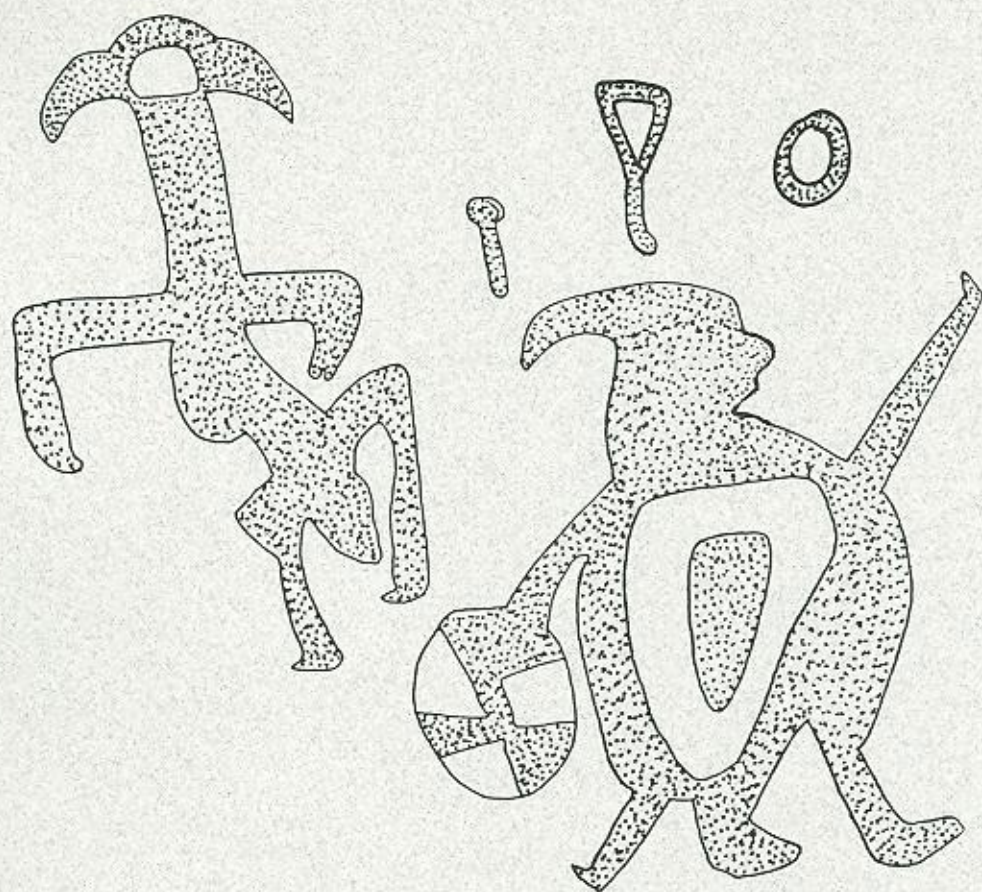


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Cover: Jarbidge Rock Art

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# ARTICLES AND REPORTS

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## ***THE JARBIDGE ROCK ART SITE: PICTOGRAPHS IN THE HIGH DESERT COUNTRY OF SOUTHWESTERN IDAHO***

*Kelly A. Murphey  
Castleford, Idaho*

### **THE INTRODUCTION**

In 1986, I presented information concerning the similarity of petroglyphs found near Buhl, Idaho, and petroglyphs commonly attributed to the Fremont culture of Utah. Among the similarities were a shield warrior motif, several anthropomorphs with elaborate headgear, others with horned headgear, a bizarre creature, and a variety of "handled items" of unknown representation (Murphey 1987). At the conclusion of this paper I also noted that ongoing research at two other rock art sites in the mountains located south of Buhl could eventually reveal even stronger similarities to Fremont motifs (Murphey 1987:93). The first of those two sites is discussed here.

### **THE SETTING**

Very little archaeology has been conducted along this segment of the Idaho/Nevada border. The Jarbidge Rock Art Site (10-0E-3729) is located two kilometers south of Columbet Creek Rockshelter (Lynch and Olsen 1964), on lower Columbet Creek. Deer Creek Cave (Shutler and Shutler 1963) and several unreported excavations of the 1960's (Freighters Defeat and Diamond A) are located 8 to 14 km further south, on and near the West Fork of the Jarbidge River (see also Meatte 1990, for survey projects). While most are habitation sites located on the lower fringe of the aspen zone, the Jarbidge Rock Art Site is located at a slightly lower elevation, at 1708 m (5600 ft.) and in a classic high desert setting.<sup>1</sup>

The site vegetation is characterized primarily by big sage (*Artemisia* sp.) and grasses, although a little juniper (*Juniperus occidentalis*) and willow (*Salix* sp.) can be found along the creek about 800 m (2600 ft.) downslope. The site draw and another draw on the opposite side of Columbet Creek act as a major trail for big game and livestock going to and from the desert plateaus on each side of Columbet Creek. Deer herds consisting of 70 to 100 animals were seen using this trail on two different occasions in the spring of 1986. It seems logical that the trail may have been used by other kinds of big-game animals back in time.

