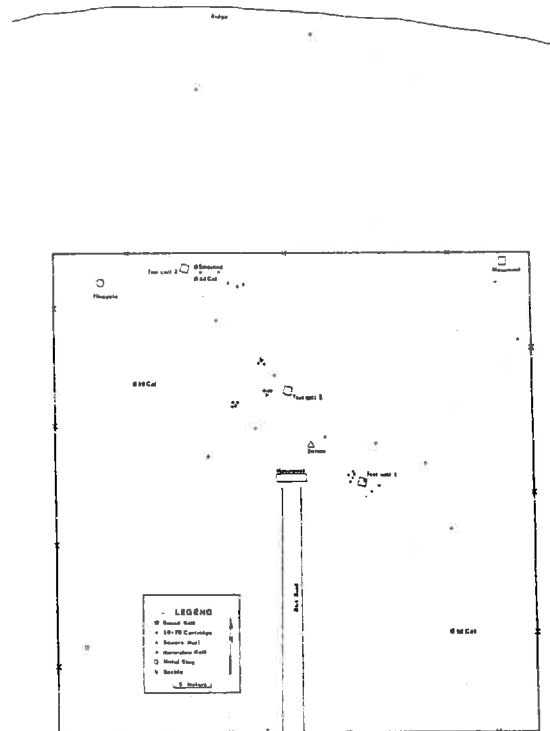


FIGURE 6: Distribution pattern of artifacts recovered at the state monument to the Wagon Box Fight, during the current investigations.

artifacts recovered is approximately 160 ft long, which is slightly larger than White's (1972:153) estimate.

Additionally, Dr. Don Rickey and S. W. Vaughn recovered a number of cartridges from the state monument location. Both also report finding these artifacts in a circular pattern (see Figures 4 and 5). Although the accuracy of these earlier maps may be questionable, since the mapping techniques were not stated, it appears evident that a number of cartridges dating to the time of the Wagon Box Fight have been recovered in the general area of the state monument. Thus, given the artifacts recovered by Vaughn and Rickey and those recovered during the current investigation, it appears likely that the state monument does accurately locate of the Wagon Box Fight.

Three 1 m x 1 m units were excavated within the state lands.

These units were located in areas where relatively high concentrations of artifacts had been discovered with the metal detector (Figure 6). No cultural materials were located during excavation.

Artifacts

All of the 46 artifacts recovered are metallic and have been classified into the following categories: ammunition, miscellaneous items, square nails, rivets and spikes, and horseshoe nails. These are discussed below.

Ammunition

A total of five artifacts were recovered in this category, including one .50-70 rifle cartridge, one .58 caliber lead ball, one .50 caliber lead ball, one .44 caliber lead ball and one fired lead ball of unknown caliber (Figure 7).

The rifle cartridge is a .50-70 450 Martin, bar-anvil primed, center fire (Figure 7). This cartridge was first made at the National Armory, Springfield,

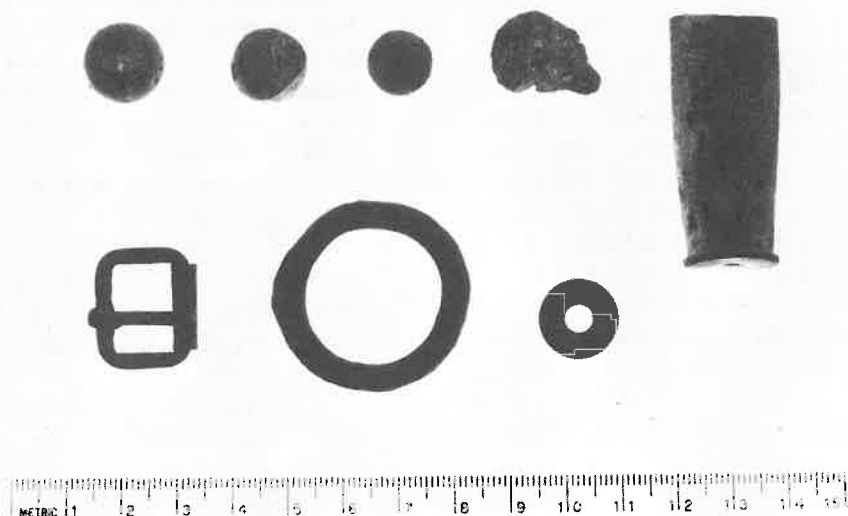


FIGURE 7: Ammunition and miscellaneous items recovered at the state monument to the Wagon Box Fight. Top row, left to right: .58 caliber lead round ball; .50 caliber lead round ball, .44 caliber lead round ball; smashed lead ball; .50-.70 cartridge shell. Bottom row, left to right: buckle; metal ring; washer.

