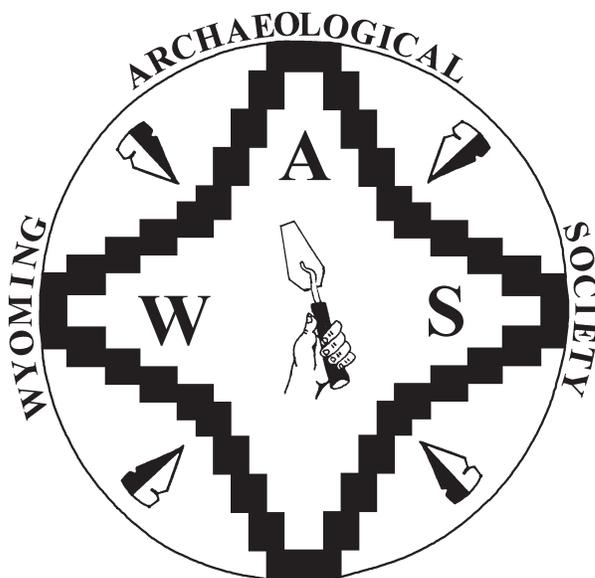
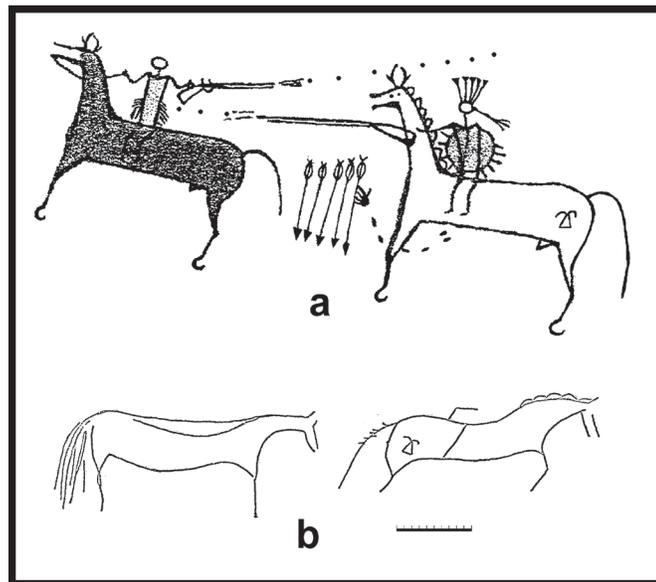


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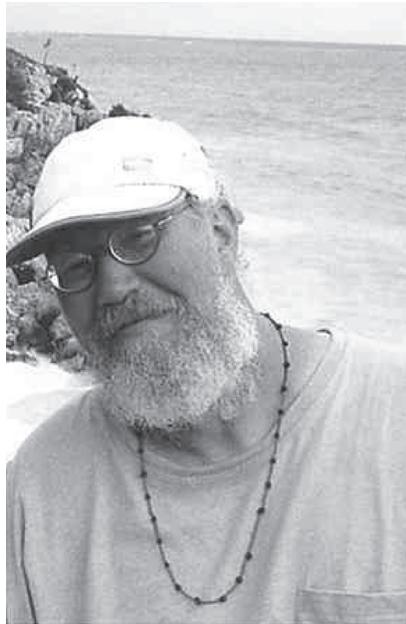
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IN MEMORIUM



**James "Jim" Clark Miller
1955-2011**

James "Jim" Clark Miller died Jan. 8, 2012, at the Denver Veterans Affairs Medical Center. He was born to Archie Glenn and Sydell Hoover Miller in Newcastle, Wyoming on August 2, 1955. He grew up on his father's ranch and spent his teen years in Rock Springs, Wyoming. Jim entered the Marines in 1973, fought bravely in the Vietnam War, and was honorably discharged in 1979.

After his service, Jim obtained an Associate's degree in Anthropology from Western Wyoming Community College, a Bachelor's degree in Geology from Montana State University, and a Master's degree in Anthropology from University of Wyoming, where he was working to complete his Doctorate of Philosophy in Geology. He worked as a geoarchaeologist at many locations throughout the west and most recently as a Research Director for Dominquez Archaeological Research Group

and a teacher at Colorado Mesa University.

Jim was preceded in death by his parents and is survived by three brothers, Sid Miller of Scottsbluff Nebraska, George Miller of Broken Arrow, Oklahoma, and Gene Miller of Gillette, Wyoming; his son, Glenn "Rusty" Miller of Grand Junction, Colorado; daughters, Jennifer (Tristan) Ververka of Richey, Montana and Vanessa (Gerald) Johnson of Rock Springs, Wyoming; and six grandchildren.

Jim loved his son, his two daughters and his grandchildren and greatly valued his many friends, coworkers, and students. He also had a never-ending passion for research and investigation, which he endeavored to pass on to everyone he met. Memorial contributions may be sent to the Department of Anthropology, 1000 E. University Ave., Dept. 3431, Laramie, Wyo., 82071, in Miller's name.

IN MEMORIAM



Bob Edgar
1939-2012

Bob Edgar, whose decades of loving work preserving Old West buildings, cabins, wagons and artifacts helped carry on a bygone era at Old Trail Town, died Friday at age 72. Although Old Trail Town in west Cody made the most headlines during his lifetime, Edgar wore many different cowboy hats through the years. He also was an archeologist, historian and author, having written several books on area history.

But most of all, many people in Wyoming and the northern Rockies will remember Edgar as a true Western gentleman – a quiet, mild-mannered cowboy who often seemed to belong to an earlier era. “Absolutely, he was,” Bob’s brother Larry Edgar said. “He never said a bad word about anyone, and he was such a humble man. “He would never have allowed his picture to be on Old Trail Town’s billboard,” he said referring to the current west Cody sign erected after Bob moved first to a facility in Lovell in 2007 and later to a care facility in Powell.

Bob Edgar was born northeast of Powell near Polecat Bench on July 27, 1939, the son of Paul

G. and Marjorie Edgar. A respected businesswoman, his mother later operated Edgar’s Interiors in Cody for many years. Growing up in the wilds of the Powell-Cody area and Oregon Basin, he gained his first taste of archeology and the region’s historic past. “There wasn’t much to do except wander around the hills,” Bob told an Associated Press reporter in 1984 about his interest in area history. “And that’s when I first started collecting artifacts.”

When the young Edgar noticed that many of the region’s historic buildings were in disrepair he started to collect and preserve the structures. In 1968, Old Trail Town opened to the public featuring five buildings. Through the interest of Bob and his wife Terry in local history, the number of buildings grew to more than 20. Almost all came from within a 150-mile radius. “I’ll always remember how much he loved nature and history,” says Larry, himself an artist and author from Meeteetse. “He was a real student of Wyoming history. “And he was even working on a book about Big Horn Basin

history when he got sick.”

Old Trail Town would pop up on the national radar shortly after it opened, playing on the country’s love and nostalgia for the Old West. Later, in 1984, Bob and trail town were featured on “Good Morning America” and the same year, an AP story appeared in newspapers across the country. For many years he lived in a cabin at the front of Old Trail Town and visited with an endless stream of tourists who’d come knock on his door. His authentic village also made headlines when each of the six reburials of Old West personages took place. In the late-1970s, Jeremiah “Liver Eatin’” Johnston was reburied at the site, and actor Robert Redford attended the service to be a pallbearer.

Aside from Old Trail Town, Bob was also known for the books he wrote about regional history and archeology. Among his books were “Cowboy Dreams” and he also was a co-author of “Buffalo Bill’s Town in the Rockies,” both of which were published in 1996. He and Jack Turnell wrote the noted “Brand of a Legend” about the Pitchfork Ranch.

And as an archeologist Edgar led the excavation of the famous Mummy Cave on the North Fork, 1963-65. The Smithsonian carried on his excavation work beginning in in 1966. The extensive findings, including the remains of “Mummy Joe,” served to re-write much of the archeological history of the northern Rockies known to that time.

In 1976 and 1982, Bob was Grand Marshal of Cody’s Stampede Parades. In 1986 he was awarded a distinguished alumnus award from Northwest College, which he attended 1959-61.

Bob also was a master trick shooter, marksman and an avid outdoorsman. Through the years one of his most popular tricks was enjoyed by countless groups of Cody people or conventioners visiting town. He’d use a small hand-held mirror to shoot backward over his shoulder. With his back to the person holding out a playing card or hat – or with a cigar in their mouth – he’d use the mirror to line up his pistol. He’d then fire a shot through the item, with the slug always slamming into a special wooden backstop.

As a lifelong resident of the Big Horn Basin, he had a profound love for the region’s historic past, his brother said, and now, on the original site of Cody City, that love will live on for many years under the guidance of the non-profit foundation that operates Old Trail Town. “The wildlife and history of the region always meant a great deal to him,” Larry said. “I’m glad his legacy will continue.”

Bob Edgar is survived by three daughters, brothers Larry and Dave and sister Helen. His two former wives preceded him in death. Those wishing to memorialize the life and work of Bob Edgar past present and future can contribute to the Museum of the Old West Foundation, P.O. Box 546 , or 1831 DeMaris Street , Cody Wyoming 82414. Contributions are tax deductible (501(c)3. and are used exclusively for the maintenance and advancement of Trail Town and the Museum of the Old West.

Cody Enterprise Monday, April 23, 2012

IN MEMORIUM



**Patrick Orion Mullen
1982-2012**

Patrick Orion Mullen – A devoted husband, loving son, and loyal friend died in a car accident on March 9, 2012, near Thompson Pass, Alaska. Patrick was born November 13, 1982, in Farmington, N.M. He graduated from Albuquerque Academy in 2001, received a B.S. from the University of New Mexico and a master’s degree in Anthropology from the University of Wyoming. At the time of his death, Patrick was pursuing a Ph.D. from UW while working as an archaeologist at Wrangell-St. Elias National Park and Preserve.

Patrick is survived by his wife, Willa Mullen, his mother Joyce Mullen and step-father Ron Wild, his father Wally Dotson and partner Peggy Williams, half-brother Lou Dotson, sister-in-law Katya Hafich, grandparents John and Velma Mullen, grandparents Wallace and Barbara Dotson, aunts, uncles, cousins and numerous loving friends.

Patrick will be missed for his kindness, humor, courage, loyalty, love of family, adventurous spirit, and love of wilderness. Willa, the love of his life,

shared his love for the outdoors and they enjoyed many adventures together while building a life together in Kenny Lake, Alaska. Patrick found great joy and peace in the mountains through backcountry skiing, mountaineering, hunting, and exploring the wild places of the west and Alaska– something he did the last day of his life.

Patrick will be remembered as he was: a strong, deliberate and contented man with a keen sense of humor. He led by example and action in his academic and athletic pursuits. In Patrick’s words, the only limit to our accomplishments is our ambition, of which Patrick had endless amounts.

Memorial services will be held at Albuquerque Academy, 3 pm Friday, March 16th. A memorial is also being planned in Wrangell-St. Elias National Park later this year. In lieu of flowers, please send donations to the Albuquerque Academy scholarship fund www.aa.edu or the New Mexico Wilderness Alliance, www.nmwild.org.

IN MEMORIUM



**William "Bill" Anthony Owsley
1921-2012**

William Owsley passed away from natural causes at Ivinson Memorial Hospital in Laramie on March 11, 2012. Bill was born in Ashland, Mont., to Daniel and Agnes Stoner Owsley, and grew up in Sheridan, Wyo. During WWII, he served in Europe as a Tech SGT aircraft mechanic with the 599th Bomber Squadron, 9th Army Air Corps.

Following the war, he married his beloved wife Norma Lou Cook of Sheridan on June 21, 1945, a union that lasted 37 years until her death in 1986. He earned a bachelor's degree in Wildlife Management from the University of Wyoming and was employed in 1951 by the Fish Division of the Wyoming Game and Fish Commission at the Como Bluff and Story Fish Hatcheries. In 1958, he transferred to the Game Division and served as a Game Warden in Lusk and Laramie until retiring in 1978. Bill then worked in the equipment room at Corbett Gym on the University of Wyoming campus until retirement.

He is preceded in death by his parents; wife; and brother Vernon. He is survived by two sons, Douglas William, of Jeffersonton, Va., and Gregory Warner, of Manteca, Calif.; daughters-in-law Susanne Davies and Janet Stender; four granddaughters; one grandson; and one great-grandson. He was a 50+-year member of the Accepted Scottish Rite of Free Masonry of Wyoming, and a lifetime Kalif Shriner. Bill was a founding member of the Wyoming Archaeological Society.

A memorial service is scheduled for 11 a.m. on June 26 at St. Matthew's Episcopal Cathedral in Laramie, the Very Rev. Marilyn Engstrom presiding. A luncheon reception will follow the service.

On July 2, his remains will be interred next to Norma Lou in the Masonic section of the Sheridan, Wyoming Municipal Cemetery.

Laramie Boomerang, Sunday, June 24, 2012

IN MEMORIUM



Leslie C. Shaw
1955-2012

As October, Massachusetts Archaeology Month, approaches, it is appropriate that we reflect upon the life and contributions of Leslie C. Shaw, who was active here in Salem. Leslie passed away in Portland, Maine, on August 29th at the age of 57 following some surgical complications. Although her life was cut short and ended far too soon, she made remarkable contributions and was a wonderful inspiration.

I first encountered Dr. Shaw's name in connection with a superb Salem archaeological survey that she helped produce in the 1980s. The year was about 2003, and I had worked to organize Salem Preservation, Inc. to restore and to reopen Pioneer Village. Pioneer Village encompasses about 3 of the 32 acres that make up Salem's Forest River Park--yet both the village and park have revealed dozens of stone chips, and a few Native American arrowheads, or projectile points, and stone scrapers, etc. over the years. The archaeology indicates the land there was once a very important and occupied part of pre-1620 Native Naumkeag.

Salem's Mayor Salvo commissioned the 1980s Salem archaeological survey after he discovered an Indian arrowhead near one of the holes at the Olde Salem Greens municipal golf course not far from the origination point of Salem's Forest River. As I read and reviewed Shaw's 1980 report, I was pleased to read that Shaw and others were aware of the archaeological significance of the Forest River corridor and Forest River Park, situated near the mouth of that river. Shaw and others recommended that when Pioneer Village next be improved, that interpretation broaden to include the Native history equally---and that ultimately a Native Village should be built perhaps behind the Puritan English Village---so that Salem, like Plimoth Plantation, could offer up a more balanced multicultural view of its full history.

Based upon these recommendations we worked with the Massachusetts Ponkapoag Tribal Council in 2007 to reconstruct an early Native fish weir upon the Pioneer Village shore. We learned that the pond in its earliest days had been a tidal

cove that extended inland from Salem Harbor. It seems woven timber & brush fish weirs across or near the mouth of this cove seasonally helped Natives routinely fish here for NAMAS (fish) when the place was called NAUMKEAG.

After meeting Shaw through her Salem archaeology report, I was fortunate to meet her in person when she was helping to conduct an archaeological survey at Fort Lee overlooking the Salem Willows. She was by trade and training a professional archaeologist, and her work took her to many ancient places.

Born in 1955 in Washington, DC, Leslie Shaw was the daughter of John and Ann Shaw, property owners in the Salem Willows neighborhood of Salem, Massachusetts. She grew up in Maryland, and developed lifelong interests in archaeology and anthropology while an undergraduate student at the University of Maine at Orono.

Bowdoin College historians reported: “Leslie earned an M.A. in anthropology at the University of Wyoming in 1980 and a Ph.D. in anthropology at the University of Massachusetts at Amherst in 1991. Over the course of her career she developed expertise in each of the areas of the world in which she worked, from the forests and coastlines of Maine to the high plains of Wyoming, from the isolation of Easter Island in the Pacific to the urban landscapes of Boston and Salem and to the jungles and savannas of the Maya Lowlands of Central America. A highly-regarded researcher and col-

league, she published numerous articles in scholarly journals on each of these geographic areas, was the author of nearly 50 technical reports, and delivered dozens of professional papers at national and international conferences.”

Maine historians noted Leslie Shaw “met her husband, John Cross, in the doctoral program in anthropology at the University of Massachusetts at Amherst. ...She is survived by her husband; two beloved daughters, Lauren T. Cross and Audrey L. Cross; her parents, John and Ann Shaw of Salem, MA [and additional family].”

Bowdoin sources added: “She began her teaching career at the Harvard University Summer School, and held positions at the University of Massachusetts at Amherst, the University of Massachusetts at Boston, and the University of Southern Maine. [Leslie Shaw] was a fellow at ... Radcliffe College in 1993-94, and also was an archaeologist with the National Park Service. Since 1998 she had been a visiting assistant professor in the Department of Sociology and Anthropology at Bowdoin College, where she was an especially effective teacher and valued mentor.”

John Goff

Source: http://salem.m.wickedlocal.com/wkdSalem/db_/contentdetail.htm?contentguid=deLla7yu&full=true

“MY NAME WAS MADE HIGH:” A CROW WAR RECORD AT 48HO9

by

James D. Keyser

Until quite recently the Bighorn Basin has not been known for its Biographic rock art imagery. In fact, in their excellent overview of the region, Francis and Loendorf (2002:179-183) note only two sites in the Bighorn Basin proper—Military Creek and Mahogany Buttes—that contain horses and riders, and both of those are in the Bighorn Mountain foothills on the basin’s extreme eastern edge.¹ They also note (Francis and Loendorf 2002:181) that “illustrations of Historic period weaponry are less common than those of horses.” In the last few years, however, intensive effort on the part of Mike Bies, Bureau of Land Management Worland field office archaeologist, to document Biographic imagery has produced several significant new discoveries of classic Northwestern Plains Biographic Tradition rock art (e.g., Bies and Walker 2009; Francis 2007:221-224; Greer and Greer 2009; Keyser and Poetschat 2009). Recording work at 48HO9 in June of 2011 adds another important image to this growing list.

Site 48HO9, located in the approximate center of Wyoming’s Bighorn Basin, almost 30 miles (50 km) west of Worland, Wyoming (Figure 1), was originally recorded in 1976 by George Zeimens who noted two tipi rings and eroded fire hearths associated with a lithic scatter that yielded one quartzite side-notched projectile point of indeterminate type (Zeimens 1976). In late 2010, Mike Bies was informed of a petroglyph panel contain-

ing a horse and rider, and after doing preliminary photographic documentation (Figure 2) and GPS work it was discovered that the image was situated at the northern boundary of the site. A few weeks later Mike contacted me to see if my crew would be interested in recording the site at the finish of an informal research project that we were planning to investigate Fremont Tradition images in far southwestern Wyoming. I enthusiastically agreed, and Mike and Marit Bovee took us to the site on June 2, 2011. This report is the result of about an hour’s work recording the site’s single petroglyph panel by tracing it on a clear plastic sheet.