### **THE SITE**

The rock art is located along a rather nondescript, low rim at the upper end of a steep draw which narrows as it climbs southwest out of the Columbet Creek drainage (Figure 1). There are numerous pictographs along the northwest wall, and a few petroglyphs occur on the southwest wall, and at the southeast corner of the northeast wall (Figure 2).

Except for a single petroglyph (located on a prominent rock face at the southeast side of the draw), the art is slightly protected by cave-shelters and shallow overhangs. However, in addition to 29 panels, there are also several places where light red blotches suggest pre-existing art erased by time. The artists used, overall, only four colors; red, white, black, and yellow. It must also be noted, however, that several distinct shades of red are in evidence, light red, dark red, and "ochre" (consolidated volcanic ash). (The ochre designation refers to a red mineral used in raw chunks, like chalk, a technique which this writer calls "sketch-like.") Ochre occurs in the canyon wall and the layer shows considerable evidence of quarrying.<sup>2</sup>

The other features include an L-shaped rock wall in front of a rockshelter, some cairns, several hunting blinds, a small lithic scatter located on the rim above the rock art, and some projectile point fragments scattered along the draw. The dominant and most obvious feature is rock art.

### **PANEL DESCRIPTIONS**

A panel is defined as rock art separated from other rock art by a considerable blank space and/or by occurring on a distinct rock face. The distribution of the motifs on Panels A to CC is shown in Table 1.

Panel A is located on the southwest side of the draw, on a large rock face. In addition to nine finger slashes in red paint (4 cm long avg.) there are also two small rectangular meanders and what seems to be a small deer or elk that has been scraped/pecked into the rock face and then painted. This is one of two occurrences of petroglyphs at the site (Figure 3A). Neither set is particularly detailed, nor large.

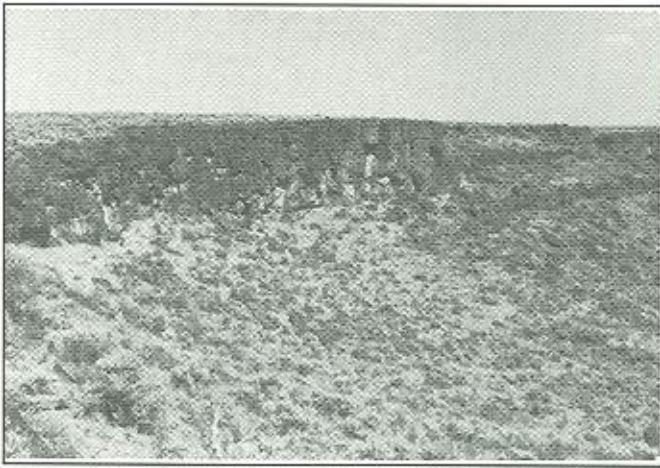


Figure 1: A photo of the Jarbidge Rock Art site looking northwest.

Panel B is also small, and has only a few elements. It is located in a small (5 x 5 m) cave-shelter at the upper, southeast side of the draw. Five fingertip dots forming an arc are just above three finger slashes painted in light red ochre. A spall that has recently fallen from the roof also has a red paint splotch (Figure 3B).

Panel C is 70 m from Panel A. It is 86 cm wide, and is located on the south end of the potted cave shelter in which Panel D is also found (Figure 3C). The figures occur in three groups about 30-60 cm apart. The motifs are all small (8-10 cm wide) and most are colored with black paint; they may include two bison, three elk or deer, a possible antelope, and geometric shapes. At the right margin of the panel there is a large red splotch and several more splotches are located further south of this panel. Two red finger slashes are on the left margin.

Panel D is a 2.80 m wide panel located on the back wall of the same rockshelter mentioned above (Figure 4D). The paint colors include dark and light red, white, black, and a little yellow. In addition to a large elk (1.10 m wide), the motifs include four small elk, a heron (35 cm tall), a hawk or raven, a bear, a buffalo, dogs or coyotes, two projectile points, some handled items, a large (30 cm wide) mask, a hunter shooting a bow, and two hunters successfully shooting deer or elk with bows and arrows. Two round-headed and one bucket-headed anthropomorph are depicted. In addition, there are three large red dots, lines, circles, tailed circles, an isolated series of eleven fingertip marks in a row, and rake designs of several types.