Massachusetts in 1866 by E. H. Martin (Logan 1948:127). It was used by the United States military from 1866 to 1873 (Barnes 1980:127). At the Wagon Box Fight, .50-70 cartridges were used in the Springfield-Allin breech-loading rifle (White 1972:151-52).

The .58 caliber lead round ball is complete and in good condition, except for some pit marks along the outside of the ball (Figure 7). It could not be determined with certainty if this ball had been fired. The .58 caliber lead round ball was the type of ammunition used in the Springfield muzzle-loading rifle. This rifle was the type issued to the soldiers at Fort Phil Kearny prior to the acquisition of the Springfield-Allin breech-loading rifle in 1867 (White 1972:151-52). However, a number of the older Springfield muzzle-loading rifles were taken by the Indians after the Fetterman massacre in 1866 and could have been used against the soldiers at the Wagon Box Fight.

The .50 caliber lead round ball is flattened on one side which probably indicates that it had been fired (Figure 7). This was the type of ammunition used in the 1865 Spencer carbine. Captain James Powell, the ranking officer at the battle, reported that many of the attacking Indians had breech-loading arms of various types (Murray 1967:107). Thus, this lead ball may have been fired by the Indians or soldiers during the battle.

The .44 caliber lead round ball is flattened on one end, which probably resulted from being fired (Figure 7). This is the type of ammunition used in an Army Colt revolver. Once again, it is possible that the Indians were able to confiscate this type of

revolver at the Fetterman massacre and use them against the soldiers at the Wagon Box Fight.

The smashed lead round ball is too flattened to determine the caliber and all that can be said is that it was fired and smashed into something (Figure 7).

Miscellaneous Items

The three items in this category include one metal washer, one metal ring and one metal buckle (Figure 7).

The washer measures 9/16" diameter by 3/16" inside diameter by 1/16" thick. It cannot be absolutely determined if this washer was associated with the Wagon Box corral or if it was deposited at a later date.

The metal ring measures 1 5/16" outside diameter by 1" inside diameter by 3/16" thick. Metal rings are used on saddles, breeches, collars and leather straps (Berge 1980:249). According to Jim Wear (personal communication 1983), this is a hand made ring for a 3/4" strap, probably from a work bridle which would hold the check rein harness. The buckle measures 3/4" by 7/8" by 1/16". Jim Wear (personal communication 1983), suggests this is a single bar roller buckle for a 1/2" strap.

Square Cut Nails, Rivets and Spikes

A total of 31 artifacts were recovered in this category including 26 square cut nails, four rivets and one large spike (Figure 8).

Generally, cut nails pre-date 1890 when wire nails became more abundant (Fontana et al. 1962). Although cut nails could have been utilized into the early part of the twentieth century, most nails produced in the United States between 1850 and 1888 were square cut nails (Fontana et al.



FIGURE 8: Cut nails, rivets and spikes recovered at the state monument to the Wagon Box Fight. Top row, left to right: spike (SH129-11); rivet (SH129-8); rivet (SH129-3); clinch nail (below SH129-3; SH129-4c); rivet (SH129-10); rivet (SH129-17); cutnail (SH129-23); cutnail (SH129-46); cutnail (SH129-48); cutnail (SH129-43); cutnail (SH129-4a); cutnail (SH129-3). Bottom row, left to right: all cut nails (SH129-41; 44; 46; 40; 24; 33; 23; 1; 20; 25; 16a; 27; 16b; 34; 39; 13; 45; 22; 13).

1962:46). Thus, one would expect that cut nails were the type used during the time of the Wagon Box Fight.

If the cut nails were associated with the Wagon Box Fight, it is likely that they entered the archeological record as discard from such items as supply boxes and possibly from the wagon boxes themselves. This is likely because the wagon boxes had been set up for approximately a month prior to the attack and a number of supplies were stacked between the wagon boxes to fill the empty spaces (see above).

The four rivets recovered appear to be hand made (Jim Wear, personal communication 1983). While rivets can be used for a number of purposes, they are

definitely used in the construction of wagons (Jim Wear, personal communication 1983).

The spike recovered (SH129-11) is complete and is similar to a small railroad spike. Jim Wear (personal communication 1983) identified it as a narrow-gauge railroad spike, but this could not be independently confirmed. He also reported that these were historically utilized by blacksmiths to fashion nails and other metallic fasteners when their nail supplies were low.