The petroglyph is very clearly and carefully incised on a low, east-facing surface of a large, free-standing sandstone boulder that long ago detached from the high cliff looming above the eastern edge of the site and fell and rolled to its present position (Figures 3, 4). Located on a relatively flat terrace along a shallow, dry drainage less than 50 meters from the base of the cliff, the small pickup truck-sized boulder stands more than two meters tall and is between six and eight meters in circumference. The terrace is covered by a typical, sparse sagebrush-shortgrass prairie characteristic of much of the desert-like center of the Bighorn Basin.

The petroglyph shows a very precisely-drawn horseman armed with a long spear and small equestrian-period buffalo hide shield who is attacking a pedestrian enemy through a hail of bullets or (less likely) arrows that have missed their mark (Figure 5). Unfortunately, the pedestrian opponent is badly damaged (and, in fact, nearly obliterated) by cattle (and possibly bison in the late 1800s) rubbing against the projecting corner of the boulder, as such animals commonly do. Given the relatively late date of the image, however, and the significant accumulation of dried cow manure at the base of

EDITOR’S NOTE: This article was previously published in the Fall 2010 issue of The Wyoming Archaeologist, but because of a formatting error, one figure was incorrect. The entire article is reprinted here with corrected formatting. Our apologies to the author and readers of the journal.

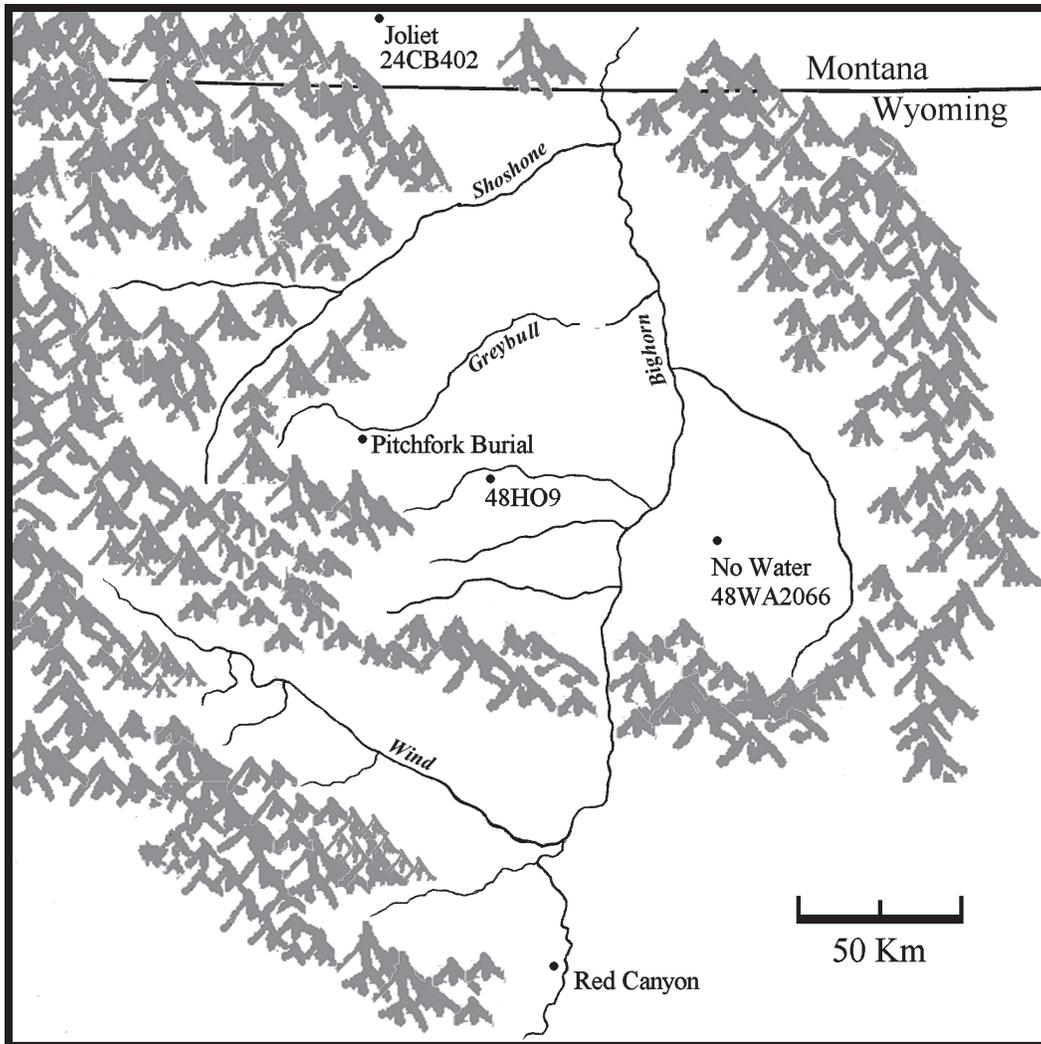


Figure 1: Bighorn Basin of Wyoming, showing referenced site locations. Joliet, No Water, 48HO9, and Red Canyon are all petroglyph sites. Pitchfork Burial has no rock art.

the sheltered side of the boulder, I suspect that most of this damage postdates the introduction of large scale cattle ranching in the Bighorn Basin in 1879 (Vision West 2011).

The rider, who wears extremely long hair, has a bent-kneed posture with feet clearly shown but no arms indicated. The horse is a typical mature style animal with open nose, two erect ears, hook hooves, and a flowing tail composed of four long lines. Three single, stylized eagle feathers project obliquely out from the rearmost and longest line of the tail at approximately equal intervals along its length. These are shown as long, oblique lines terminating in a long triangular tip, and were originally thought to represent guns attacking the horse, but they all lack

both trigger guard and hammer (cock) and frizzen that typically identify guns (Keyser 1977:41; Keyser and Poetschat 2009:29), and their form is identical to stylized eagle feathers commonly drawn by Crow and Mandan warrior artists to indicate horse bonnets and to decorate shields and spears (Brownstone 2001b:70, 80; Keyser 2011c).

The horse is also branded on its left hip with a triangle that has—at its extreme apex—a distinctive “branch” curving upward and outward from each side. An identical brand is drawn on the left hip of at least two other Biographic art horses. One is painted on a Northern Plains bison robe (Figure 6) now in the British Museum (King 2001:75) and thought to be of Blackfoot origin (Brownstone 2001a) that is



Figure 2: Petroglyphs at 48HO9 as first photographed, November 2010. (Mike Bies photograph).



Figure 3: Location of boulder at 48HO9 in relation to cliff in background. Arrow points to panel with rock art located on back side of boulder in this view. (George Poetschat photograph).



Figure 4: Tracing in place showing location of rock art on boulder. (David Kaiser photograph).

tentatively dated on a stylistic basis to the period between about A.D. 1825 and 1850. A rock art horse at site 24YL589 in Montana, known from a tracing, has the same brand (McCleary 2008:174, 262), but that site has since been destroyed (McCleary, personal communication 2011).² McCleary (2008:174-175) identifies this brand as “T hanging triangle” that was registered to the Ryan Brothers Ranch that operated in the late 1800s between Billings and Roundup, Montana. The occurrence of this brand in several places on different media, plus the fact that the robe art example may have been drawn before 1850 suggests that this brand may not be the Ryan Brothers brand. It also has some limited similarity to a few US cavalry brands (e.g., Figure 7) as they are depicted in rock art (McCleary 2008:163, 244) and ledger drawings (Afton et al. 1997:139, 177, 181, 247; McCleary 2008:244; Peterson 1988:29, 31). This information indicates that positive identification of this brand awaits further study of additional brands as they are portrayed in Plains Indian Biographic art.

The horseman’s shield is undecorated, and using the system designed to measure such items (e.g., Keyser 2010) it was apparently 44-45 cm (17-18 inches) in diameter in real life—perfectly consistent with the size of equestrian period shields from all across the Northwestern Plains (Keyser 2010:93). Using a similar body size to weapon size ratio, the spear, which is tipped with a greatly outsized triangular point, would measure between 3.9 and 4.0 meters (12.75 - 13 feet) long. The point would be at least 1.2 meters (47 inches) long.

In the art style to which this image belongs, spears are commonly-depicted weapons and examples from three other rock art sites and six painted bison robes (Figures 8, 9) measure between 1.6 and 4.8 meters (5.5-15.5 feet) in length, with three in the 3-5 meter (10-16 feet) range. While occasional Historic period spears were, in fact, quite long—some stretching as much as eight feet (Utley 2008:19)—the length of the longest ones in this art style (including the one at 48HO9) seems to be significantly exaggerated.

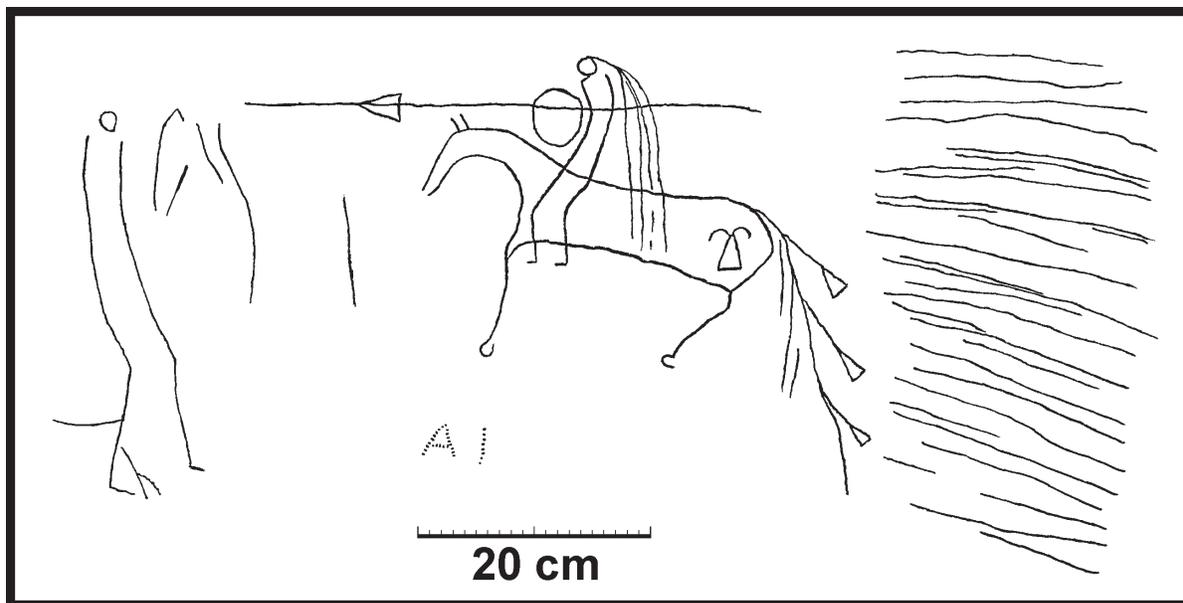


Figure 5: Petroglyph at 48HO9. Sketchy nature of pedestrian opponent and probable weapon due to animal abrasion on this corner of boulder that has removed all but faint traces of figures. Note brand on horse's left hip.

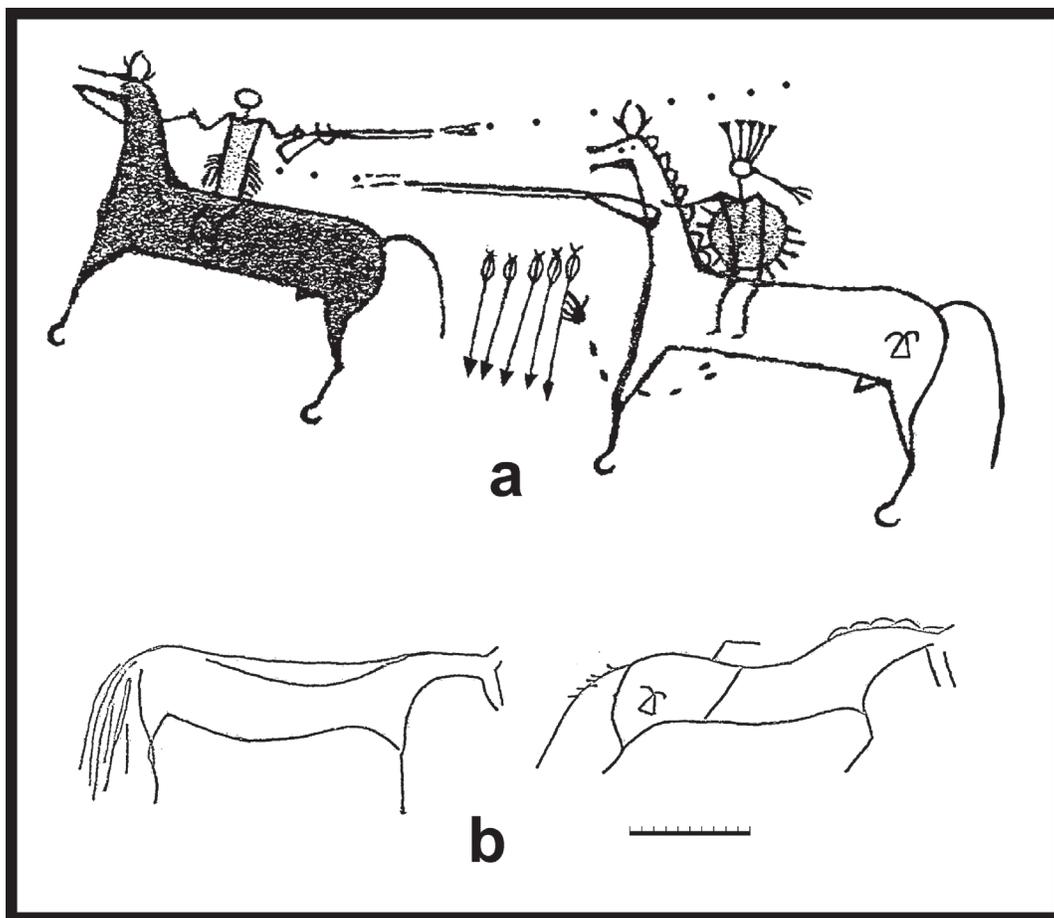


Figure 6: Other instances of the same brand on horses in Biographic art. a, Malcolm Robe, British Museum (adapted from David Williams tracing in King 2001:74); b, 24YL589 (adapted from McCleary 2008:262).

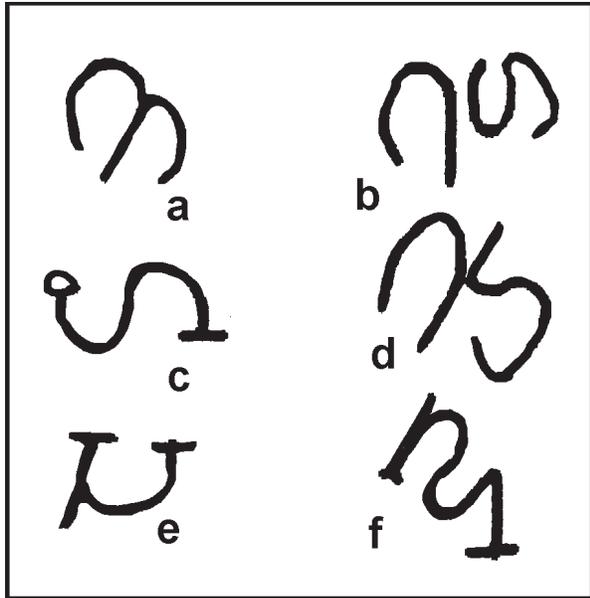


Figure 7: Variations of US cavalry brand in rock art (a, Joliet) and ledger art (b-f) (adapted from McCleary 2008:244).

The same sort of exaggeration seems evident for the large, outsized, triangular spear point at this site, just as has been noted at other sites (Keyser and Kaiser 2010). Almost certainly most such points were metal blades and some are positively identifiable as such by the crosspiece that indicates a notched tang blade (Keyser and Kaiser 2010:113-116). However, if we take into account the likely exaggeration of the spear and its tip at this site, it still seems that this point is a metal blade. For instance, if we assume the true size of the 48HO9 spear was between 6 and 7 feet long (1.8 – 2.1 meters)—the more or less the standard length for Historic period spears (Keyser and Kaiser 2010:121)—then the point would still be between 53 and 62 cm (21 -25 inches) long. Clearly the point was outsized, regardless of the “artistic license” used to exaggerate it. Anywhere in the 50 to 60 cm range, the point would have certainly been metal.

This exaggeration of the weapon and its killing tip is quite common in Ceremonial and Biographic art in all media, but especially prevalent in rock art (Keyser 2011a; Keyser and Kaiser 2010:120-123). While some of the exaggeration may be due to the types of perspective employed to structure scenes in Biographic art (e.g., Keyser 2011a:179), the continuity of this convention from Ceremonial through Biographic art and its use for floating weapons

drawn to count coup (which need not be depicted as exaggeratedly long) suggests that rock artists drew these weapons in an outsized form to emphasize their potency as killing instruments.

The warrior’s hair and the horse’s tail are also illustrated as quite long. While the length of the horse’s tail is almost certainly exaggerated (since it is one and a half times as long as the rider is tall), the warrior’s hair (which is almost exactly as long as he is tall) may actually have been as long as is shown here. Long tresses were highly valued by Crow men, who often incorporated horse hair into their own long locks by attaching it with various kinds of fixatives. Based on comparison with his own body size, the length of this horseman’s hair would be nearly 1.7 meters (5.5 feet), but this is well within the range of length for Historically-known Crow warriors’ hair. The longest reliably reported example is that of Long-Hair, whose own tresses (without extensions) were said to measure at least ten feet long in the 1830s (Denig 1976:194, editor’s footnote 40; Keyser and Poetschat 2009:35).

The warrior’s pedestrian opponent, though badly damaged by cattle rubbing, is stylistically nearly identical to the rider, though somewhat simpler in that he lacks a hairstyle or headdress. Badly eroded vertical lines between the pedestrian and horseman are probably what remain of the pedestrian’s weapon and it is tempting to identify the longer, slightly recurved line as a bow, but this cannot be verified.