Panel E is eight meters further to the north of Panel D. It includes two or three small white anthropomorphs, an elk, a zigzag line, and a sun inside a 5 m deep cave-shelter (Figure 5E). Panels F, G, (not shown) and H are located just outside the cave. Panels F and G are painted in light red and white colors; they represent geometric animal track designs (herbivore) (Figure 5F). Panel H contains an elaborate red anthropomorph that is possibly carrying a shield and has a bow slung across his back. Panel H also contains what seems to be a procured mountain sheep, judging from the outspread limbs and a hole in the head of the animal. Perhaps this indicates removal of the brain. In addition, there are several handled items of unknown function and a circle located 30 cm to

the right of the majority of the panels' figures (Figure 5H).

Panel I is one meter wide and includes a large abstract representation of a mountain sheep at rest. Arcing to the left and continuing below this sheep is a series of motifs including an abstract anthropomorph, slashes, a star, a circle, and a handled circle (Figure 6I). The lower left corner has five anthropomorphs and a dog or coyote placed around a quadruped, perhaps another sheep, that appears wounded or is resting on its haunches. Four hunters wear horned or eared headgear and one has a bucket-shaped head. One holds a bow and another may be holding an atlatl, ceremonial device, or perhaps even a throwing stick. The panel is painted with a light red pigment.

Panel J is 4 m from Panel I and 5 m from Panel D. It has ochre sketches of two anthropomorphs, a projectile point, and also two animals, presumably sheep (Figure 6J). Most figures were poorly (or quickly) executed in comparison to the panels at the site. The Eastgate projectile point is relatively well done.

Four small panels (K, L, M, N) are near Panel J. Two depict an anthropomorph, chevrons, and circles. Panel M is a small mask showing hair bobs and Panel N is an anthropomorph standing near two tailed circles (Figure 6K-N).

Panel O is 1.80 m wide and is painted with dark red paint except for one small black anthropomorph. There are two large anthropomorphs, one square-headed with a big belly and a very long tail, and another that appears to be carrying a large shield. Both anthropomorphs show erect penises. Adjacent to them, a small abstract representation of a mountain sheep has eight tracks and eight dots leading to it. The panel is partially framed by a

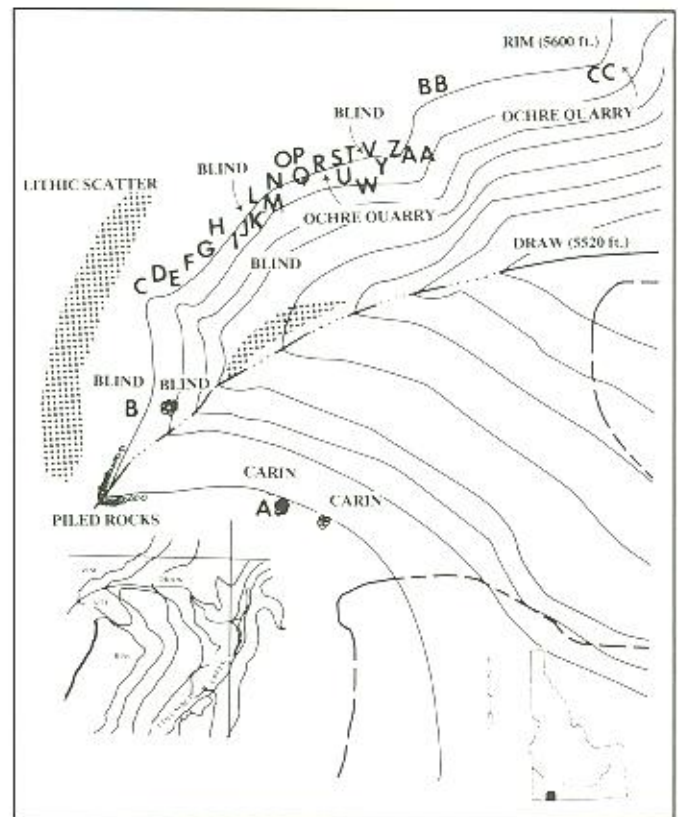


Figure 2.