Table 1 summarizes the type and sizes of the artifacts recovered within this category.

Horseshoe Nails

A total of seven horseshoe nails, all of which appear to be hand made (Jim Wear, personal

Catalog #	Type	Size	Broken	Bent
1	Common nail	2 7/8" - 12D	Yes	No
3	Common nail	4 7/8" - 50C	No	Yes
4a	Cut spike	3 1/2"	Yes	Yes
4b	Cut spike	2 1/8"	Yes	No
4c	Clinch nail	1 1/2" - 100	No	Yes
13	Common nail	2" - 7D	No	Yes
16a	Common nail	2 3/8" - 9D	Yes	No
16b	Common nail	1 3/8" - 12D	Yes	No
20	Common nail	2 1/2" - 100	Yes	No
22	Common nail	1 7/8" - 6D	Yes	Yes
23	Brad	3" - 12D	No	No
24	Common nail	3 1/2" - 16D	Yes	Yes
25	Common nail	1 7/8" - 8D	Yes	Yes
27	Common nail	2 1/2" - 8D	No	No
33	Common nail	3 1/2" - 5D	Yes	No
34	Common nail	1 1/8" - 20D	Yes	No
39	Common nail	2" - 7D	No	No
46	Unknown (midsection fragment)	1 1/2"	Yes	Yes
41	Unknown (midsection fragment)	2 1/4"	Yes	Yes
40	Unknown (midsection fragment)	1 1/2"	Yes	Yes
43	Common nail	2 1/2" - 50D	Yes	Yes
44	Unknown (midsection fragment)	1 5/8"	Yes	Yes
45	Common nail	1 3/4" - 8D	Yes	Yes
48	Common nail	2 1/2" - 50D	Yes	Yes
SH129-3	Rivet	1"	Yes	No
SH129-4	Hookhead spike	3/4"	No	No
SH129-8	Flathead rivet	1"	Yes	No
SH129-10	Flathead rivet	2 3/4"	Yes	Yes
SH129-11	Spike (railroad?)	3/4"	No	No
SH129-13	Fine	3/4" - 2D	Yes	No
SH129-17	Rivet	3"	Yes	Yes

TABLE 1: Summary of cut nails, rivets and spikes recovered at the state monument to the Wagon Box Fight.

communication (1983), were recovered (Figure 9). These horseshoe nails are all complete, but most are bent, which may indicate that they have been used. The length and width of these

Artifact #	Length	Width	Broken	Bent
43	2 1/8"	3/16"	No	Yes
17	2 1/4"	3/16"	No	Yes
30	2 1/4"	3/16"	No	Yes
26	1 1/2"	1/8"	No	Yes
35	1 3/8"	3/16"	No	Yes
15	1 3/4"	3/16"	No	Yes
32	1 1/2"	3/16"	No	Yes

TABLE 2: Summary of horseshoe nails recovered at the state monument to the Wagon Box Fight.

horseshoe nails varies (Table 2), which suggests that these are not all from the same horse, since the size of the nail used is related to the size of the hoof, weight of the shoe and the type of work expected of the horse (Martin 1907:107).

At the wagon box corral, it was reported that the stock was kept inside to protect them from Indian raids. Thus, the horseshoe nails, if they are associated with the corral, could have entered the archeological record either from regular loss or from the actual changing of horseshoes within or around the corral. It is also

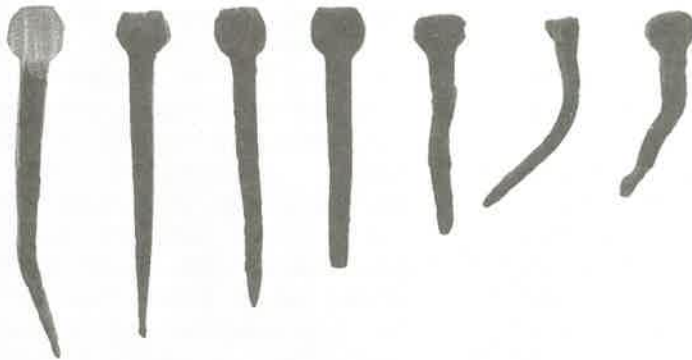


FIGURE 9: Horseshoe nails recovered at the state monument to the Wagon Box Fight. Left to right: SH129-17; 30; 43; 15; 32; 26; 35.

possible that these horseshoe nails could be associated with the early 1900s stock corral. However, their spatial distribution fits within the linear patterning of the dated artifacts, and it is likely that they are associated with the Wagon Box corral.