Directly behind the horseman and his mount is a vertically-stacked series of more than two dozen long, horizontal lines. Using the Biographic art lexicon (Keyser 1987), we can interpret these in two possible ways. Most likely, since they are of varying lengths but each is in almost exactly the same orientation, they represent flying bullets (and possibly arrows) that document the fusillade of fire through which the warrior artist rode to attack and count coup on his enemy. Such depictions are one of the most common (if not the most common) ledger art conventions (Afton et al. 1997:201, 211, 233, 239; Bates et al. 2003:245, 249; Berlo 1996 107, 111, 207; Powell 2002a:63-67) but they are also found in rock art at several sites (Keyser 2011b; Keyser and Poetschat 2005:37). Some ledger art depictions (e.g., Powell 2002b:56) are almost identical to this, and it is possible that some of the shorter lines in this series might represent arrows, as they do in some

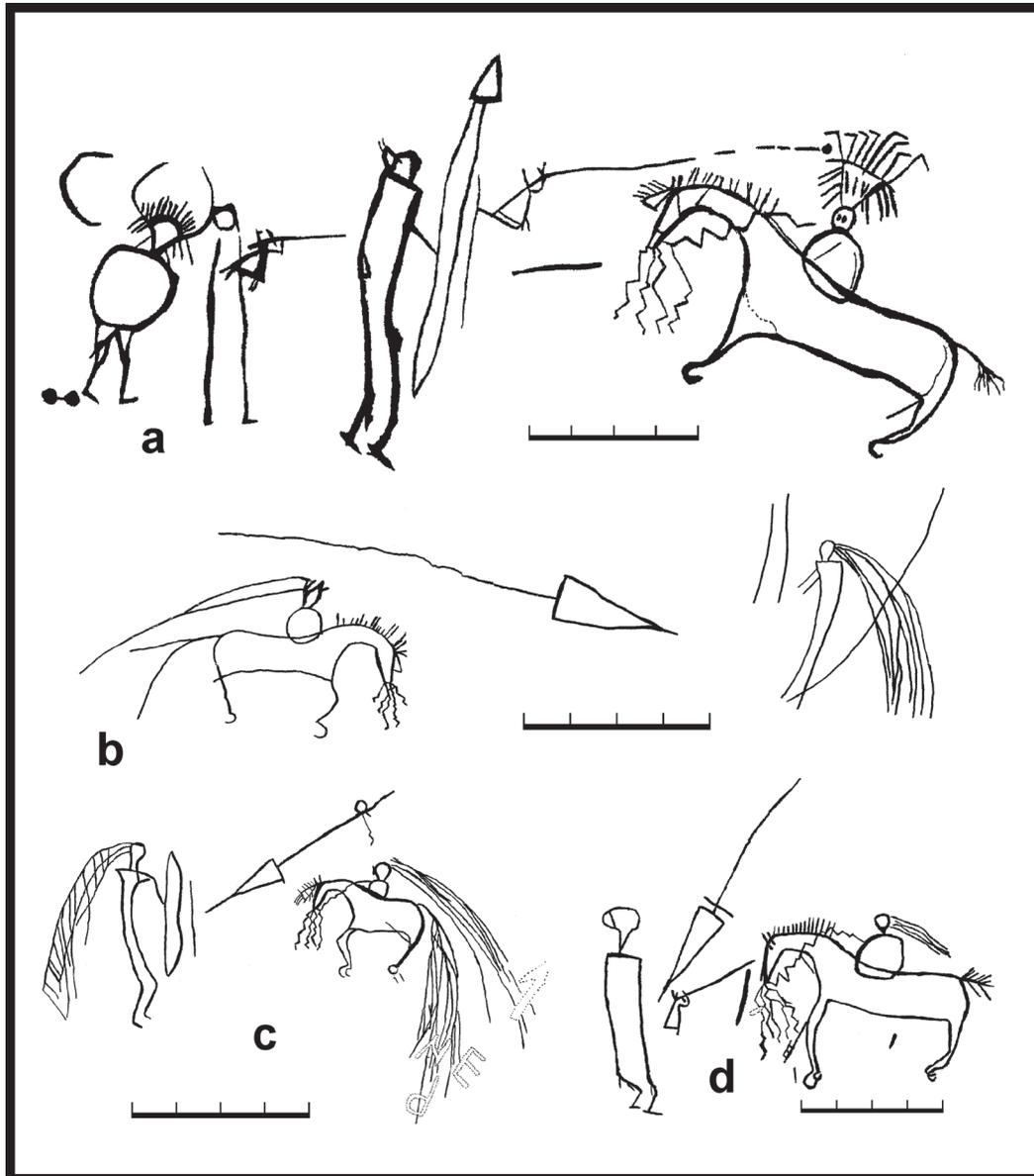


Figure 8: Crow horsemen counting coup at No Water, 48WA2066. Note similarity of pedestrian humans in a-c to that at 48HO9.

ledger drawings.

A second plausible (though seemingly less likely) interpretation is that these lines represent members of the warrior artist's own war party. However, none is clearly drawn as a recognizable weapon (e.g., gun, spear) and all are quite elongated. Furthermore, the fact that they are not arranged either in the typical shallow (seemingly protective) arc centered around the warrior and/or in a phalanx extending both above and below him (e.g., Keyser 2000:38, 50-52, 2005:35-36; Keyser and Poetschat

2008:58) suggests that these are projectiles that missed their mark rather than supporting comrades.

Identification as a fusillade of fire is consistent with the warrior's clearly-implied forward motion against his opponent, which creates a pictorial narrative as indicated by the position of his mount's galloping posture and the visual effect of the forward-thrust shield and long spear, which essentially forces the observer's eye to go from the rider, down his outsized spear, to his pedestrian opponent. In such a composition these conventions of movement

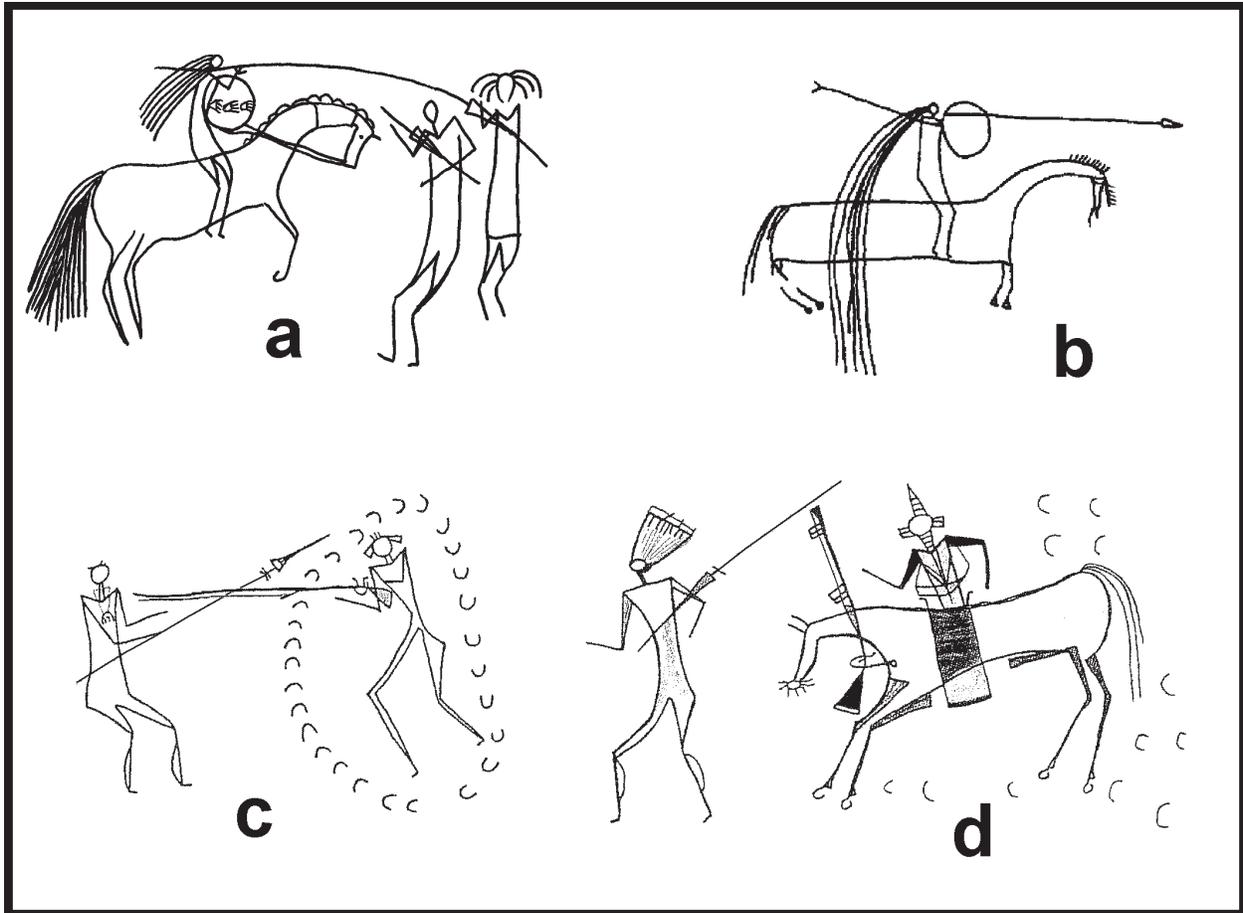


Figure 9: Other Crow coup count scenes in rock art (a, b) and robe art (c, d). a, Manuel Lisa site (24YL82); b, Red Canyon, Wyoming; c, robe in Bernisches Historisches Museum, Bern, Switzerland; d, robe in København Nationalmuseet, Copenhagen, Denmark. Note elongated spear points in a, c, d.

are used to indicate the rush into battle; hence the interpretation of these as bullets whizzing past the charging protagonist is most consistent with the scene's overall structure.

Thus, we can certainly identify this as one warrior's coup against a pedestrian foe, probably accomplished against heavy firepower from the enemy side. That this occurred as part of an organized raid or battle, which required some level of preparation, rather than a casual, spur-of-the-moment confrontation (such as defending one's own horse herd from marauding raiders) is indicated by the rider's carrying his shield and having had time to prepare his war horse by tying the eagle feathers in its tail.

CULTURAL AFFILIATION

Several stylistic clues, coupled with the site's location, strongly suggest that this is a Crow petro-

glyph. The horse is a mature style animal typical of Historic period Indian drawings throughout the early to mid 1800s (Keyser and Klassen 2001:224-253). Stylistically, it is far more similar to other mature style horses previously identified as Crow in both rock art and robe art (Keyser and Poetschat 2009; McCleary 2008), than to horses of the same period drawn by Blackfeet, Sioux, Cheyenne, Ute, or Shoshone artists (Keyser 1977, 2004, 2007; Keyser and Poetschat 2005, 2008, 2009, 2011).

The two humans illustrated at 48HO9 display a number of distinguishing features that they have in common with other Crow figures painted on bison robes and drawn in rock art elsewhere in Crow country (Figures 8, 9). Their body style shows a tall, significantly-elongated torso with legs bent at the knees. Figures routinely have a forward-leaning posture suggestive of almost realistic movement

and action. Brownstone (2001b:74) has noted that such figures show “strong sense of line alternating between curves and angles.” The result is an early Biographic style human that is far less rigid and stiff than those typically portrayed in Blackfoot Biographic art (e.g., Bouma and Keyser 2004; Dempsey 2007; Keyser 1977:67-71, 2007:11-13).

The warrior’s long hair is also consistent with a Crow identification, since a similar hair style is found on numerous, stylistically-similar warriors in rock art throughout Crow territory (Keyser and Poetschat 2009:18, 96) and on documented Crow bison robes from the Historic period (Brownstone 2001b:70-72; Keyser and Poetschat 2009:75). However, at the No Water petroglyphs, only 65 kilometers (40 miles) southeast of 48HO9, both Crow attackers and their pedestrian opponents wear this long hairstyle in two separate scenes (Keyser and Poetschat 2009:18, see Figure 8b, c). Hence, the long hair style was also obviously worn by members of other tribes.

The exaggeratedly elongated, triangular, needle-nosed lance point was commonly used among the Crow, but also drawn by at least one Comanche artist. On at least three Crow robe paintings, two painted warshirts, one shield, and three rock art sites attributed to Crow artists there are more than two dozen such lances tipped with these points (Figures 8, 9). Brownstone (2001b:80-82) makes a convincing argument that these are straight rapier sword blades used as lance points, since they are quite similar to swords also illustrated by Crow warrior artists. Such rapier blades, either complete or partial, could well have been between 60 cm and 1.2 meters (2 - 4 feet) long, just as this specimen at 48HO9 is illustrated, either in its more realistic or exaggerated form.

Probably the most distinctive ethnic identifier in this scene, however, is the form of the eagle feathers tied in the horse’s tail. While attaching feathers down one’s horse’s tail is quite common in ledger art and the similar equidistantly-spaced, three-feather arrangement occurs among at least Sioux and Cheyenne (e.g., Afton et al. 1997:24-25; Maurer 1992:212-213), drawing eagle feathers as a central stem with a triangular termination (Figure 10) is characteristic only of Crow, Mandan, and Comanche artists’ work on painted buffalo robes and in rock art (Brownstone 2001b; Keyser 2011c;

Keyser and Cowdrey 2008; Loendorf and Olson 2003:6).³ Mandan chief, *Mato-tope* (Four Bears), and the unnamed artist who drew the main image at the Tolar site are the only known warrior artists other than Crow men to draw feathers in this manner. *Mato-tope* drew such feathers on several robes to indicate a special horse bonnet, while the Comanche artist drew them around the perimeter of his shield.

Numerous Crow warrior artists drew such feathers decorating lances and shields and composing war bonnets and feathered tabs attached to various weapons on at least three robes and two war shirts, and at half a dozen rock art sites (Figure 10) in the middle Yellowstone River drainage centered on Billings, Montana (Brownstone 2001b:70-73, 80; Keyser 2011c; Keyser and Cowdrey 2008:28). One of these depictions (Figure 10b) at the Joliet site (24CB402) in Montana shows such feathers tied in the horse’s tail just as at 48HO9 (Keyser 2004:38; Keyser and Klassen 2001:32). One bird on a Crow shield also has its tail feathers indicated in this manner (Brownstone 2001b:80).

Thus, in this sample of Crow art we see that feathers of all sorts—a bird’s tail, feathers composing war bonnets, and others decorating horses and weapons—were drawn in this style. However, when drawn as individual entities (such as these decorating the horse’s tail), their shape may indicate that they were stripped along the quill and had the end cut into a straight termination—a form with specific meaning among several northern Plains tribes including the Sioux, Ponca, and others (Mallery 1893:433-434; Taylor 1994). Taylor (1994:203) notes that:

“feathers stripped nearly to the top, leaving the black tip which would flutter in the breeze when worn, indicated a successful scout who had succeeded in discovering many dwellings—the black tip symbolizing the smoke-blackened tipi or earth lodge tops. Such feathers, [Ponca warrior], Buffalo Chief said, were commonly upright in the crown, ‘but the meaning is the same when attached to . . . the mane or tail of the horse.”

Ample ethnographic, ethnohistoric, and archaeological evidence attests to Crow use of the

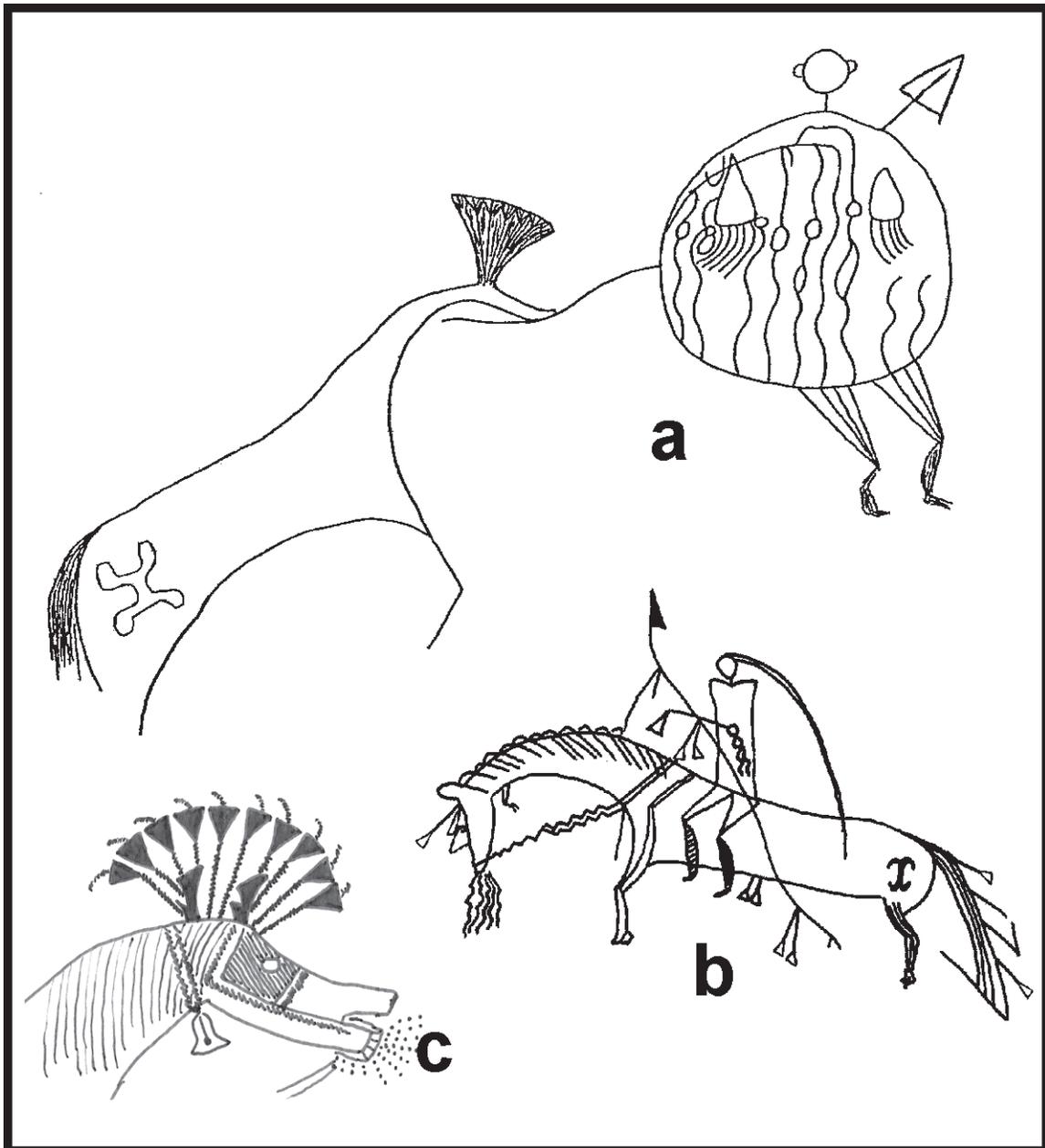


Figure 10: Feathers drawn with a central stem and triangular termination. a, horse bonnet, Razor Creek site, 24YL578, b, feathers decorating horse's tail and forelock and "long-bow" weapon, Joliet, 24CB402; c, horse bonnet, Mato-tope robe drawing.

Bighorn Basin (Keyser and Poetschat 2009:97). Lowie (1956:4) documents that much of the Crow tribe wintered in the Wind River region and that the Mountain Crow and their Kicked-In-The-Bellies clan subdivision used the Bighorn Basin area as its home territory most of the year (Voget 2001:695-696). The basin was widely known as an ideal place to winter horse herds (Medicine Crow 1992:xxii). Finally, Crow oral tradition also documents their use

of—and travel through—the Bighorn Basin where they often encountered hostile enemies from several tribes (Bauerle 2003:77; Medicine Crow 1992:100).