TABLE 1  
THE DISTRIBUTION OF MOTIFS PER PANEL

Motifs	Panels																										Occurrences Panels					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z		AA	BB	CC		
<b>Geometric</b>																																
Anchor/Horned				1																											2/2	
Circle				4				1	1		1	2			1						1					2					13/8	
Circle (tailed)			1	3										2												1					7/4	
Dot/Ball				4												2															8/3	
Finger Dot		5		20					1						8	15	24				2			50							125/8	
Finger Slash/Line	8	3	2	2		1	1		4												1	6	1		1				23		54/12	
Half Moon				1																											1/1	
Handled Item	2			2				2	1									2	1						1				2		13/8	
Loop Chain				1																											2/2	
I-Shaped Bracket			1	1											2	1									2						7/6	
Meander (curved)																								1							1/1	
Meander (rectilinear)	3																											1			1/1	
Rake			1																												2/2	
Star									1																						1/1	
Zig Zag					1																										4/1	
<b>Representational</b>																																
Antelope			1																												1/1	
Anthropomorphs																																
Abstract (horned)									4	1																					5/2	
Abstract (plain)		2			1				1																						4/3	
Bucket-headed		1	3	2				1		1		1	2		1	1								2	1	3					19/12	
Bucket (w. bow)				2																			2								4/2	
Oval-headed			3							1																					5/3	
Oval (w. bow)			1																												1/1	
Shield-type								1							1																2/2	
Bear			1																												1/1	
Bird (various)			3																				1			3					7/3	
Bison			2	1																											3/2	
Deer/Elk	1	3	5	1																											10/4	
Dog/Coyote			1						1																				1		3/3	
Mask				1									1					1													3/3	
Mountain Sheep		1						1	2	2					1						1		2		1		4				15/9	
Projectile/Arrow		1	2						1								3		1												6/3	
Sun/Fingered Circle		3		1																											5/3	
Track (animal)					3	4				1	1			8	1						1										19/7	
<b>Total</b>	14	8	18	61	7	4	5	5	17	3	3	4	1	3	23	19	31	2	1	2	10	6	1	56	5	40	1	1	2	353/124		

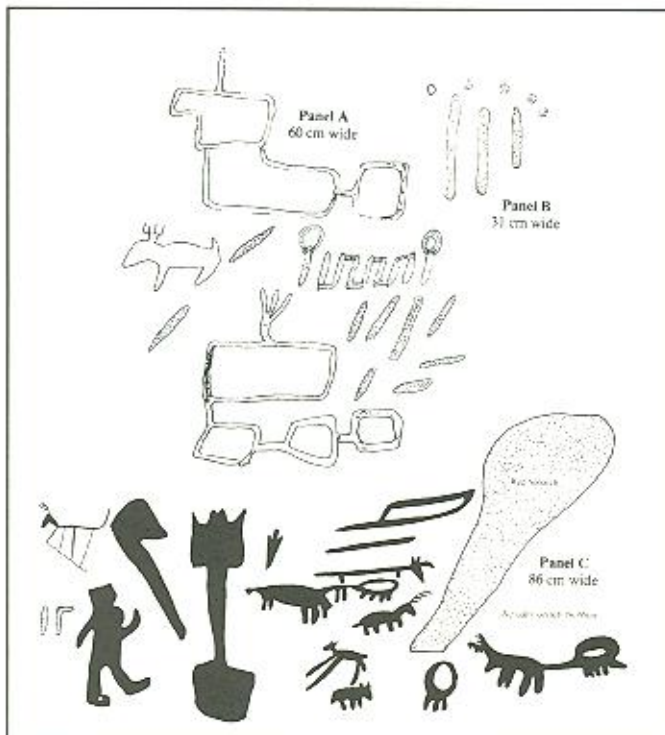
legged bracket and there is a half circle above the left side (Figure 7Q). It is 1.50 m from Panel O to Panel P.

Panel P is in a 2 x 2 m cave-shelter. There is a vertical alignment of 15 fingertip marks along the right margin. The remainder of the panel consists of a single sheep track, two ovals, solid circles, and a hooked slash. The entire panel is 33 cm wide and is done in light red paint (Figure 7P). It is six meters from Panel P to Panel Q.