Artifacts in Other Collections

A number of artifacts have been reportedly collected from the state monument area (Rickey 1983; Vaughn 1967). However, only one of these artifacts was available to the authors for examination. This is a brass buckle from a carbine sling collected by J. W. Vaughn (Figure 4), which he donated to the Wyoming State Archives and Historical Department. It is currently housed at the Wyoming State Museum, Cheyenne. This buckle is described as:

One cast-brass tip once riveted to the terminus of the regulation leather carbine sling or harness fabricated and issued during the period circa 1850-1880 (Wyoming State Archives and Historical Department 1967).

The other artifacts reportedly collected off the site are listed in Table 3.

CONCLUSIONS

Because of its significance, the Wagon Box Fight is a National Historic Landmark on the National Register of Historic Places. Historic research indicates that the site of the state monument is the location of the battle. Research also shows that the battle had an impact on the soldiers and Indians, and on future events in the Powder River Basin and Wyoming. The soldiers realized that with superior arms

Item	Number	Collected By	Date Collected	Reference
.50-70 cartridges	6-8	Dr. Don Rickey	1956-1958	Rickey, 1983
.50 caliber Spencers	4-5	Dr. Don Rickey	1956-1958	
.50-70 cartridges	11	J.W. Vaughn	pre-1967	Vaughn, 1967
Brass buckle from carbine sling	1	J.W. Vaughn	pre-1967	

TABLE 3: Summary of artifacts in other collections from the state monument to the Wagon Box Fight.

and organization, they could successfully defend themselves. The battle illustrates the fighting techniques of the Indians and how these methods could not be used to defeat entrenched or fortified soldiers.

Combined with other events near Fort Phil Kearny and along the Bozeman Trail (i.e., continual Indian harassment, the Fetterman Massacre, and the Hay Field Fight), the battle illustrates the struggle for domination of the region and the methods each side used to gain control. The United States Army built forts to protect the Bozeman Trail and to establish military control in the Powder River Basin. The Indians realized they had to destroy the forts and keep Whites out of the basin in order to maintain their claim to the area. In spite of the soldiers and civilians successfully defending themselves at the Wagon Box Fight, the United States government in 1868 ceded the Powder River Basin to the Indians. However, this cession endured less than ten years before Whites overran the region and the United States Army ultimately defeated the Indians in Wyoming.

The archeological evidence suggests that the site of the state monument is the location of the battle. The most convincing evidence for the location of the battle is linear pattern of the

artifacts recovered suggesting the location of one side of the wagon box corral. While there is no direct evidence that the artifacts recovered were actually associated with the battle, they date to the time period consistent with the date of the battle, and functionally they are consistent with the types of artifacts which are likely to have been lost at the battle site (i.e. ammunition, nails and horse trappings).

Given these results, the potential for additional archeological investigations is great. Key questions which could be addressed include discovering the exact locations of both the Indians and soldiers position during the battle, and attempting to interpret the activities conducted at the Wagon Box corral prior to the battle. Both excavations and further metal detector work at the site should be able to provide a cleaner picture of the events which took place.

ACKNOWLEDGEMENTS

We would like to express our gratitude to a number of people and organizations for their contributions to the investigations. These include Dr. Don Rickey, Jr. for sharing with us his knowledge of the Wagon Box Fight, Jim Wear, an expert on harnesses, carriages and wagons, for examining some of the artifacts, Judy Heberling at the Wyoming State Museum for searching their records for information concerning the battle, the Western History Research Center for providing access to a great deal of information, and the Wyoming Recreation Commission for providing funding for the investigations.

REFERENCES CITED

- Barnes, Frank C.
1980 Cartridges of the world.
DBI Books, Inc.
Northfield, Illinois.
- Berge, Dale L.
1980 Simpson Spring Station:
Historical archeology in
western Utah. Cultural
Resource Series 6.
Bureau of Land
Management, Salt Lake
City.
- Brady, Cyrus T.
1912 Indian fights and
fighters. Doubleday,
Page and Company, Garden
City, New York.
- Brininstool, E. A.
1953 Fighting Indian
Warriors. Stackpole
Press, Harrisburg,
Pennsylvania.
- Brown, Dee
1966 Fort Phil Kearny: An
American sage. G. P.
Putnam's Sons, New York.
- Buffalo Voice
1916 Site of fight is
located. August 16,
Buffalo, Wyoming.
- David, Robert B.
1937 Finn Burnett,
frontiersman. Arthur H.
Clark, Glendale.
- Fontana, Bernard, L. J. Cameron
Greenleaf, Charles W. Ferguson,
Robert A. Wright, and Davis
Frederick
1962 Johnny Ward's ranch: A
study in historic
archeology. Kiva
28:1-115.