Archaeological evidence pointing to Crow occupation of the Bighorn Basin includes Late Prehistoric period Crow ceramics found at several sites (Frison 1976, 2007:99-105), which attest to pre-horse period use of the general area, and skeletons interred in the Pitchfork Burial, found not far

from 48HO9. These have been identified as Crow based on both craniometric measurements and associated material culture items (Scheiber 1994), and they date between A.D. 1800 and 1840—exactly the time period during which the evidence suggests this narrative scene was carved at 48HO9.

CHRONOLOGY

Clearly the mature-style horse indicates that the petroglyph at 48HO9 was carved in the Historic period, a date consistent with the small, equestrian-period shield held by his rider. Stylistically, however, we can narrow this range a bit, since both horse and human are similar to a series of relatively well-dated Crow rock art and robe art depictions that were drawn between A.D. 1800 and 1860.

The horse is drawn in a distinctive mature-style form that emphasizes its high arched neck and hooked hooves. This form shows the beginning of the use of a somewhat more naturalistic body shape for the neck and rounded rump than was used to draw horses in earlier Crow rock art. Likewise, the human figures with their fluid posture are somewhat more realistic than earlier Biographic Style depictions. When one carefully compares this scene with well-dated Crow Bison robes and the imagery from the nearby No Water petroglyphs, detailed similarities between all of them are obvious and specific, especially given that rock art figures are inherently somewhat less refined than bison robe paintings.

In a study that identified a Crow robe painting style, Brownstone (2001b) shows a series of Crow drawings from the period between 1830 and 1860 that portray both horses and humans in a style very similar to this scene at 48HO9. Furthermore, other later Crow drawings on bison robes dated between 1860 and 1890 (e.g., Brownstone 2001b:71, 78; Schmittou 1996; Wildschut 1926), in petroglyphs at the Joliet site (Keyser and Klassen 2001:32, 230-242; McCleary 2008), and in ledger drawings from the 1880s and 1890s (e.g., Heidenreich 1985; Keyser 2000:Plate 7, 2004:97; Maurer 1992:216), show considerably more realistic images, especially with regard to horses' legs and hooves and humans' facial features and clothing. Thus, the evolution of Crow Biographic art helps us date this petroglyph to the first half of the nineteenth century.

SUMMARY

Sometime in the approximate half-century between about A.D. 1810 and 1860 a Crow warrior artist came to what we now know as 48HO9 and carved a petroglyph representing a significant episode in his war record on the smooth, east-facing surface of a large boulder. Documenting his charge through a hail of enemy bullets to where he touched or killed an enemy warrior with his long spear, the artist was announcing to his own tribesmen, his enemies, and his gods that he was a man of status—an accomplished warrior performing the deeds of bravery that might one day make him a chief within his tribe. To this man, carving this petroglyph was part of the culturally prescribed warfare system that led to adulation of the warrior ideal and ultimately to the status of chief. Crow warrior chief, Two Leggings, best described the hero worship that accompanied such deeds:

“We were singing as we walked into the village, and I held a long willow stick with [the scalp I had taken] tied to the end. For two days and nights the women danced the scalp dance and my name was spoken as the one who had taken revenge on the [enemy]” (Nabokov 1967:36).

(Endnotes)

1 Most of the horses, guns, and tipis mentioned and illustrated in their work (Francis and Loendorf 2002:140, 175-183) are from the Clark Fork and Yellowstone River drainages in Montana (particularly Pictograph Cave and Joliet), or the Green and Wind River drainages in southwestern Wyoming (particularly Red Canyon and Names Hill).

2 A third instance of this brand is reported at the Joliet site (Conner 1984:1; McCleary 2008:174-175) but consultation with Tim McCleary indicates that this brand cannot be verified at Joliet. Possibly the dagger-like, “T over V” brand that McCleary (2008:174) reports, was previously conflated with the brand found at 48HO9 and 24YL589.

3 On this basis, in conjunction with other imagery, a shirt attributed to the “Apache” (Dockstader 1966) has been correctly re-identified as Crow.

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**“I WAS IN THE THICK OF THE FIGHT:”
COUNTING COUP AT 48SW82,
SOUTHWESTERN WYOMING**

by
James D. Keyser

Coup counting is a central theme of Plains Biographic art in all media, occurring both as scenes of personal combat and as tallies of unfortunate enemies on whom coup has been counted. While combat scenes are undoubtedly the most common Biographic art depiction (Figure 1), tallies proclaiming a career’s worth of accomplishments resulting from a series of such combat episodes are more frequent than has been portrayed in the Biographic art literature. Such tallies were most commonly painted on buffalo robes and war shirts (Figure 2), with examples known from tribes as varied as the Blackfeet, Sioux, Cheyenne, Mandan, Gros Ventres, and Crow. Similar tallies are also found occasionally in ledger drawings (Afton et al. 1997:48-49, 252-253; Bates et al. 2003:278-279; Berlo 1996:102-109; Keyser 2000:58; Mallery 1972:572-573) and are known in Plains rock art from Calgary, Alberta to Fort Collins, Colorado (Figure 3).

Tallied coups take two primary forms. One is a compilation of war honors shown either as ideographic symbols denoting particular deeds (Figure 3g) or actual representations of stolen horses or other captured war trophies that are typically carved or painted in a horizontal row or vertical column to show a man’s accomplishments (Figure 3e-f). The second sort clearly illustrates the various enemies on whom coup was counted, but focuses primarily on the weapon(s) used to hit or kill them. These compositions can range from a single enemy warrior struck by one or more floating weapons (Figure 3a-b) to aligned rows of multiple enemies, each of whom is touched or killed by an illustrated weapon (Figure 3c, d, h). Some rows also include enemies where the mode of counting coup is not illustrated (Figure 3e).

One such Biographic coup count tally and a sec-

ond Biographic scene are carved in far southwestern Wyoming at site 48SW82. They are described in detail here because of the tally’s unique structure and the rarity of comparable Biographic art examples known in the rock art of this area.

THE LUCERNE 1 SITE

The Lucerne 1 site (48SW82) is situated on National Forest land in the Flaming Gorge National Recreation Area of far southwestern Wyoming (Figure 4). Located on the west side of the Green River (now Flaming Gorge Reservoir), along massive sandstone cliffs on the north side of the Lucerne Valley east of State Highway 530 and north of the Lucerne Valley road, the site has been known in the professional literature for a half century, though it has not been studied in any detail until quite recently.

PHYSICAL SETTING

The rock art at 48SW82 is exclusively petroglyphs incised and (less commonly) pecked into about a dozen small, relatively widely dispersed, panels on the south-facing sandstone cliffs flanking the north side of the Lucerne Valley, just east of Linwood Canyon.¹ Each of the small, scattered panels contains only a few images, most of which are incised lines (tool grooves?) and simple geometric images. Among these panels, however, are four panels that contain primarily representational forms including bison, a lizard, an unidentifiable quadruped, and two Biographic scenes showing coup counts—one a tally of coups counted on three enemy warriors and the other showing an armed warrior juxtaposed with a woman wearing a dress. Although three of the male warriors in these scenes have been referred to as hunters with superimposed “geometric designs” (Grimshaw and May 1963:8) the fact that these geometrics are their quivers and

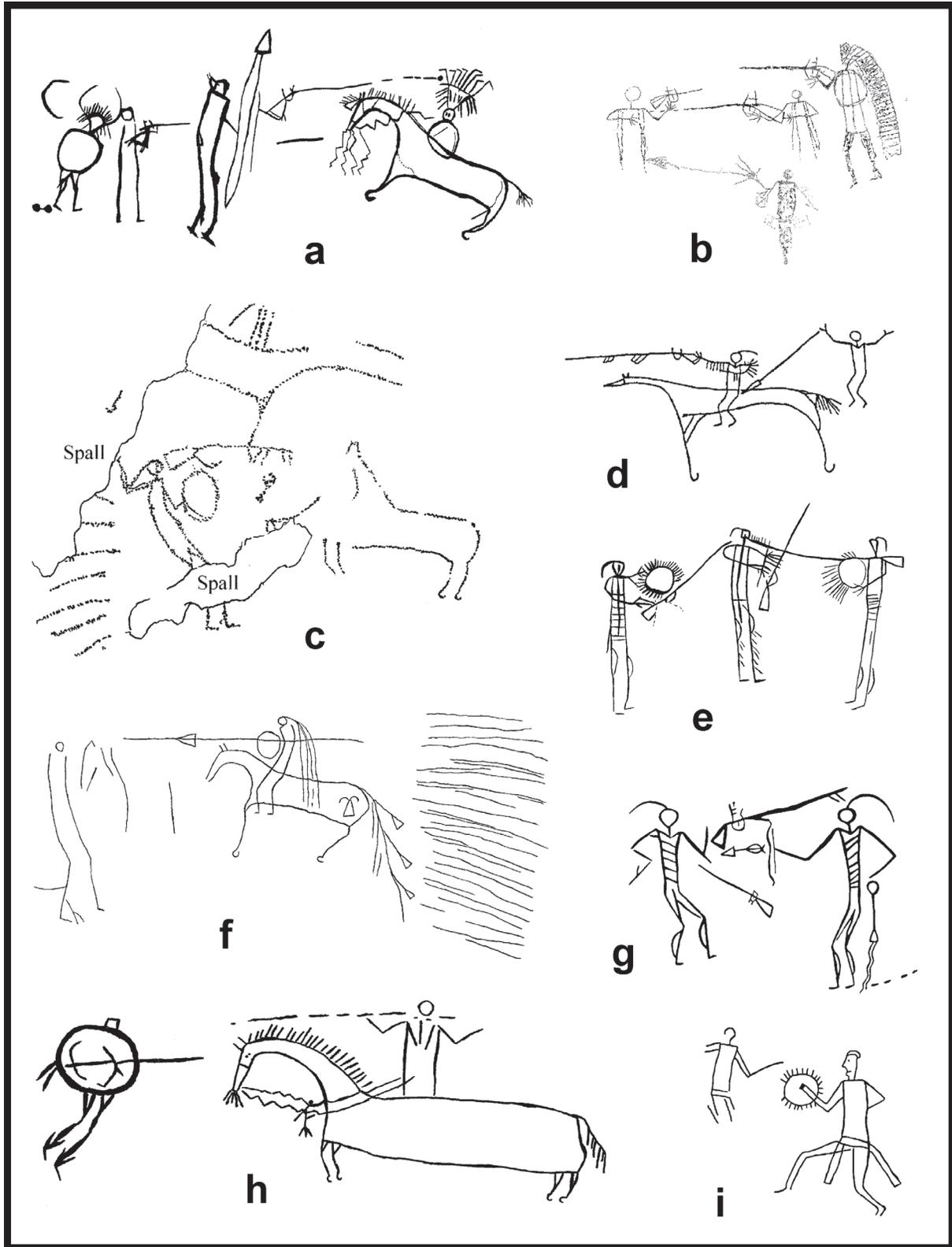


Figure 1: Combat scenes are a common component of Northwestern Plains Biographic rock art. a: No Water (48WA2066); b: Gyp Spring (48BH3987); c: Powder Wash (48SW9532); d, g: Castle Butte (24YL418); e: Pine Canyon (48SW309); f: 48HO9; h: Craig Sandrocks (5MF4306); i: Names Hill (48LN39).

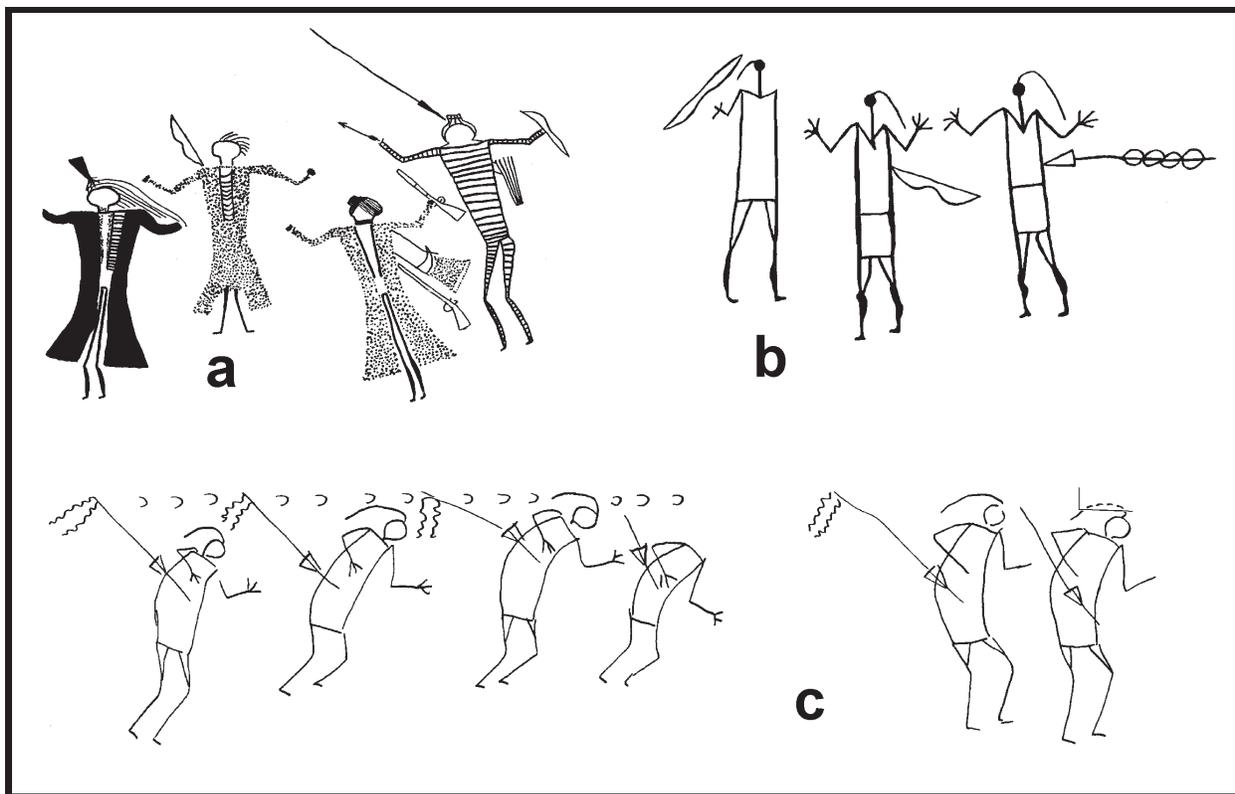


Figure 2: Coup count tallies in robe and ledger art are most often rows of enemies on whom the artist has counted coup, each struck by a floating weapon. a: Schoch war shirt, Bernisches Historisches Museum, Bern, Switzerland; b: painted war shirt, Folkens Museum Etnografiska, Stockholm, Sweden; c: Five Crows Ledger (drawing by Flathead artist Red Feather/Adolph, adapted from Keyser [2000:58]), Jesuit Missouri Province Archives, St. Louis, Missouri. Note wrapped spear shaft in b and streamers attached to spears in c.

the floating weapons that were used to strike them clearly enables us to identify and understand them as vanquished enemy warriors.

In addition to petroglyphs, occupation debris is found scattered across the broken terrace below the sandstone cliffs. Evidence of occupation, consisting of lithic scatter (predominately Tiger Chert flakes but including a few tool fragments) and eroded fire hearths, is quite dense in the area of 48SW82, but similar materials are also found in much more limited quantities throughout the extent of 48SW83. Scattered pine and juniper trees, sagebrush, rabbitbrush, bitterbrush, and yucca are the predominant vegetation in the site area, which is a typical canyon lands environment for the Green River Basin in far southwestern Wyoming.

RECORDING HISTORY

The site was first recorded about 1962 during a survey of sites that could be potentially impacted by the construction of Flaming Gorge Dam and

filling of the Flaming Gorge Reservoir (Day and Dibble 1963). The initial record notes both occupation debris (primarily lithic debitage) and a few petroglyphs (Day and Dibble 1963:10-14, 67) but none of the petroglyph images from this site were among the few illustrated in their report. Instead, what little attention the authors offered to rock art was focused on some of the more spectacular images from nearby sites 42DA14, 48SW83, and 48SW88, and two Fremont Style images from 48SW61 on the opposite side of the Green River (Day and Dibble 1963:10-14).

This site was also visited at about the same time by Russ Grimshaw and Clyde May, Rock Springs Chapter members of the Wyoming Archaeological Society, who did not differentiate between sites 48SW82 and 48SW83² in their discussion of the “Lucerne Valley” site (Grimshaw and May 1963). In their article they provided sketches of two of the dozen panels now known at 48SW82 (Figure 5) and

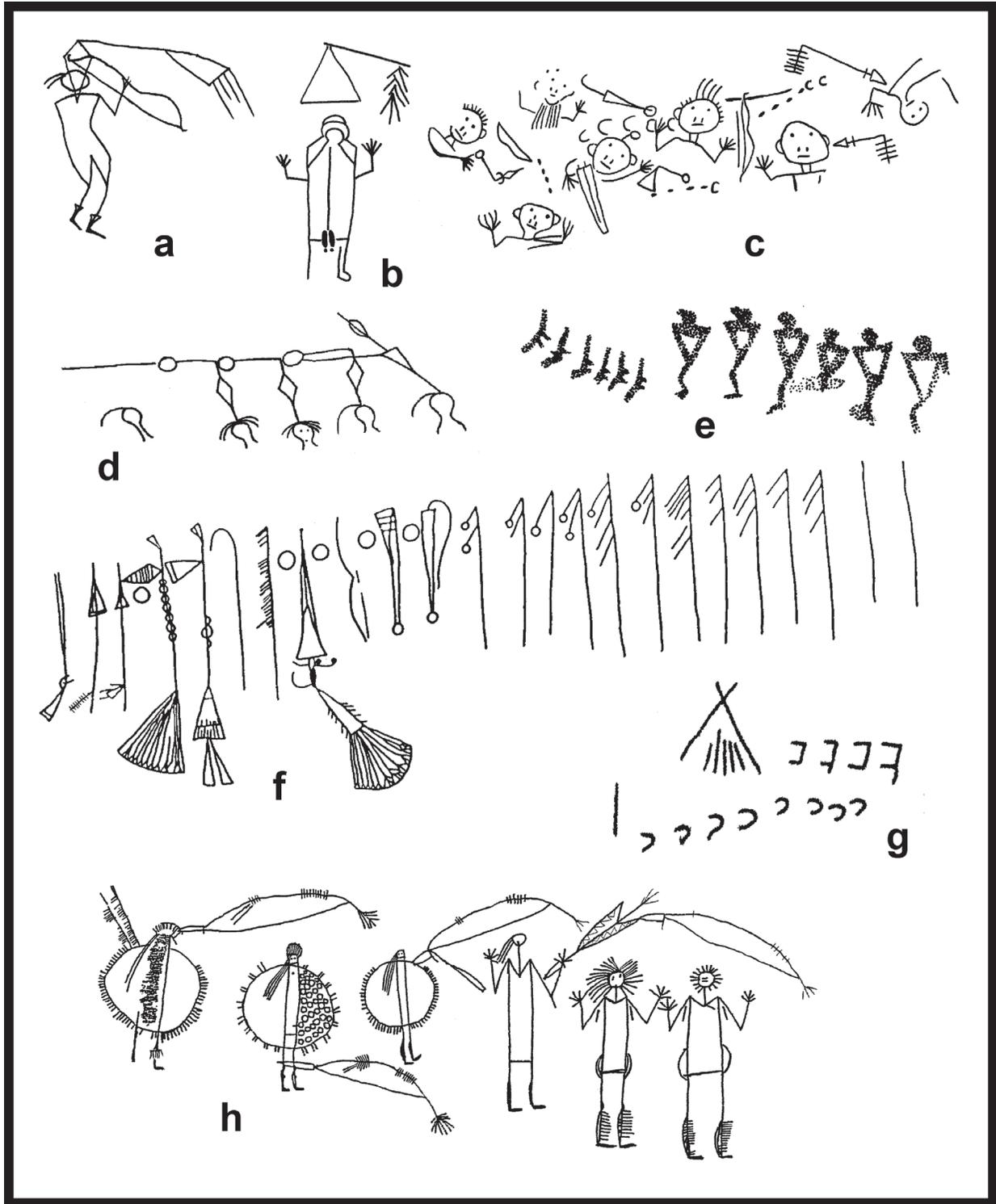


Figure 3: Coup counts in rock art include both single enemies struck with floating weapons (a, b) and tallied rows of enemies (c-e, h), war trophies (f, g), or stolen horses similar to those painted in robe art. a: site near Fort Collins, Colorado; b: White Mountain (48SW302); c: Ellison's Rock (24RB1019); d: Manual Lisa (24YL82); e: Crossfield Coulee (EiPI-19); f: Nordstrom-Bowen (24YL419); g: Writing-On-Stone (DgOw-27); h: Bear Gulch (24FR2). Note upside-down Y-shaped feathers on tabs attached to tomahawk (fourth from left) and sword (eighth from left), and quirt with turned-back lash (eleventh from left). Note variety of tabs, streamers, and wrapped handles on several weapons (a-c, f, h).