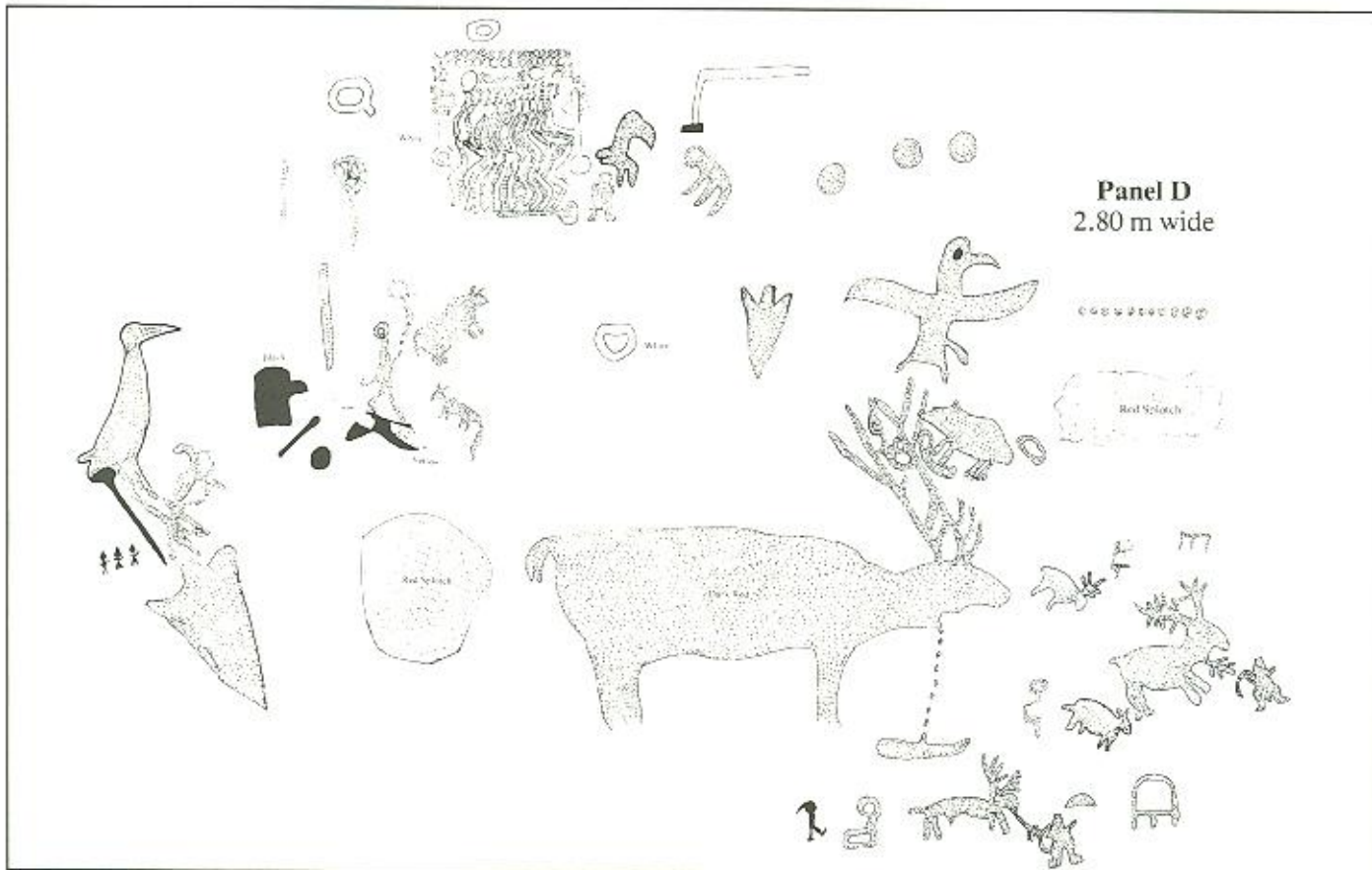
Panel Q is 2 m above ground level on a smooth rock-face. It involves a large (2.50 m tall) black and red mask and a small handled item below. Above, there is a much smaller bucket-headed anthropomorph and two unusual tools or bundles that may include several arrows (Figure 8Q).

Panel R is 74 cm long and depicts a squatting bucket-headed anthropomorph with raised arms and a tool, rattle, or possibly an atlatl on the left (Figure 9R). Panel S includes one motif, an arrow, that is 33 x 20 cm (Figure 9R). Panel T is 91 cm wide and has a 21 cm long mountain sheep with a vertical slash on the left (Figure 9T). All three are done in light red. It is six meters from Panel R to Panel T.

Four meters of wall occur between Panel T and Panel U. Panel U is done in dark red paint and has a horizontal alignment of four geometric motifs spread over a 67 cm wide area. These motifs include a slash, a circle, a handled circle with arms, and a possible sheep or elk track (Figure 10U).



**Figure 3.** Panels A - C. Panel A includes nine pictograph slashes, two petroglyph meanders, and a petroglyph representation of a deer or elk. Panel B has three ochre slashes and five fingertip dots. Panel C includes a variety of animals, geometric representations done in light black paint, several red slashes, and splotches.



**Figure 4.** Panel D with motifs in light and dark red, white, black and a little yellow paint. Notable motifs include the vernal-type mask (upper left), a projectile point (center), a bear (center right), and hunters shooting their bows (bottom right). Note what seems to be blood coming from the large elk's throat.