- Frost, Ned
1973 Letter to Harriett Gibson Weaver, April 19. On file Office of the Wyoming State Archeologist, Laramie.
- Galloway, Gene
1967 Archeological salvage at Fort Phil Kearny, 1961. Wyoming Archeologist 4(1):26-42.
- Garber, Vie
1920 Letter to Grace Raymond Hebard, September 6. File In2-bat-wb-m, Western History Research Center, University of Wyoming, Laramie.
1926 Letter to Grace Raymond Hebard, October 1. File In2-bat-wb-m, Western History Research Center, University of Wyoming, Laramie.
- Gibson, Samuel
1917 Letter to editor of the Buffalo Bulletin, February 27. Vertical File Indians-Hostilities -Wagon Box Fight, Wyoming State Archives, Cheyenne.
- Grinnell, George Bird
1928 The Wagon Box Fight. The Midwest Review IX (February/ March):1-7.
- Hebard, Grace Raymond and E. A. Brininstool
1922 The Bozeman Trail, Vol. 2, Arthur H. Clark, Cleveland.
- Hyde, George E.
1937 Red Cloud's Folk. University of Oklahoma Press, Norman.
- Logan, Herschel C.
1948 Cartridges - a pictorial digest of small arms ammunition. Standard Publications, Inc. Huntington, West Virginia.
- Martin, George A.
1907 The family horse: Its stabling, care and feeding. Orange Judd Company, New York.
- Mattison, Ray H.
1959 National survey of historic sites and buildings: Fort Phil Kearny and related sites. Unpublished manuscript, on file Office of the Wyoming State Archeologist, Laramie.
- Murray, Robert A.
1967 The Wagon Box Fight: A centennial appraisal. Annals of Wyoming XXXIX (April):104-07.
1969 Military posts in the Powder River Country of Wyoming, 1865-1894. University of Nebraska Press, Lincoln.
- Neihardt, John G.
1972 Black Elk speaks. Pocket Books, New York.
- Potomac Corral of the Westerners
1960 Great western Indian fights. Doubleday, Garden City, New York.
- Rickey, Don, Jr.
1983 Letter to Skylar Scott, May 25. On file at the Office of the Wyoming State Archeologist, Laramie.

- Sandoz, Mari
 1961 Crazy Horse. University of Nebraska Press, Lincoln.
- Scott, Skylar S.
 1980 An Indian history of the Big Horn Mountains and vicinity. Unpublished manuscript, on file Office of the Wyoming State Archeologist, Laramie.
- Sheridan Post
 1916 Marker for wagon box, June 30, Sheridan, Wyoming.
- Smith, Sherry L.
 1980 Wyoming cultural sites inventory: Wagon Box Fight monument and battlefield. Unpublished manuscript, on file Office of the Wyoming State Archeologist, Laramie.
- Spear, Elsa
 1967 Bozeman trail scrapbook. Mills Company, Sheridan, Wyoming.
- Stands In Timber, John and Margot Liberty
 1972 Cheyenne memories. University of Nebraska Press, Lincoln.
- United States Department of the Interior Geological Survey
 1967 Story, Wyoming Quadrangle 7.5 minute series (topographic), Denver.
- Urbanek, Mae
 1978 Ghost trails of Wyoming. Johnson, Boulder.
- Vaughn, J.W.
 1967 Letter to Gene Galloway, October 23, Vertical file Indians-Hostilities -Wagon Box Fight, Wyoming State Archives, Cheyenne.
- Weaver, Harriett Gibson
 1974 Letter to Elmer Parker, Assistant Chief, Old Military Records Division, National Archives, March 21. On file, Office of the Wyoming State Archeologist, Laramie.
- Western History Research Center
 1983 File (In2-bat-wb-m) Indian-battle-Wagon Box-Marker. University of Wyoming, Laramie.
- White, Lonnie J.
 1972 Hostiles and horse soldiers. Pruett, Boulder.
- Wyoming Recreation Commission
 1976 Wyoming: A guide to historic sites. Big Horn Book Company, Basin, Wyoming.
- Wyoming State Archives and Historical Department
 1967 Curation agreement with J. W. Vaughn accession number M67-164, Cheyenne.
- Dave Reiss and Skylar S. Scott
 Office of the Wyoming State Archeologist
 Department of Anthropology
 University of Wyoming
 Laramie, Wyoming 82071