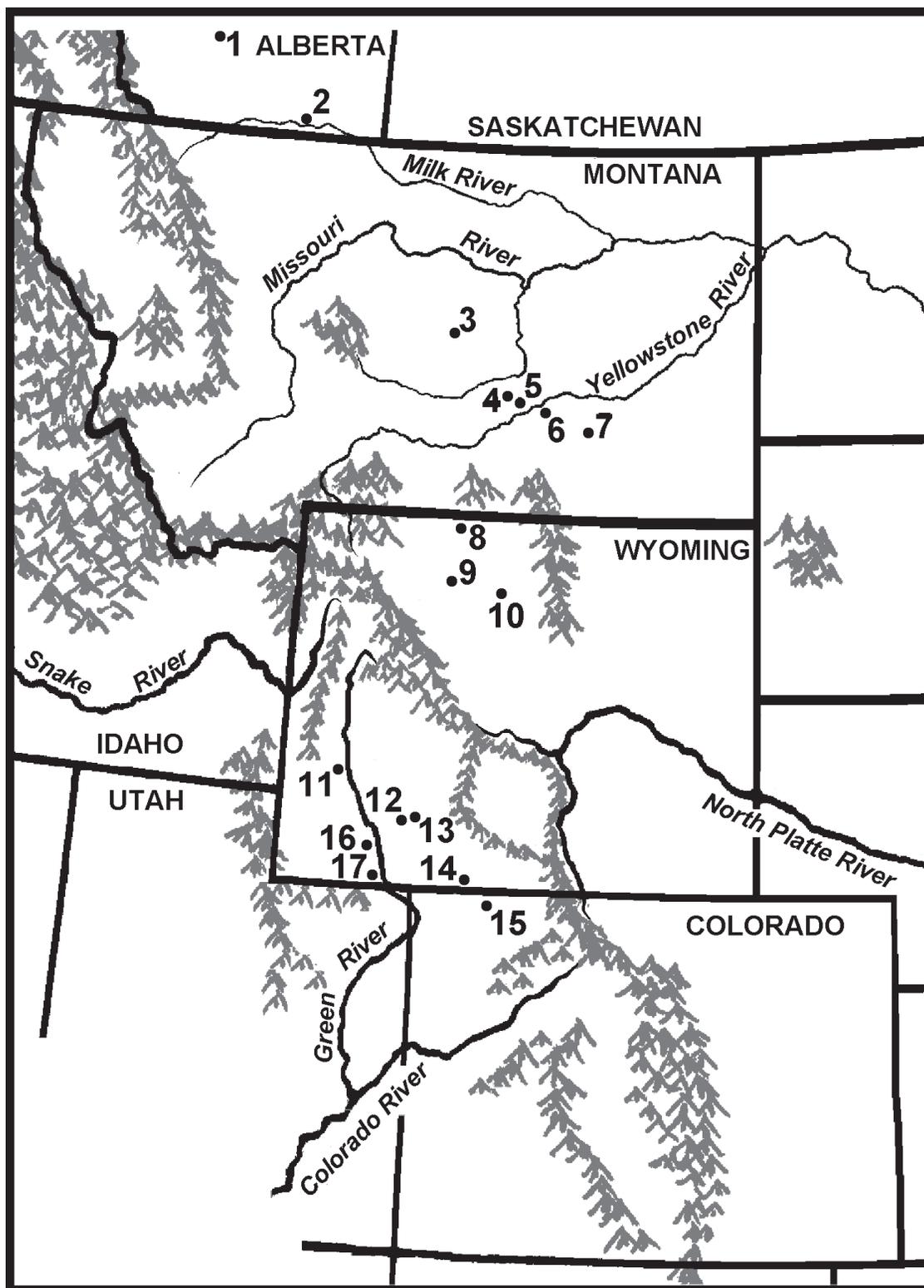


Figure 4: Northwestern Plains showing sites referred to in discussion. 1: Crossfield Coulee; 2: Writing-On-Stone; 3: Bear Gulch; 4: Nordstrom-Bowen; 5: Castle Butte; 6: Manuel Lisa; 7: Ellison's Rock; 8: Gyp Spring; 9: 48HO9; 10: No Water; 11: Names Hill; 12: White Mountain; 13: Pine Canyon; 14: 48SW9532; 15: Craig Sandrocks; 16: 48SW8319; 17: Lucerne 1 (48SW82).

scattered images from about half of the eleven loci now known at 48SW83. More than 40 years later George Poetschat and I revisited these sites specifically to see the two panels at 48SW82 that had been sketched by Grimshaw and May. During our visit we also saw much of the imagery at 48SW83 (including all panels sketched by Grimshaw and May and also two additional loci), and based on this initial

examination we returned three years later (2009) to do a full recording of both sites by photography and direct tracing on clear plastic sheets (Keyser and Poetschat 2012b). Sites 48SW83 and 48SW88 were also visited about 2007 by Mavis and John Greer, who presented a paper on some of the images that same year (Greer and Greer 2007), but they did not report any of the images (including these coup count

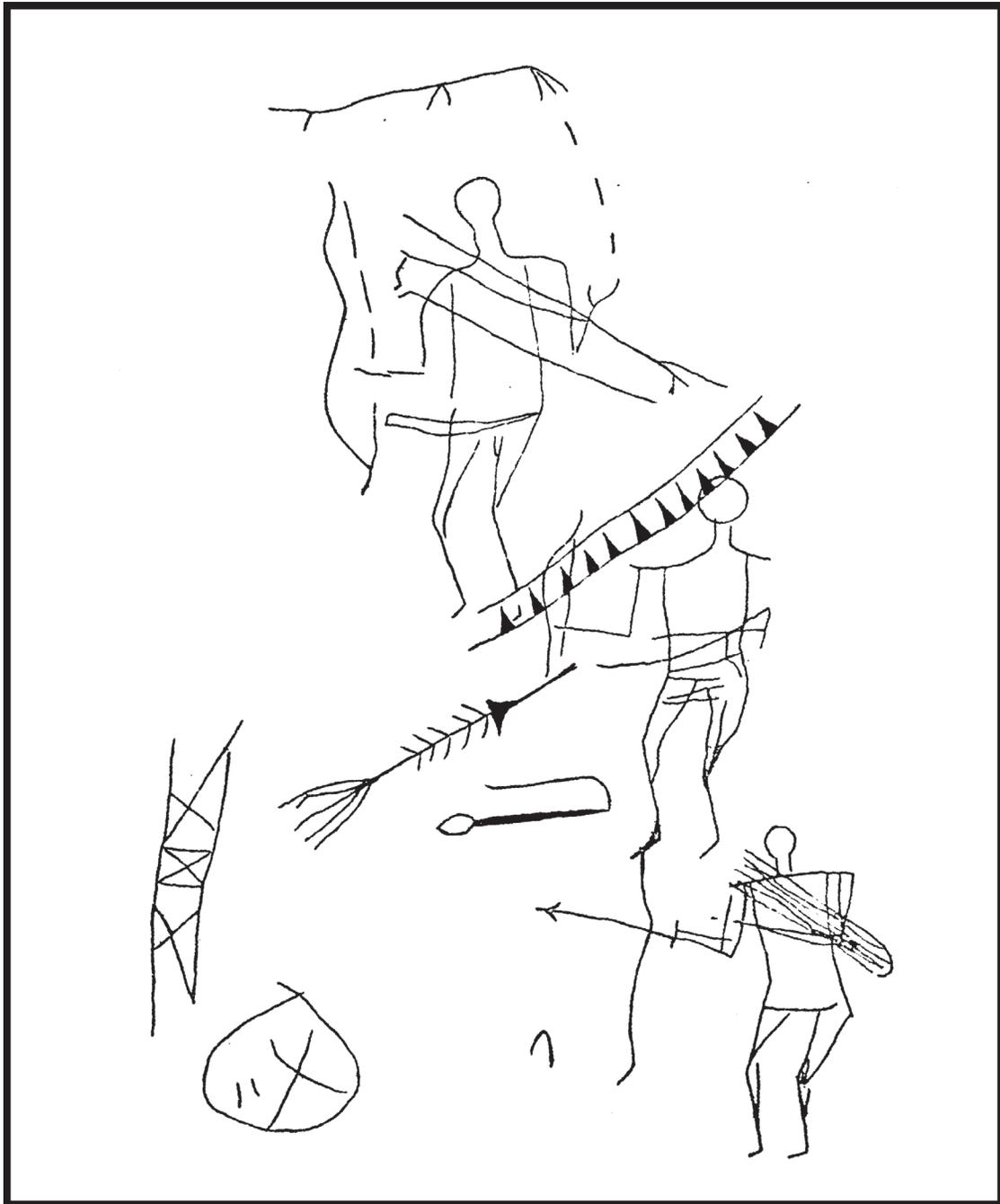


Figure 5: Sketch of coup count tally panel at 48SW82 as published by Grimshaw and May (1963).

scenes) from 48SW82.

Discussion with Jeff Rust concerning the recording history of these two sites—both of which have been visited multiple times by US Forest Service archaeologists since their initial recording (e.g., Iacovetta 1977; Loosle 1993, 1997, 2007; Mlazovsky 1981)—has led us to maintain the distinction between 48SW82 and 48SW83. We do this even though imagery from both sites has been conflated in the Grimshaw and May (1963) report and despite the fact that the distribution of cultural material at these two sites is essentially the same for more than a mile; and the distance between 48SW82 and 48SW83 is no greater than that between other pairs of loci comprising 48SW83 (Keyser and Poetschat 2012b). In fact, if these sites were being newly recorded today, they would probably be included together under a single designation. However, to maintain consistency with the Historic record (especially the Grimshaw and May report that lumps images from both sites under a single name), we have named these two sites Lucerne 1 (48SW82) and Lucerne 2 (48SW83).

COMPARISON OF THE RECORDINGS

In Plains rock art research, we are not often fortunate enough to have tracings or photographs that reveal portions of figures that have since been damaged or removed by erosion and/or vandalism. In this regard the Grimshaw and May sketches of imagery at 48SW82 (Figure 5) are quite important, for they show key parts of the tally scene that are now missing and enable a much fuller interpretation of the composition than would be possible without their work. However, as with any sketch, there are discrepancies between it and a direct tracing, and these must be documented in order to evaluate the accuracy of the sketch.

Initially, we can be certain that this is a sketch rather than an actual tracing or a tracing done from a photograph since significant problems of scale, orientation, and perspective are obvious when comparing our tracing (Figure 6) to the 1963 drawing. For example, the 1963 sketch shows the upper warrior at about the correct height, but the bottom two warriors are seriously shortened. In contrast, the lower warriors are shown almost realistically in side-to-side perspective but the upper warrior's arm and bow are spread too far to the left. In addition, the elongate geometric form filled with X-shapes

is positioned much too close to the warriors in the 1963 sketch. Finally, several of the floating weapons are positioned incorrectly. The banner-lance is drawn ending just below the upper man's feet, when it, in fact, extends significantly further out in front of his feet. Likewise, it crosses too high on the middle warrior's bow. The lower warrior's bow crosses the front leg but not the back leg of the middle warrior, showing that the middle warrior is positioned slightly incorrectly. The quirt also seems slightly out of place from where it must have been, given the remaining portion of the lash, but there is so little of this weapon still extant that it is difficult to say exactly how badly out of position it is on the sketch.

In addition to issues of scale and perspective, there are serious problems with the omission of some lines that are readily visible today and the inclusion of others that are not currently visible. Major lines in the 1963 sketch that do not now exist are the "breechclout-like" extension at the upper warrior's waist and his upraised "hand" on the right side;³ several lines at the waist of the middle warrior, a solid line for his bowstring, one or two too many "feathers" on the banner lance, and the bottom of a circle forming his head.

Conversely, lines that were obvious in our recording but missed in the 1963 sketch include the upper warrior's lower arm on his right side, almost all of the tomahawk's tab and blade, the bottom half of the middle warrior's bow, the small point on the very elaborate spear, the bottom warrior's dashed bowstring, and the top line on his quiver. Also missing from the sketch are the single vertical lines found near each warrior.

Also, some lines that seem likely to have been on the panel in 1963 were not sketched and are now missing because the slab has broken away. These include the very lowest end of the middle warrior's bow and bowstring, and the end of the banner-lance. The discrepancy in the "extra" feathers shown for the sketched banner-lance may be the result of Grimshaw and May actually drawing the entire weapon before part was removed when the slab detached, but that does not explain the obvious error in this weapon's position in the sketch.

Finally, a large crude circle with a central X and two short vertical dashes within it, which was sketched by Grimshaw and May, is not currently

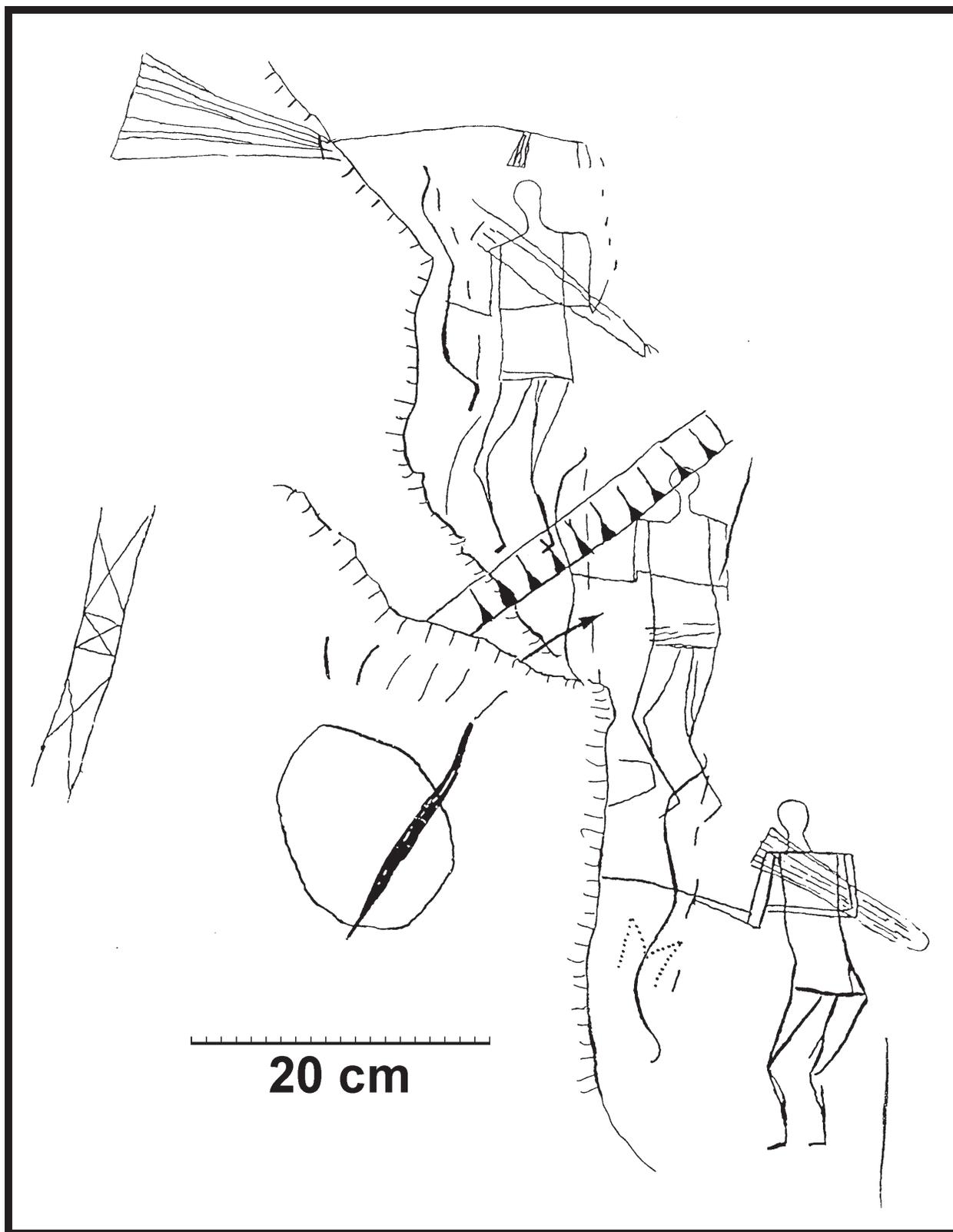


Figure 6: The coup count tally panel as recorded by Keyser in 2006/2009. Compare to Figure 5.

present on the panel (cf. Figures 5-7). However, there is a circle, bisected by a deeply incised line, with a row of six small vertical slashes just above it, carved in the area that was originally at least partly covered by the now-missing slab that contained parts of the floating weapons. When we recorded the site we were not sufficiently familiar with the Grimshaw and May sketch to know that the area now occupied by this circle and slashes was apparently covered in 1963, nor was there any evidence that this circle and other marks were much more recent than the other images. However, if the Grimshaw and May sketch is essentially as accurate in showing these missing weapon parts as it is in conforming to the remaining parts of the drawing, I am confident that the area containing the circle and slashes that we recorded was covered in 1963 by a now missing slab of rock. If this is, in fact, the case, the circle and slashes must have been drawn by recent site visitors coming here after the slab fell off sometime after 1963. I cannot help but wonder if these images we recorded were drawn here after removal of the slab by someone who remembered the circle and slashes as sketched by Grimshaw and May. However, in the absence of someone's first-hand recollection of doing this, such a suggestion cannot be confirmed.