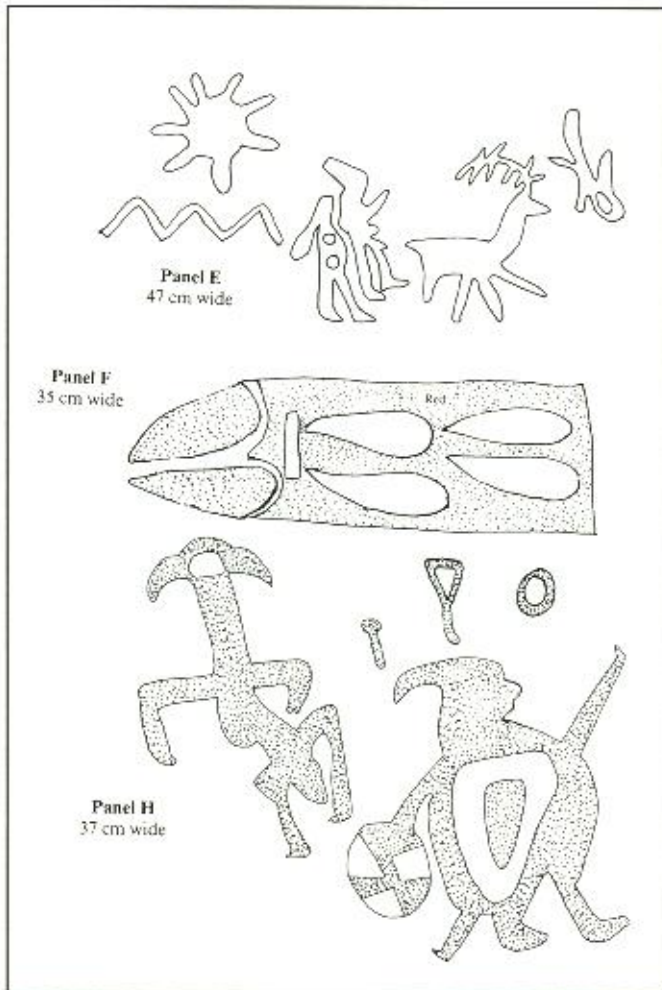
Panel V consists of a bird, possibly a quail or grouse, done in ochre and a small sheep with two small anthropomorphs above and below painted in light red paint. Both anthropomorphs are carrying something, possibly bows, judging from shape and how they are being carried (Figure 10V). Panel W, consisting of two etched ochre meanders, is 1 m further to the north (Figure 10W).

Panel X represents two bucket-headed anthropomorphs facing each other. Between the two is a vertical line comprised of 22 fingertip dots that lead to a small mountain sheep. Five more dots form a curved trail. Another vertical line of 23 dots occurs along the left margin and there is a right-angled bracket in the upper right corner (Figure 11X).

Panel Y is just above and slightly back from Panel X. It involves an ochre-drawn anthropomorph and four circles, one of which is handled (Figure 11Y). The anthropomorph has antennae or horns.

Panel Z is 1.60 m wide and located 2 m from Panel X. The panel is done in dark and light red paint. It includes four mountain sheep, four bucket-headed anthropomorphs (one holding a spear with a bird on the end), three ducks, and various geometric designs (Figure 12Z). The latter include a horizontal alignment of 22 slashes (one slash extends into a chain of circles and loops), a sun disk, a large handled rake, a horned and footed circle, and several other slashes and isolated dots.

Panel AA is 1.50 m beyond and slightly above Panel Z. It consists of a single rectilinear meander, including a



**Figure 5.** Panels E - H. Panel E is painted in white and shows bucket-headed anthropomorphs, an elk, a sun, and two geometric designs. Panels F and G are white game tracks on a red background (G is not shown). Panel H shows a shield warrior, what seems to be a dead mountain sheep, and three geometric designs.

solid sun disk, a diamond, two triangles, several loops, and two bear tracks (Figure 13AA). They are sketched with ochre except for one small circle that has been painted red. The panel is 85 cm long and is 13 m from Panel N.

Panel BB consists of a single dark red elk which is 92 cm long (Figure 13BB). This elk is slightly smaller than the one in Panel D.

Panel CC is in a rock shelter 50 m north of Panel N. It has two motifs, both petroglyphs, which have been painted red. One is a handled triangle that is 11 cm long and the other is a handled bisected circle that is 30 cm long (Figure 13CC). There is a dry-wall rock alignment constructed in front of the shelter.