In summary, without original photographs we cannot judge the accuracy of the missing portions of the weapons sketched in 1963, but the generally good conformance of these sketches to the portion of the composition that remains at the site suggests that the missing portions are sufficiently accurate to be used in reconstructing the original composition (Figure 7) and interpreting it as a coup count tally.

BIOGRAPHIC ROCK ART

AT 48SW82

Two panels at site 48SW82—the coup count tally and a neighboring panel showing what appears to be defeated enemies—have predominately Biographic Tradition rock art. These two panels are the subject of this report.

THE COUP COUNT TALLY PANEL

The coup count tally, carved on one southwest-facing panel located at about eye level above the top of a steep colluvial slope, consists of three rectangular body style bowmen each drawn in a relatively realistically-posed side view position (Figures 5-7). Each warrior is struck by one or two floating weap-

ons. Erosion of the panel since 1963 has removed a sandstone slab containing parts of two floating weapons and the tip of one bowman's arrow, but these can be relatively reliably reconstructed based on a sketch done by Grimshaw and May (1963:9). The three warriors are stacked one above the other and all face left.⁴ For ease of description these warriors are numbered 1-3 from top to bottom.

Each bowman holds a recurved bow out to the left with the bowstring indicated by a dashed line. The bowstrings are not drawn back and only warrior 3 has an arrow nocked in the "ready to draw and fire" position, but both he and warrior 1 carry a quiver. In typical Plains style, these quivers are shown as an elongate, narrow U-shape closed at the squared-off end and filled with longitudinal lines. They are oriented obliquely across the each warrior's torso with the top at the left shoulder. The bottom of each is far to the right of the warrior's body, about midway between his shoulders and waist.

All three warriors are nearly identically posed, with bent knees and left-facing feet. On each man the left arm extends down nearly parallel to the body and bends at the elbow to form a reverse L-shape with an angle of slightly less than 90 degrees. No hand is shown but each arm ends at or near the bow's hand grip. The right arm is drawn in almost exactly the same position as the left but the lower arm, also without a hand, reaches across the body to the other elbow. The result is a reasonably accurate representation of a bowman's position holding his weapon ready to draw and fire. The only major difference between the body morphology of these three warriors is that the arms of warrior 3 are formed of double, almost parallel lines in contrast to the stick arms of warriors 1 and 2 above him.

The rest of these warriors' bodies are also very similar to one another. Legs begin at the horizontal line denoting the bottom of the torso and show unfilled V-shaped thighs and barely rendered calves. A round head is perched atop a short, thick neck formed of two approximately parallel lines that curve up from the shoulder line. Again, only the warrior 3 is different in that he has a horizontal line demarcating his shoulders and the top of his torso. None of these warriors has any indication of clothing nor does any wear a headdress or hairdo.

A floating tomahawk with a relatively small, quadrangular-shaped blade is positioned directly

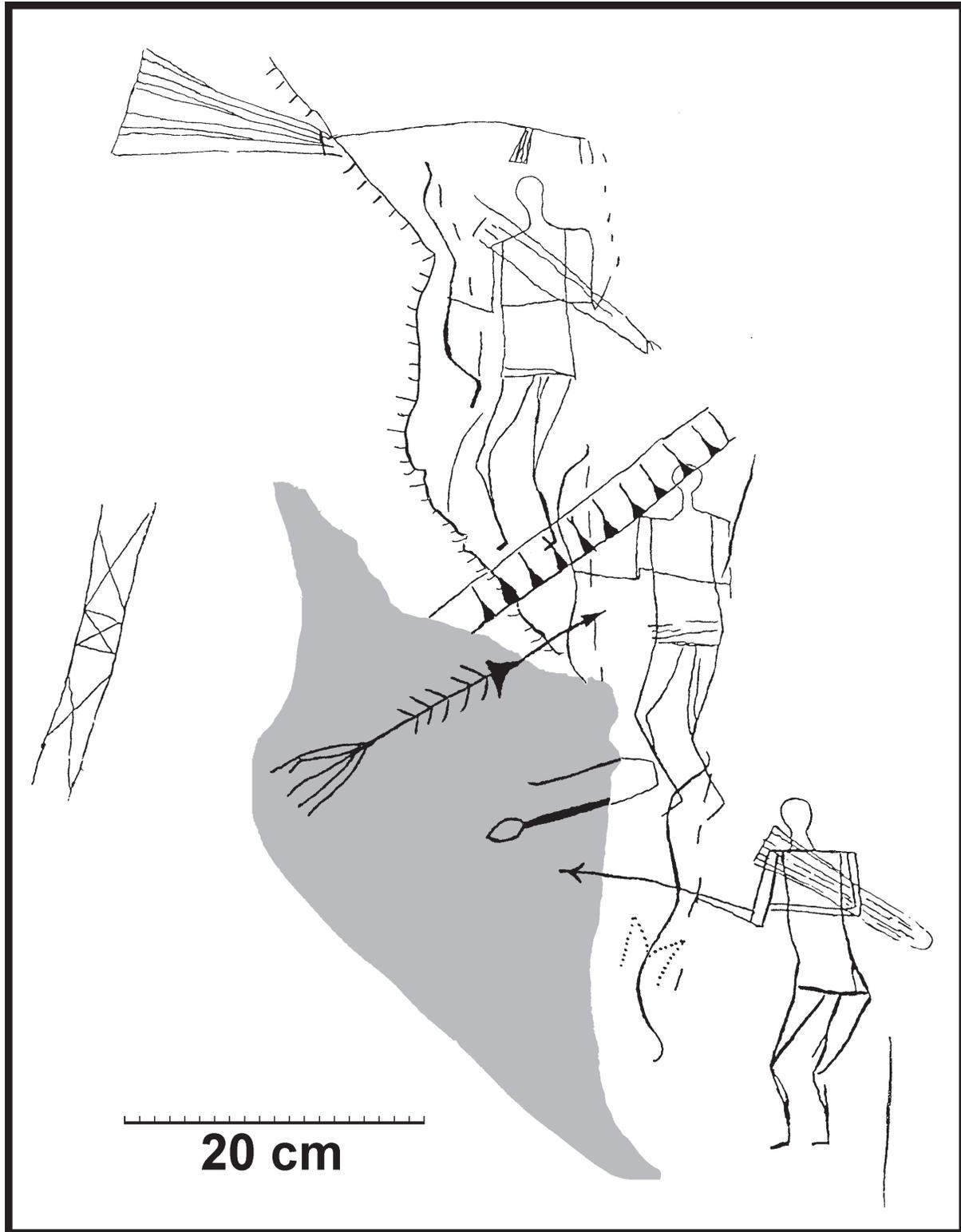


Figure 7: Hypothetical reconstruction of coup count tally panel using imagery sketched by Grimshaw and May (1963) that has been lost to erosion since 1963. Grey represents broken area of cliff.

above the head of warrior 1. The handle end of this horizontally-oriented weapon is adorned with an outsized triangular tab consisting of a long fan of nine lines closed at the wide end with a line approximately perpendicular to the tab's long axis. This tab extends backward from the handle in the same horizontal position. Just in front (to the right) of the weapon's blade the tomahawk's handle extends straight out and at the very end are two short lines pendant from it. The function of these

is unknown, but an identical configuration occurs on a tab-decorated, spontoon tomahawk carried by a woman in an 1853 Assiniboine ledger drawing depicting a scalp dance (Denig 2000:Plate 71; Ewers 1997:201; see also Figure 8i). It seems likely that these are some sort of decorative streamers.

A line of five short dashes extends from the blade-end of the tomahawk to a short vertical line that touches the warrior's right elbow and quiver. This vertical line is more than three times longer

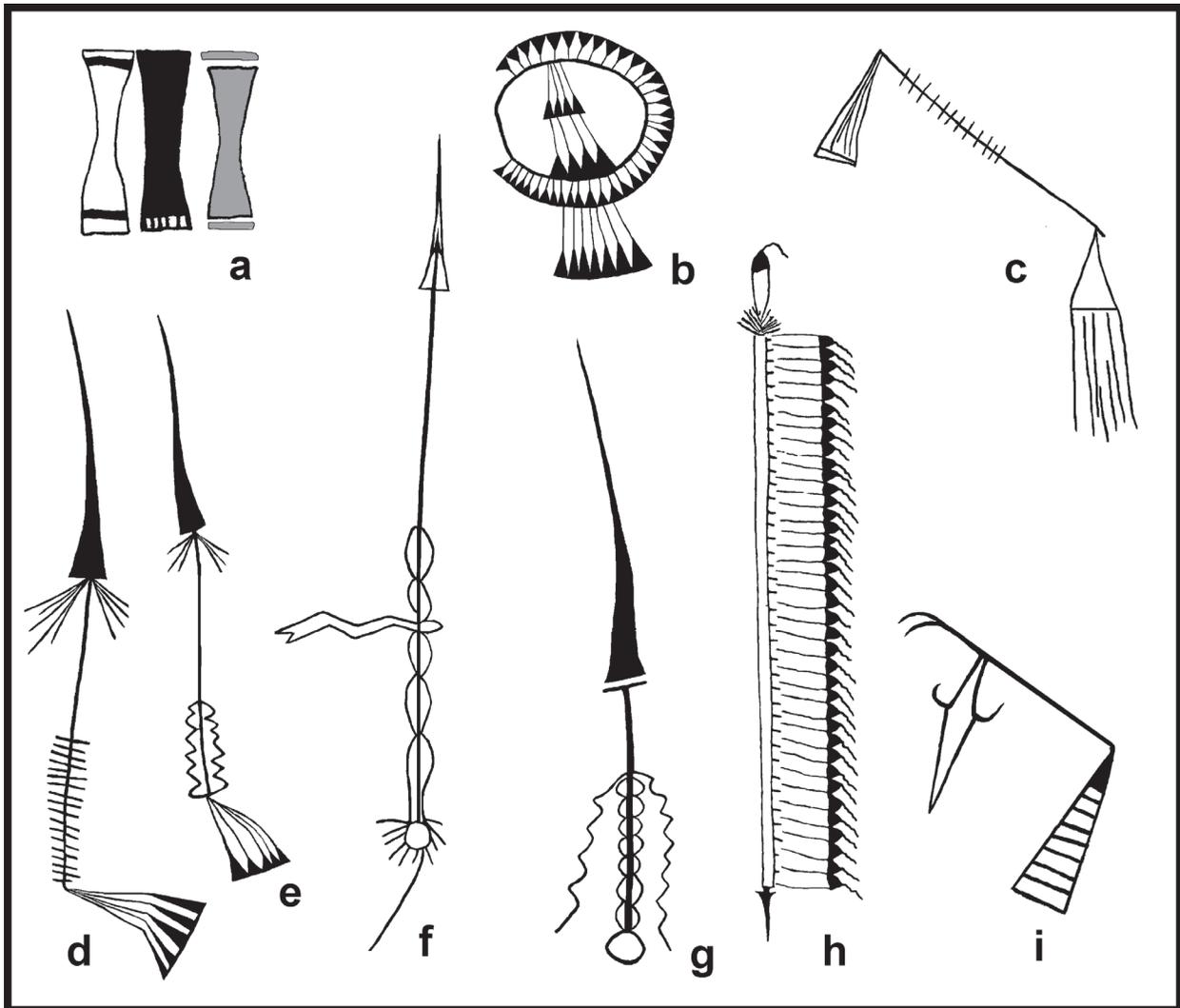


Figure 8: Plains Biographic art shows fine detail for many items of material culture. a: blankets given away as gifts to increase prestige (adapted from drawing by Mandan warrior-artist, Yellow Feather, [Ewers 1968:Plate 24]); b: shield showing triangular terminations for feathers around margin and on attached bustle (drawn from author's photograph of a Crow robe in Danish National Museum, Copenhagen); c: tomahawk with wrapped handle and tab (Writing-On-Stone, DgOw-9); d-g: spears with wrapped shafts and decorative tabs and streamers (adapted from various Crow Indian drawings on robes and war shirts [Brownstone 2001:71-80]); h: banner-lance (adapted from drawing by Sioux warrior-artist, Thunder Bear, [Wissler 1912:68]); i: Spontoon tomahawk with tab and decorative projection above the blade (adapted from Assiniboine drawing by an unnamed warrior artist [Denig 2000:Plate 71]). Note eagle feathers shown with filled, Y-shaped end (b, d, e), tabs (c-f), streamers (d-g), and wrapped handle (c) and spear shafts (d-g).

than the longest dash.

The middle Bowman, warrior 2, is nearly identical to the upper one in pose and armaments. He is hit across the face with a long feathered, banner-lance drawn in a typical Plains style. No point is shown and feathers are drawn as a series of evenly spaced, filled-in Y-shapes that hang down perpendicularly from the spear shaft. These are connected at their filled-in tips with a line approximately parallel to the shaft. Similar Y-shapes are commonly used in rock art and robe art (Figures 3f, 8b, d, e) to represent eagle feathers (Keyser 2011).

This weapon is almost certainly a banner-lance, typically made with a long narrow strip of cloth (sometimes composed of multiple panels sewn end to end) attached to the spear shaft. This cloth strip served as a base on which eagle feathers were sewn. Such lances were used as officers' emblems (Figure 8h) in various military societies in several Plains tribes (Murie 1914:562, 578; White Bull 1968:42, Plates 8-11; Wissler 1912:26, 68; 1913:392-394). They are often illustrated without an obvious point, so this example at 48SW82 may be complete. It is possible, however, that a point was drawn on this weapon but this part was broken away when the slab detached. If so, the point would have been on the end opposite that which strikes the enemy, but this is also a relatively common occurrence for some weapons, such as crooked lances, that were used more to strike coup than to kill an enemy. No point is illustrated by Grimshaw and May (1963:9), but close examination shows that their sketch is unreliable for such small details. Close examination of this petroglyph shows that the lance is superimposed upon the warrior's head, indicating that it was drawn after the artist completed the human figure.

At about waist level for warrior 2 a second lance points in from the left where it crosses his bow and nearly touches his body. Visible today only as the forward third of this weapon tipped with a small triangular point, the 1963 panel sketch shows a longer lance with a triangular "flag" of some kind and various other decorative attachments on the spear shaft. These other attachments include a series of shallow, nested V-shapes forming a chevron design oriented point-forward along the middle of the spear shaft directly behind the flag, and a tab of five lines fanned out from the weapon's butt end. Such elaborations could represent any number of types of feathers or

streamers, or animal pelt wrapping or tabs, all of which were common decorative elements on Plains Indian lances and other weapons (Figure 8).

As originally sketched (Grimshaw and May 1963) this lance has a long needle-sharp point that flares to the triangular shape about one-third of the way down the spear shaft (on the now-missing portion), but we noted and recorded a small triangular point at the extreme end of the spear shaft nearest warrior 2. We cannot reconcile this discrepancy except to note that the 1963 sketch misses other similarly subtle details and includes some lines that do not exist (see Comparison of Recordings, above).

Warrior 3, the lower one, is very similar to the upper two, although he evinces slight distinctions in the form of arms and neck, and he is the only one to have an arrow nocked in his bow, which gives him a more "ready to fire" appearance. Like warrior 1, he carries a quiver slung across his body, though it is somewhat more precisely drawn than the upper man's. Positioned just above the bow of warrior 3 is a quirt, visible today only as a sideways U-shape, but shown in the 1963 sketch as a relatively long-handled whip with the lash curled back over the top of the handle and an oval, loop wrist strap at the handle's butt end. Quirts are shown in nearly identical fashion in rock art, robe art, and ledger drawing (Figure 3c, f, also see Keyser 2004:97; Keyser and Cowdrey 2008:28-30). Although this quirt is positioned at the feet of warrior 2, such floating weapons typically are positioned just above a vanquished enemy. Combined with the absence of any other weapon near warrior 3, I believe that the quirt's position indicates it counts coup on this man.

There are three relatively long vertical lines on the panel, each positioned next to one of the warriors. Near warrior 1 the slightly curved line is very shallow and occurs just in front of his leading knee. The line near warrior 2 overlaps his arm on the left; and the line near warrior 3 is behind him and extends from about mid thigh to below his foot. The lines near warriors 2 and 3 are deeper and more distinctly drawn than that near warrior 1. None of these lines are in the sketch by Grimshaw and May (1963), and it is possible that they have been added after their sketch was drawn. Conversely, the Grimshaw and May sketch omits many small details, and these lines may likewise have just been ignored. If they

are part of the composition, they may represent other weapons touching these men, but they are much simpler than the obvious weapons. Additionally, similar lines are quite common on other rock art panels at this and neighboring sites, so these lines may be later native rock art not directly relating to these figures.

Finally, to the left of the warriors is a long, vertically-oriented, rectilinear figure showing three compartments, each inscribed with an X. The central compartment is approximately square, while those above and below it are about three times longer than they are wide. Though somewhat out of place, this image was sketched by Grimshaw and May (1963). Identification of this is speculative, but its form suggests an object that has a beaded, painted, or woven design. This could represent a blanket, a parfleche bag, a medicine bundle, or some sort of belt. Its association with the coup count tally is also somewhat speculative, but it might represent some sort of captured war trophy, as do all sorts of similar images in robe art and rock art (Brownstone 1993; Dempsey 2007; Keyser and Klassen 2001, 2003). Among the Mandan, Hidatsa, and Sioux, somewhat similar forms (Figure 8a) were used to represent blankets captured as war trophies or given away to augment a man's status (Ewers 1968:Plate 24; Furst and Furst 1982:178, Plate 165).

Just a few meters to the west of the coup count tally is a conjoined pair of bison drawn with each animal's separate front quarters sharing a common body and legs.

THE WOMAN PANEL

The second scene is located considerably higher on the cliff, and just around the corner from the tally composition. Carved on a southeast-facing surface more than three meters above ground level, it was necessary to access the images by ladder in order to trace them.

The simple scene shows a warrior that is stylistically similar to warriors 1-3 standing just to the right of, and facing away from, a much larger figure of a woman, who is identified by her dress and hair (Figures 9, 10). The warrior's body style is generally similar to that of warriors 1-3, but his arms have three-fingered hands and are bent at the elbow and upraised in the "prayer" posture typical in Plains rock art. Like warriors 1-3 he has slightly bent legs and simple, single-line feet. He has no

lower torso-line and his head, which is perched atop a long, single-line neck, is proportionately almost twice as large as those of the three warriors in the other scene. He holds his bow out to his right, and although it is recurved, the bowstring is represented as a solid, rather than dashed, line. Two arrows, each with a V-shaped nock but without any indication of fletching or point, are positioned parallel to, and just in front of, the bow stave in a common plains art depiction of a warrior carrying extra arrows ready to fire (Keyser et al. 2012). The warrior also has a crudely drawn quiver shown as an elongate V-shape whose wider end is closed by a line approximately perpendicular to the long axis. The quiver is infilled with three lines spanning its long dimension. It is oriented across the warrior's body from the left side at his waist to above his right shoulder.

The woman is identified by her small round head just peeking over the top of a tall collar, the broadly flaring dress she wears, and one leg and foot that extends down out of one of the inverted U-shaped openings in the garment's bottom. Her head is crowned with a wild profusion of lines forming a broad fan shape that apparently represents the "disheveled" hair style that characterizes many women (especially enemy women) in Plains rock art (Greer and Keyser 20008; Keyser et al. 2012; McCleary 2008). She also has a single stick arm that extends out from the right sleeve of the dress and curves up in a broad, shallow U-shape. No arm emerges from the left sleeve and no leg extends from the right opening in the hem of the dress. The form of the garment's hem is unique, but if one views the outer openings as positioned to show the legs, the middle upside down U-shaped opening then might symbolically represent her vulva.

Just below this composition, but on a separate cliff surface are a lizard and bison, but neither appears to be directly related to the Biographic drawing.

THE WORK OF TWO WARRIOR-ARTISTS

Using a simplified analysis of stylistic signature (cf. Keyser and Brady 1993; Keyser 2000:61-66) that relies on general motif morphology and proportion, control and precision of line, and specific attributes of various images, we can identify these two panels as the products of two different but related



Figure 9: Sketch of second panel at 48SW82 as published by Grimshaw and May (1963). Note general similarity of bowman to those on coup count tally panel (Figure 6).

artists. The four bowmen are all sufficiently similar rectangular body human figures to be classified as parts of the same general style. Clearly these were drawn by artists who shared the same concept of how to illustrate the human form. However, several factors indicate that the same man did not draw both scenes. For instance, while warriors 1-3 in the coup count tally all have the same general head and neck shape and arm posture (differing only slightly in the use of double lines for arms and a top torso-line for warrior 3), warrior 4—on the other panel—has a completely different size and shape for his head and neck and shows upraised arms with clearly depicted hands. Likewise, the bow of warrior 4 has a solid-line bowstring that contrasts to the dashed line used for all others. Proportionately the warriors in these two compositions are also very different (Table 1). Warriors 1-3 all have between 51 and 54 percent of their total height above the waist, while warrior 4 has 67 percent of his height in that measurement. This is largely due to the relatively much shorter legs and longer neck for warrior 4. Finally, in overall form

warrior 4 is “looser” in composition than the other three; with several places where lines do not precisely meet (e.g., left side of torso to shoulder-line, bowstring to upper end of bow, top of head). He also lacks a lower torso line. This “looseness” strongly contrasts to warriors 1-3, where such imprecision occurs only once (on the right calf of warrior 3).

There are no ethnographically distinctive attributes to these drawings, so we cannot assign them to any known ethnic group. In this area the Shoshone and Shoshone-Bannock are resident groups that participated fully in the Plains warfare complex by counting coup, and who are known to have drawn rock art of such exploits. The Utes, also resident in this area claimed not to have counted coup (Keyser and Poetschat 2008:68; Smith 1974:33, 239). However, many other groups raided in and traveled through this area, including the Cheyenne, Arapaho, Crow, Blackfeet, Sioux, Assiniboine, Gros Ventres, Comanche and possibly even the Hidatsa and Pawnee. Coup count rock art drawn by Shoshone and Comanche warriors has been documented in the

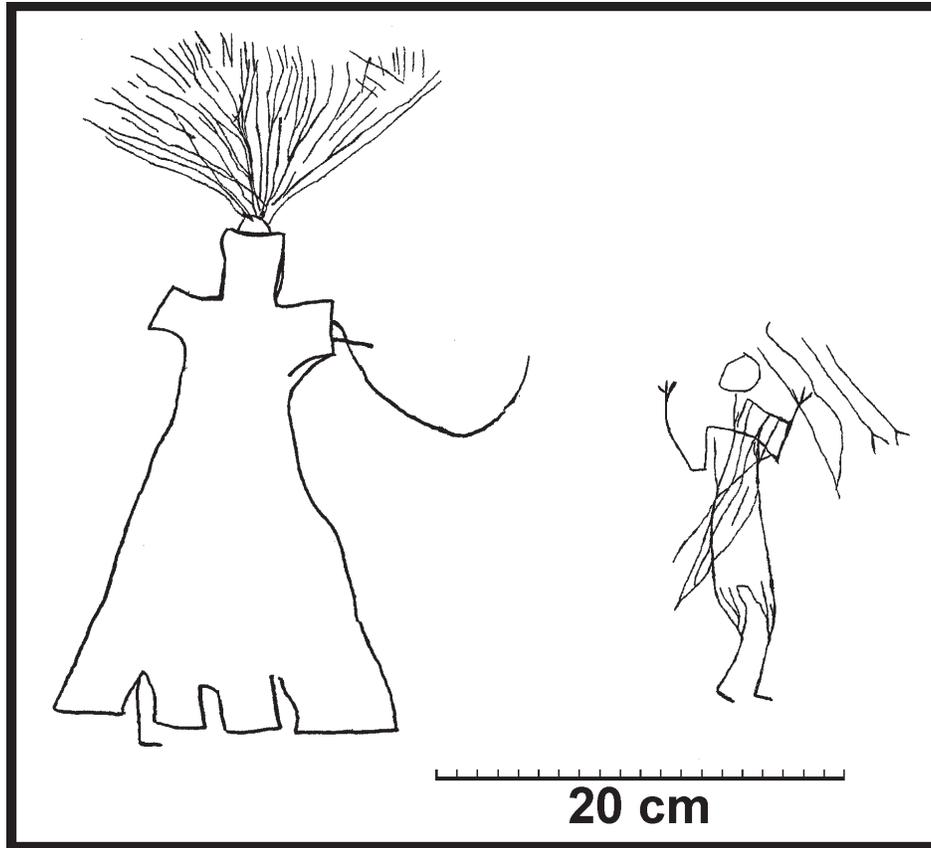


Figure 10: Second panel at 48SW82 as recorded in 2009. Compare to Figure 9.

Green River Basin, but any of these other tribes might also have drawn these scenes.

DATING THE COMPOSITIONS

Several elements of the coup count tally securely date it to Historic times, albeit the early part of the Historic period given the absence of guns. The strongest indication is the quirt that strikes warrior 3. Shown as a classic form, with lash curved back toward the handle, this item demonstrates the association of the horse with this composition. Likewise, the tomahawk’s rectangular metal blade indicates that it is a Euro-American trade item, obtained only after French and English from the northeast and

Spaniards from the south begin introducing these items into the Indian trade. Additionally, the banner-lance almost certainly includes a long, narrow strip of trade cloth to which eagle feathers are attached. Although it is likely that such cloth first entered the Northwestern Plains in Protohistoric times, it was widely used to make clothing and decorate weapons only after the mid 1700s. Finally, recurved bows carried by all four warriors support an Historic period date, since this type of bow is found exclusively in Historic period rock art on the Plains (Keyser 1977:38; Keyser et al. 2012:117).

This combination of items—trade cloth, quirt,

Table 1: Comparison of Measurements of Warriors

ATTRIBUTE PROPORTIONS	WARRIOR 1	WARRIOR 2	WARRIOR 3	WARRIOR 4
Head Width:Body Width	1:2.7	1:2.2	1:2	1:1.3
Torso and Head Height:Body Height	1:1.9	1:2	1:1.8	1:1.5
% Body Height Above Waist	54%	51%	54%	67%

metal axe, and recurved bows—suggests that these scenes were carved in the early part of the Historic period. Based on archaeological and ethnohistorical evidence, we know that horses first entered this area between about A.D. 1650 and 1690 (Eckles et al. 1994; Secoy 1992). Metal-bladed tomahawks and trade cloth could have been obtained after about the mid 1600s, and would have been widely used in the area before A.D. 1800. Conversely, the gun was uncommon in this area of southwestern Wyoming until at least the very late 1700s and may not have been widespread throughout the Green River Basin until the first decades of the 1800s (Secoy 1992:45-64, 105-106). The prevalence of bows and arrows in these scenes strongly suggests that they predate the common use of guns. Thus, we suggest that the coup count tally dates to the period between about A.D. 1650 and 1800. Given the stylistic similarities between warrior 4 and those in the coup count tally, and the fact that warrior 4 is armed with a recurved bow and arrows, we suggest that it dates to approximately this same time period.

READING THE NARRATIVE

Using the Biographic art lexicon (e.g., Keyser 1987; Petersen 1971, 1988) we can readily understand the actions portrayed in the coup count tally, and we can make an educated guess as to what the other scene depicts.

THE COUP COUNT TALLY

The three figures in the coup count tally are enemy warriors on whom coup has been counted as indicated by the floating weapons that strike each one. Although aligned in a vertical column rather than a horizontal row they appear to represent three separate battle actions in which the artist has performed the illustrated war honor. The vertical orientation is not particularly common for Biographic art, but it was used for some tally compositions (Brownstone 2001; Keyser and Poetschat 2012a; Keyser and Klassen 2001:289) and the form of the cliff on this panel essentially mandates a vertical rather than horizontal structure.

Warrior 1 was struck (and quite likely killed) with the elaborately decorated tomahawk. Dashes emanating from this weapon and leading to the warrior represent tracks of the artist (who struck the blow) running up to the Bowman, either to count the coup or to take his quiver. Although no capture hand

is illustrated, the use of these tracks to augment the floating weapon, suggests that this represents more than merely striking a blow with the tomahawk, and the orientation of these directly to the quiver implies capture of it as a war trophy.

Warrior 2 was struck by two weapons. The banner-lance is shown actually touching him, almost certainly indicating the striking of a coup rather than a killing blow, which is consistent with the fact that no point is shown on the lance and the blow is probably not a fatal one. In contrast, though it does not actually touch the Bowman, the spear seems likely to be the weapon that killed him.

Warrior 3 was lashed with a quirt, and the fact that he is shown with an arrow nocked and almost ready to fire implies that he was alive when struck. Striking a live enemy with a quirt is a very brave deed, not only because the quirt is not a lethal weapon, but also because it implies that the victor gave up the advantage of his horse to engage a pedestrian enemy. This coup is explicitly shown in several robe and ledger drawings (Afton et al. 1997:240-241; Keyser 2004:97; Keyser and Brady 1993:8-10).

These three explicitly depicted coups are typical war honors drawn in the Biographic art that was a major part of the Plains warfare complex. Despite the fact that each Bowman is struck by a different weapon, and the middle one was hit with two, these are probably all coups of a single warrior. We know that a single man could have struck all of these blows since drawings by other warriors show them using a variety of weapons to count various coups (Keyser and Brady 1993; White Bull 1968) and the spear that appears to have killed the middle Bowman might actually be the weapon of a different warrior who was credited with the first strike on, and killing of, this individual. Counting coup on a man wounded or killed by someone else was a common practice, and illustrating such a coup often entails drawing the weapon of the different warrior who first killed or wounded the enemy (Afton et al. 1997:184-185, 188-189; White Bull 1968:35, 44, Plates 3, 9).

Furthermore, each of these deeds is slightly different, and each would have been ranked differently. The uppermost coup includes both striking an enemy and taking a war trophy; the middle coup was probably a second coup (wherein the bow-lance bearer struck the enemy after another of his comrades had

struck and killed him with the decorated lance); and the lower coup may represent a first coup struck after the artist had given up the advantage of his horse. In all, these display a series of highly ranked coups that any Plains warrior would have thought worthy of recounting.

It is possible that warriors 1-3 represent coups of different men drawn by a single artist either to commemorate an entire engagement with an enemy force or to claim credit for war honors performed by several men under his command. Both of these scenarios occurred in Plains Biographic art, and neither can be ruled out for this composition. However, the simplest explanation is that these are noteworthy honors of a single man.

THE WARRIOR AND WOMAN

The second scene, showing a warrior armed with bow and arrows and a woman almost completely obscured by her dress, is much more difficult to interpret. The two humans do not interact, nor are there floating weapons that clearly denote obviously defeated enemies on whom coup has been counted. The woman has a very distinctively cut dress, but this garment obscures all but very small, simply-drawn parts of her body. The absence of any interaction between these figures, coupled with the fact that the armed warrior faces away from the woman, suggests that it is unlikely that this represents a combat scene or any other obvious narrative interaction involving them as a couple. Instead, it seems most likely that these are vanquished enemies, drawn—like those in the tally—to represent a warrior's coups. This supposition is lent some support by the presence of the woman, since women in Biographic art are most often captured enemies (Keyser et al. 2006; Greer and Keyser 2008). However, if these figures do represent defeated enemies, the absence of obvious coup counting conventions (e.g., floating weapon, capture hand) is puzzling in light of the structure of the nearby coup count tally. However, there is ample precedent in both robe art and rock art for an artist to simply draw vanquished foes, without any other elaboration (Keyser 1996; 2011; Keyser and Brady 1993). In any case this scene appears to have been drawn by an artist of the same cultural tradition as the coup count tally.

SUMMARY

In summary, petroglyphs at the Lucerne 1 site

are Historic period Biographic Tradition art. One scene shows a warrior's tally of three coups he counted, including striking enemies and taking a war trophy. A sketch of these images, drawn in 1963 enables us to reconstruct parts of three weapons that have since been destroyed when a small slab of sandstone broke off of the cliff. All drawn by a single artist, these three coups indicate that this man was a high-status warrior among his group.

A second panel shows two other humans that may also be defeated enemies. Drawn in the same general style as the coup count tally, this composition was drawn by a different artist, and is not as detailed a rendering as the other. Both of these scenes take their place in a growing corpus of Biographic rock art renderings known from the Green River Basin (Keyser 2008; Keyser and Poetschat 2005, 2008; Keyser et al. 2004; Loendorf and Olsen 2003).

(Endnotes)

¹ Day and Dibble (1963:67) erroneously place the site on the "left bank of Linwood Canyon." This mistake may be due to poor quality maps available at the time of their survey, which caused them to misidentify the small, unnamed canyon that runs just to the east of the site as Linwood Canyon.

² Grimshaw and May apparently did not visit 48SW88, and may not have known of it.

³ This "hand" is apparently a misrepresentation of the lower dashes that extend down from the tomahawk to the warrior's elbow.

⁴ Right and left are described from the viewer's perspective.

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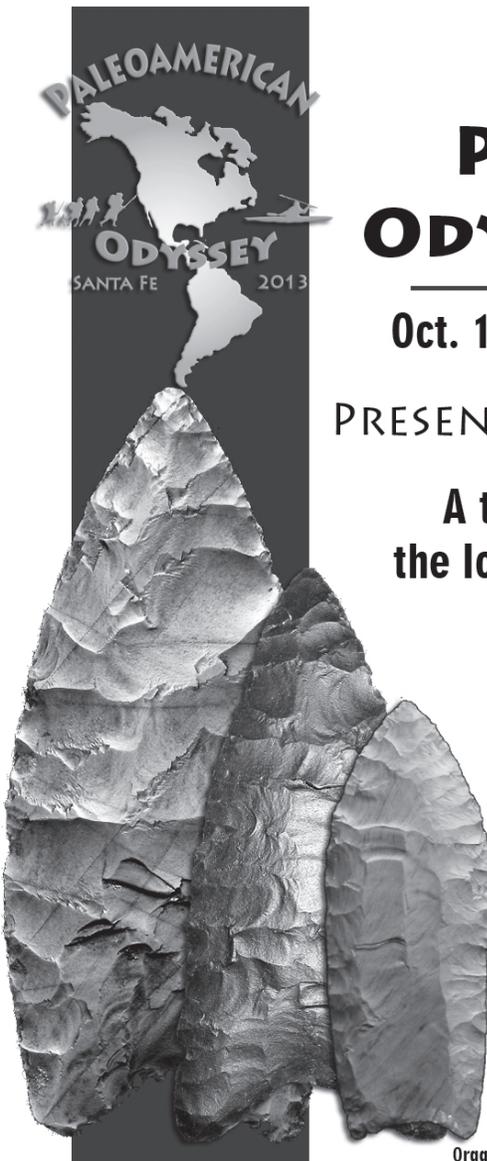
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A CONTEXT FOR THE 48SW14906 SOAPSTONE PIPE FRAGMENT

By
Richard Adams

INTRODUCTION

A soapstone pipe fragment was found at 48SW14906, an NRHP-eligible prehistoric site near the Eden Reservoir in Sweetwater County, Wyoming, by archaeologists working for Kail Consulting. Prehistoric chipped stone bifaces, meta-quartzite and chert debitage, and five fire-cracked rock scatters were also found at 48SW14906.

The fragment (Figure 1) came from the body of a pipe. Extrapolating from the fragment, the complete pipe was straight-sided, well polished and smooth. The original pipe was slightly conical or cucumber shaped. A red rind covers most of the exterior surface of the fragment.

It is made from light gray (2.5Y 7/2 or 5Y 7/2)

soapstone (aka; steatite). It is soft (Mohs hardness of 1), and probably whitish in a freshly cut state.

The fragment weighs 7 grams and it measures 27 by 24 about 5 mm thick. The estimated inside diameter is not more than 16 mm. Estimated outside diameter is 26 mm. I suspect it came from closer to the distal end than the proximal.

Few manufacturing marks are visible. Both the interior and exterior surfaces are well polished. Judging from the polish on the broken edges, the pipe has been in a fragmentary state for some time. Only three longitudinal striae are visible on the interior surface. These striae have U-shaped cross sections associated with stone tools. V-shaped striae are usually associated with metal tools. No rifling



Figure 1: Steatite pipe fragment from 48SW14906.

marks, which generally indicate manufacture with a stone twist drill, are present. Manufacturing marks on three-quarters of the exterior surface are obscured by a red rind. The exterior is also well-polished. The only marks on the exterior are a series of 8 mm long sub-parallel scratches oblique to the long axis of the pipe. There are no decorations; however, since the fragment is from the body, not the end of the pipe, decoration, which generally occurs at the distal end, cannot be ruled out.

A red rind covers about three-quarters of the exterior surface. The red substance is a fairly uniform 2.5YR 7/4 (light reddish brown) color. The rind's texture is grainy. It looks like the calcium carbonate rind found on the undersides of terrace cobbles, but not as thick. The rind is less than 1 mm thick. It could be dried aboriginal paint. Neither paint nor tarry residue is present on the inside surface. According to archaeologists familiar with the site, no other artifacts at 48SW14906 exhibit any red staining.

SOAPSTONE PIPES IN WYOMING

Wyoming's carved stone pipes are enigmatic objects. Although some pipes were used to smoke tobacco or other mixtures, alternative functions such as sucking tubes, cloudblowers, and ornaments are possible. Only one of the 32 pipes described here has any residue.