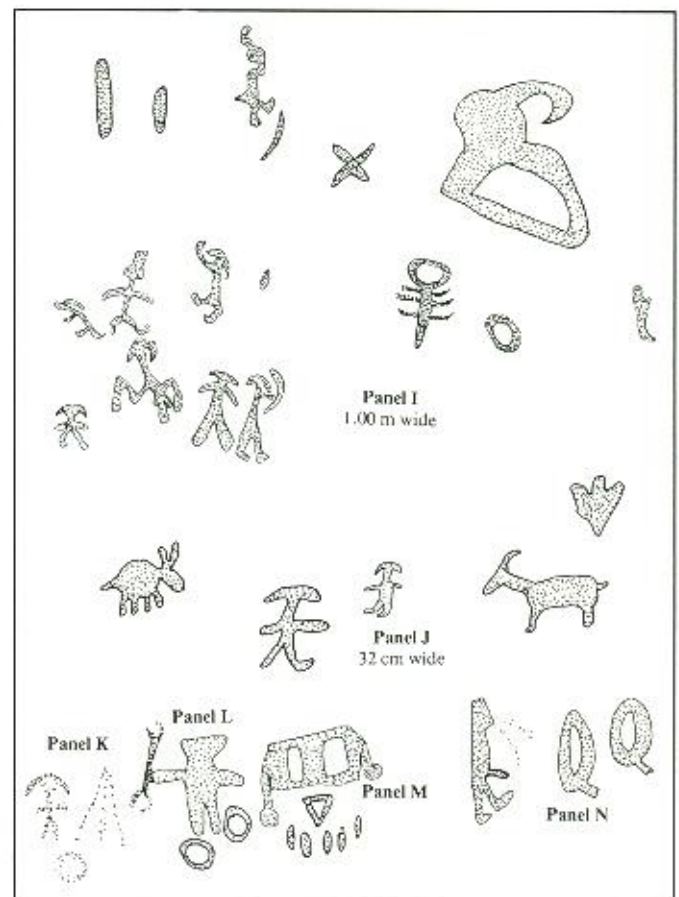
### PAINT AND STYLES

As stated earlier, four pigments were used. A preliminary analysis conducted by Keo Boreson (1988) suggests that charcoal and grease were mixed to obtain the black. White seems to have been created through a mixture of muscovite, quartz and jarosite (or beudanite). Since the red pigment varies somewhat, apparently in relation to a range from lighter to darker motifs, this suggests that

(mostly *non-local*) red ochre, jarosite, and some other unidentified minerals were variously blended. In addition, local ochre is also evidenced by the sketch-type glyphs.<sup>3</sup> The yellow paint has essentially the same composition as the darkest reds, with no significant mineralogical differences to account for the variation in color (Table 2). Though still unsubstantiated, different animal greases and/or plant pigments may have also aided in such minor variations (see Hawes 1975:79).

Most motifs are a single color. Only a few panels display more than two colors. Of the *motifs* that consist of more than two colors (3%), red is the primary while white and black the preferred secondary color. Yellow paint was seldom used (.009%) and white was used very sparingly (.09%), with the notable exception of the Panel D mask. Red (89%) and black (7%) were the most popular colors accounting for 96 percent of the total number of motifs.

The fact that there is a range of color and paint types, as well as some minor stylistic variation, is easier to recognize than to explain. The reasons why could involve (1) painting episodes over time, (2) changes in site function over time, or (3) considerable artistic range and/or range of expression at or around a single point in time. Thus, the search for one or more of these answers begins with where and when similar expressions are known to



**Figure 6.** Panels I - N. Panel I shows hunters surrounding a mountain sheep and a variety of representational and abstract motifs. Panel J has two anthropomorphs and two sheep. The remaining panels include various styles of anthropomorphs and geometric designs except for Panel M, which has one very small mask.

TABLE 2  
PIGMENT SAMPLES

Source/Episode	Sample No.	Color/Texture	Composition
Quarry Wall	4	Red/Chunk	Albite, Calcite, Quartz, Hematite
Quarry Ground	5	Red/Powder	Albite, Calcite, Quartz
Panel V/IV (large grouse)	7	Red/Powder	Albite, Calcite, Quartz, Hematite
Panel Z/III (large rake)	1	Red/Powder	Jarosite (or Beudantite) Hematite, Quartz, unknown
Panel D/II (below walker)	6	Yellow/Powder	Jarosite (or Beudantite) Hematite, Quartz, unknown
Panel D/II (large mask)	3	White/Flakes	Jarosite (or Beudantite) Muscovite, Quartz
Panel C/II (small elk)	2	Black/Powder	Burned Wood
Panel Y/I (anthropomorph)	8	Red/Powder	Jarosite (or Beudantite) Hematite, Goethite