Like steatite vessels, carved stone pipes are rare finds in archaeological excavations. Some have come from controlled site excavations, but just as many are unprovenienced. The distribution of pipes described here is shown (Figure 2); a sample of tubular pipes from Wyoming is also shown (Figure 3).

Tubular bone pipes were recovered in the Middle Archaic level of Mummy Cave (48PA201) (McCracken 1978:114). A fragment of a tubular steatite pipe was found on the surface at the Dead Indian Creek site (48PK551), another Middle Archaic site (Frison and Walker 1984). Whether the pipe is the same age as the rest of the site is a matter of speculation. Pipes have been recovered at Late Prehistoric sites with Shoshonean affiliations, such as the River Bend site (McKee 1988), Daugherty Cave, the Kobold site, and the Eden-Farson site (Frison 1968, 1970, 1971, 1978, and 1991).

Tobacco has played a large role in the ritual

life of most North American Indian groups since the first millennium B.C. when it shows up in the archaeological record of the Mississippi valley (Robicsek 1978:2). It is probable tobacco was grown everywhere corn was grown (Miles 1963:214). Tobacco is a common offering, and is often used as incense (Robicsek 1978:5). There are a number of ways to partake tobacco: smoking pipes, cigars and cigarettes, chewing, sniffing snuff (tubular pipes may have been used for this), and enemas (Robicsek 1978).

RESIDUE

Some of the most fascinating evidence for smoking comes from the Mummy Cave site (48PA201). This impressive site contains 38 levels of cultural materials which date from Late Paleoindian to the Late Prehistoric. In the McKean level, radiocarbon dated to 2425 B.C. (Husted and Edgar 2002:26), there were four tubular bone pipes:

Smoking apparently played a part in the life of the McKean people, as we recovered four tubular bone pipes from this horizon. These pipes are three to four inches in length, and average three quarters inch in diameter. The inside of these pipes contain a carbon crust. According to analyzation by the Jarret-Ash laboratory, this carbon is definitely burned organic material. The pipes had been made out of the leg bones of mountain sheep. They are highly polished (McCracken 1978:30).

Only one of 32 steatite pipes examined has organic residue adhering to the inside, yet residue from pipes smoked 4500 years ago is still present on bone pipes. The Daugherty Cave pipe fragment is the only pipe part in the sample with black organic residue. This alone makes it remarkable, but it also appears to be a "killed" pipe. A "killed" pipe has been intentionally destroyed by crushing or cutting, possibly in a ceremonial manner. The Daugherty Cave tubular pipe fragment is 26 by 18 mm and covered with organic material. Two of the four edges of the fragment have been cut through, the third is part of a circumferential break, and the fourth side is too indistinct. There is organic residue on both sides of the pipe, and also on the cut and broken edges. This raises the possibility the residue

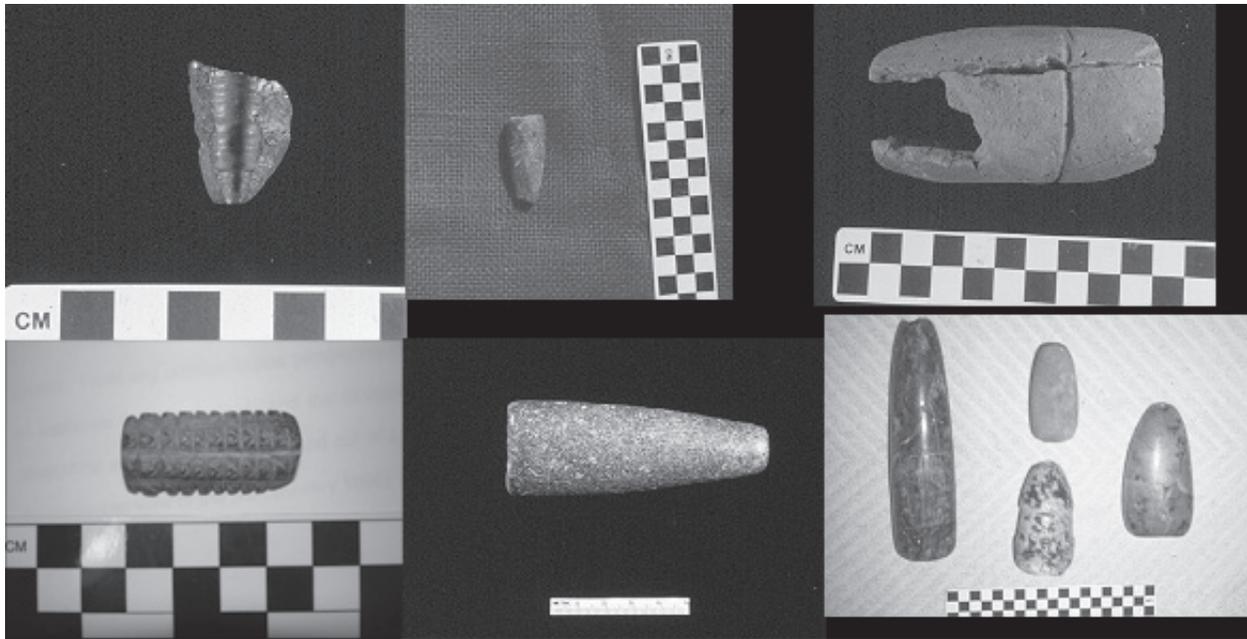


Figure 3: Sample of carved stone pipes from Wyoming. Clockwise from top left: 408 -- Daugherty Cave; 412 -- Lawrence site, Teton County; 427 -- 48SW5649; 4499 -- Alcova Redoubt; 413 Thompson pipe; 424 -- Coal Draw.

was deposited after the pipe had been “killed.” The residue is similar to the dark brown packrat “amber-rat” which glues together packrat nests.

One would expect more occurrences of residue preserved inside of pipes if they were used for smoking. It is hard to smoke a pipe more than a few times without residue forming on the inside (former pipe smoker Dale Wedel, personal communication, 11/91). It is hard to believe the tar from smoking could weather off. Rodents might eat the residue from pipes, but no gnaw marks are present on any of the pipes in the sample. Soot does adhere to the inside and outside of steatite vessels, so it does get preserved. Whether this indicates a function other than smoking is still an open question.

OTHER USES FOR PIPES

There are other possible functions for tubular pipes not related to smoking or tobacco use. The Australian aborigines use a tubular pipe to apply paint to rock walls. The paint is held in the mouth while a hand is placed against the rock. The paint is blown through the tube and a silhouette of the hand is formed (Breedon 1988). There are similar hand silhouettes on rock art panels on the Middle Fork of the Powder River (Francis 1991).

Tubular pipes have been used as sucking tubes in

curing ceremonies by shamans (Di Peso 1956:426). The tube is placed against the afflicted area of the patient by the shaman and s/he magically sucks the evil out of the patient.

It has been suggested some of the smaller tubular pipes may have functioned as hair ornaments; e.g. like well documented hair pipes (Charles A. Reher, personal communication, 10/90). Only a few of the tubular pipes in the sample are small enough to be used in such a fashion.

PIPE TYPOLOGY

Three types of pipes are described here: tubular pipes, shouldered tubular pipes, and elbow pipes (Figure 4). Other pipes styles are more modern and of little concern. For example, the “peace” pipes common to Western movies are called calumet pipes (Hall 1983). They are carved mostly from catlinite, sometimes from steatite, and found out on the Plains. These T-shaped pipes, originating in the second half of the nineteenth century (Paper 1988:69), are not germane to this discussion.

Tubular pipes have been found in archaeological excavations on the West Coast, in the Southwest and Plains, and on the East Coast. It is worth noting many of the California tubular pipes look identical to Wyoming tubular pipes. A number of the Califor-

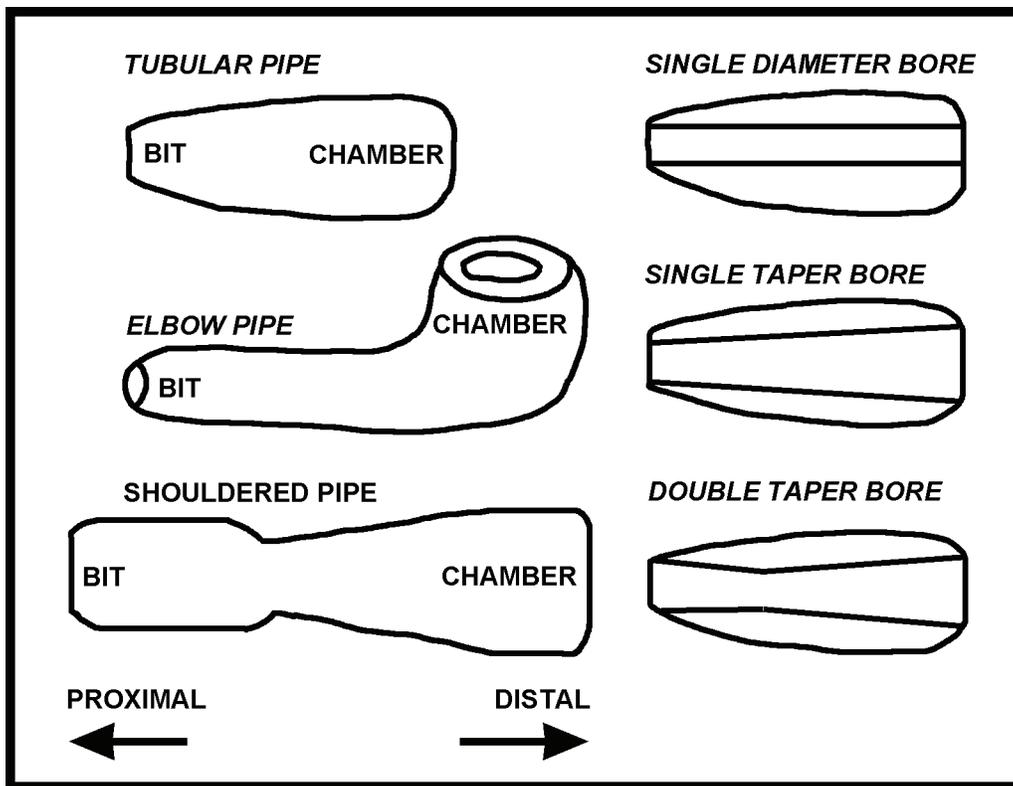


Figure 4: Carved pipe styles and nomenclature.

nian pipes are fitted with reed mouthpieces (Abbott 1879:plate VIII). Most of the tubular pipes found in Wyoming are between 5 to 20 cm in length, and 1.5 to 5 cm in diameter. They are conical to elliptical in shape, and look like grey cucumbers (Figure 3). Bore holes can be tapered, double tapered, or a single width; they range in diameter from 0.7 cm to 3 cm. Many tubular pipes bear incised decorations.

Shouldered pipes are a subset of tubular pipes. They are tubular in shape except for a constriction followed by a flare at the proximal end. The constriction seems to function as a bit to hold with the teeth. Only four pipes in the sample fall in this category. In 1805, Captain Lewis smoked a shouldered tubular pipe he later sketched.

Elbow pipes are more common on the Plains (Paper 1988) or the Northeast (Rutsch 1973) than they are in Wyoming. In Wyoming, they are rare finds. One elbow pipe was found east of the Continental Divide on the shores of Seminoe Reservoir in Carbon County. It is a small steatite pipe with a small chamber and almost no bore, so small a

mouthpiece would have to be used. The distal base is decorated with four toe-like projections. The other elbow pipe was found west of the Continental Divide, near the Big Sandy River in Sweetwater County (Figure 2, no. 402) at the Protohistoric Eden-Farson site (Frison 1971). It is a failed preform made from serpentine.

Elbow pipes in Wyoming and the region are thought to postdate European contact. They are supposed to have replaced tubular pipes because they are easier to smoke. Some authors labor under the misconception the head must be tilted back to smoke a tubular pipe (Paper 1988:66, Rutsch 1973). It is possible to smoke a tubular pipe without tilting one's head by cupping one's hands around the proximal end of the pipe. Such pipes are common among Jamaican Rastafarians and are known as "chillums."

DISTRIBUTION

The average distance from a steatite pipe find-spot to the nearest known prehistoric quarry is 135 km, farther than vessels, vessel fragments, or atlatl

weights (Adams 1992). Many of the carved stone pipes in the sample are made from materials other than steatite, some of which are quite exotic and may have come from even farther than the steatite (Jim Miller, personal communication, 2/91).

Rock shelters and riparian zones dominate the environments where carved stone tubular pipes have been found. Eleven pipes were found in one rock overhang near Thermopolis, Wyoming (discussed below). A shouldered tubular pipe found in a rock shelter north of Rawlins, Wyoming, was associated with Middle Plains Archaic artifacts. On a cliff near the North Platte River, excavators found a tubular pipe fragment in the backdirt of a looted rock shelter with Middle Archaic through Late Prehistoric artifacts (Figure 2, no. 409). This pipe is the easternmost pipe in the sample. Two shouldered tubular pipes came from a rock shelter at the Kobold site in Montana (Frison 1970). The pipe fragment from Daugherty cave is the only pipe with residue. It was found “just outside the cave entrance” (Frison 1968:267) and is without provenience.

Riparian zones have been productive areas. The find-spots of seven pipes could be classified as riparian. Five of the seven were found along the North Platte, three of these were found on the shores of Seminoe Reservoir. One tubular pipe was found on the shores of Jackson Lake (Figure 2, no. 412) and another (Figure 2 no. 407) on a terrace above the Wind River near Hudson, Wyoming.

A tubular pipe preform was found in the northern Wind River Range in 2002 at an altitude of 10,040 feet above sea level (Adams 2003a). The exterior had been shaped and was ready to be polished. The bore had been started but not completed. Recently, a tubular pipe fragment was found in the Shoshone National Forest, on the upper reaches of the Greybull River (Adams 2003b).

PIPE CACHES AND BURIALS

Pipes caches, and caches associated with burials, are not uncommon in North America. Catlinite and steatite tubular pipes have been found in the Devils Lake-Sourisford cultural complex burial mounds of North Dakota (Syms 1978; Jones 1990). A cache of 17 tubular steatite and serpentine pipes was discovered at a prehistoric cremation site on Lower Klamath Lake in northern California (Cressman et al. 1940:132). Di Peso (1956:426-430) reports a

cache of 12 tubular pipes were found buried together “above the old plaza surface” of San Cayetano, an Upper Pima town abandoned in AD 1751. All the pipes in the cache contained evidence of being smoked, and four still had dottle in their bowls (Di Peso 1956:426).

In Wyoming, only the Coal Draw site (discussed below) contained multiple pipes. The Kobold site (Frison 1970), just across the Montana border yielded two tubular pipes in a Late Prehistoric level.

DECORATION

Over a third of the pipes in the sample have decorations of one form or another. Decoration is defined as any incisions, figures, or marks not associated with manufacture. One of the elbow pipes is decorated with four toe-like projections at the base of the chamber.

The Van Norman Collection of pipes from the Coal Draw site contains five decorated pipes. Two pipes have incised lines on the outside. The lines do not look like part of the manufacturing process. Instead, they resemble hatch marks used for counting. The body of one pipe has two circular designs composed of three rings connected by oblique lines. It also has radial lines around the proximal end. Three pipes have incised geometric designs radiating from the distal end. One of the killed stone pipes has an incised figure similar to those found on nearby rock art panels.

In a nationwide survey of pipes in Native American religion, Paper (1988:75) points out “most sacred pipe bowls are plain. Where there is decoration, it tends to be limited to circular ridges and incised circles, holes in flanges or keels and cutout on flanges.”

COAL DRAW SITE - 48HO469

A cache of 11 tubular pipes was recovered from the Coal Draw site (48HO469; Frison and Van Norman 1993) in Hot Springs County north of Thermopolis, at an altitude of about 4920 feet (1490 m) above sea level, on land administered by the Bureau of Land Management (BLM).

The Coal Draw area has been known to collectors for a long time as an area rich in artifacts. One local collector and rock art enthusiast discovered four complete tubular pipes just below the crest of a sandstone hogback. Subsequent testing by George

Frison and a UW/OWSA crew exposed more pipe fragments and a few pieces of human bone (Frison and Van Norman 1993). Rock shelters are common burial locations (Gill 1991:436).

The pipes were found under a small overhang next to a rock art panel depicting an anthropomorphic figure with raised hands. The figure was executed in the Dinwoody style (Francis et al. 1991), a rock art style dated to 2,000 years B.P. at nearby sites (Walker 1989:30). The “rock varnish organic matter” from the panels at Coal Draw has been radiocarbon dated to 300 years ago (Francis et al. 1991:Table 1); although those dates are now in question (Beck et al. 1998).

Of the eleven pipes found at the site, only two are made of steatite. Four pipes are carved from talc, another three from sedimentary concretions or sandstone, and two from unidentified rocks.

Only four pipes are complete. Seven pipes are fragmentary (of these five have been refitted to varying degrees of completeness). Five appear to have been “killed” (Frison and Van Norman 1993). Three have bulbs of percussion where they were struck. The remaining two pipes are fragmentary, but consistent with the other three, although lacking telltale bulbs of percussion.

Three of the killed pipes were carved from materials which do not appear to be from local sources or even from Wyoming. A killed stone pipe some distance from its quarry suggests the pipe and its resting place were somehow linked. It also suggests pipe users knew they would be able to get more pipestone through trade or by quarrying.

INTERPRETATION

In all ways but one the soapstone pipe fragment from 48SW14906 is average. It seems to be from an average-sized slightly conical pipe. The estimated diameter is about average. Like many other such pipes, it is well-polished, lacks interior residue, and is fragmentary.

The exceptional attribute of this pipe is the red substance on its exterior surface. Any pigment adhering to the *interior* surface of the pipe could be interpreted to be an indication of use as a cloud blower (Breedon 1988). Since there is no residue of any kind on the inside surface of the fragment, just on the exterior surface, this interpretation remains speculative.

There is no way of telling from this piece if the pipe was intentional “killed” (Frison and Van Norman 1993). Five of 11 tubular pipes at the Coal Draw site (48HO469) appear to have been intentionally killed, as does a pipe fragment from the Greybull River (Adams 2003b) and Daugherty Cave (Adams 1992).

Unfortunately, it is unlikely soapstone sourcing methods will be able to identify individual quarries. My feeling is this soapstone came from northwestern Wyoming rather than the Bighorn or Sierra Madre Mountains. Light grey soapstone is relatively rare (most is battleship grey) and I have seen it only in the northern Wind Rivers (Dubois side) and Tetons (west side).

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PRELIMINARY ANNOUNCEMENT

**The 2013 annual spring meeting of the Wyoming
Archaeological Society
and the Wyoming Association of Professional
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**will be held in Laramie, Wyoming at the
Hilton Garden Inn during
the weekend of April 26-28, 2013.**

**All the standard events will take place and
details will be sent to all members at a later date.**

SAVE THIS WEEKEND ON YOUR CALENDAR NOW!!!!