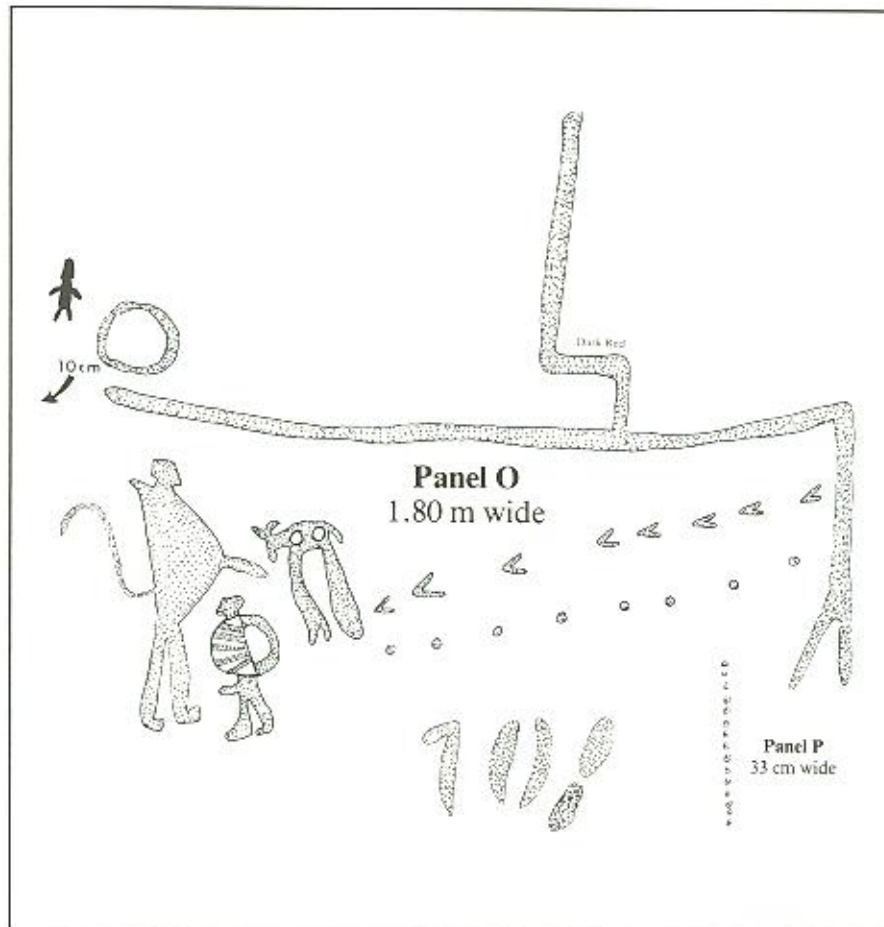


Figure 7. Panels O and P. Panel O includes two anthropomorphs standing near an abstract portrayal of a big-game animal (probably a sheep). Panel P is similar in its portrayal of game tracks and aligned dots.



have occurred immediately elsewhere in this geographic region.

### Color Comparisons

While red pictographs are reported from numerous rock art sites in Idaho, there are very few reports of other colors being used (Boreson 1975). A few white glyphs are known from further north, within the Middle and Lower Salmon River country, where they are sometimes associated with red glyphs (U. of Idaho Field School Notes, 1974). There are also a few reports of black glyphs from this same area. Nevertheless, it appears that nothing of the variety and magnitude of color used at the Jarbidge site has ever been reported from the immediate north or east. In fact, combinations of colors and motifs like those reported from the Jarbidge site are mostly unheard of except in the distant south and east. They are not even particularly common to the south.<sup>4</sup>

D. Thomas (1983:310-319) has documented a few pictograph motifs done in white, various shades of red, orange, and yellow in central Nevada, and he has suggested a southeastern relationship for some related Anasazi-type anthropomorphs. To the east, Fremont sites in central and southern Utah (Schaafsma 1986:22) have paintings done in red, white, black, and combinations of these colors. Reports from the northern Fremont areas seem to be less varied and less common, but they do occur (Castleton 1979:16; 1984:33, 79, 99, 107).

### Stylistic Comparisons

The Jarbidge Rock Art Site seems to have many attributes similar to Fremont rock art. Anthropomorphs with single-feather headdresses, dot headgear, round hairbobs, and flat, bucket, or inverted bucket-shaped heads are widely associated rock art motifs of Fremont people (Castleton and Madsen 1981:166). Other classic Fremont traits include shield figures and rectangular-shaped masks. Less diagnostic traits include birds (particularly water birds), phallic motifs, horned figures, tailed designs, arrows, animal tracks, and combinations of circular elements, especially horned or anchored circles, stars, rows of dots, rake variations, and rectilinear meanders (Cole 1990:175-188). Typical Fremont zoomorphs include deer or elk, bear, buffalo, and particularly mountain sheep, which are often the subject of elaborate hunting scenes (Castleton and Madsen 1981:166-173; Castleton 1984:6-7; Schaafsma 1986:61-64; 1986:223-225).

Some of the best comparisons between the Jarbidge motifs and Fremont rock art styles occur in the area of the Uinta Fremont, in the northeastern corner of Utah (Jennings 1978:184). Among the most comparable Uinta motifs are bears, deer or elk; horned, feathered, and/or antennae anthropomorphs with square to bucket shaped heads. The anthropomorphs with "Vernal type" head styles (Castleton 1984:16-32, 37-38) are very similar to some at Jarbidge. These "Vernal type" heads are bucket to rectangular shaped and most often include hair

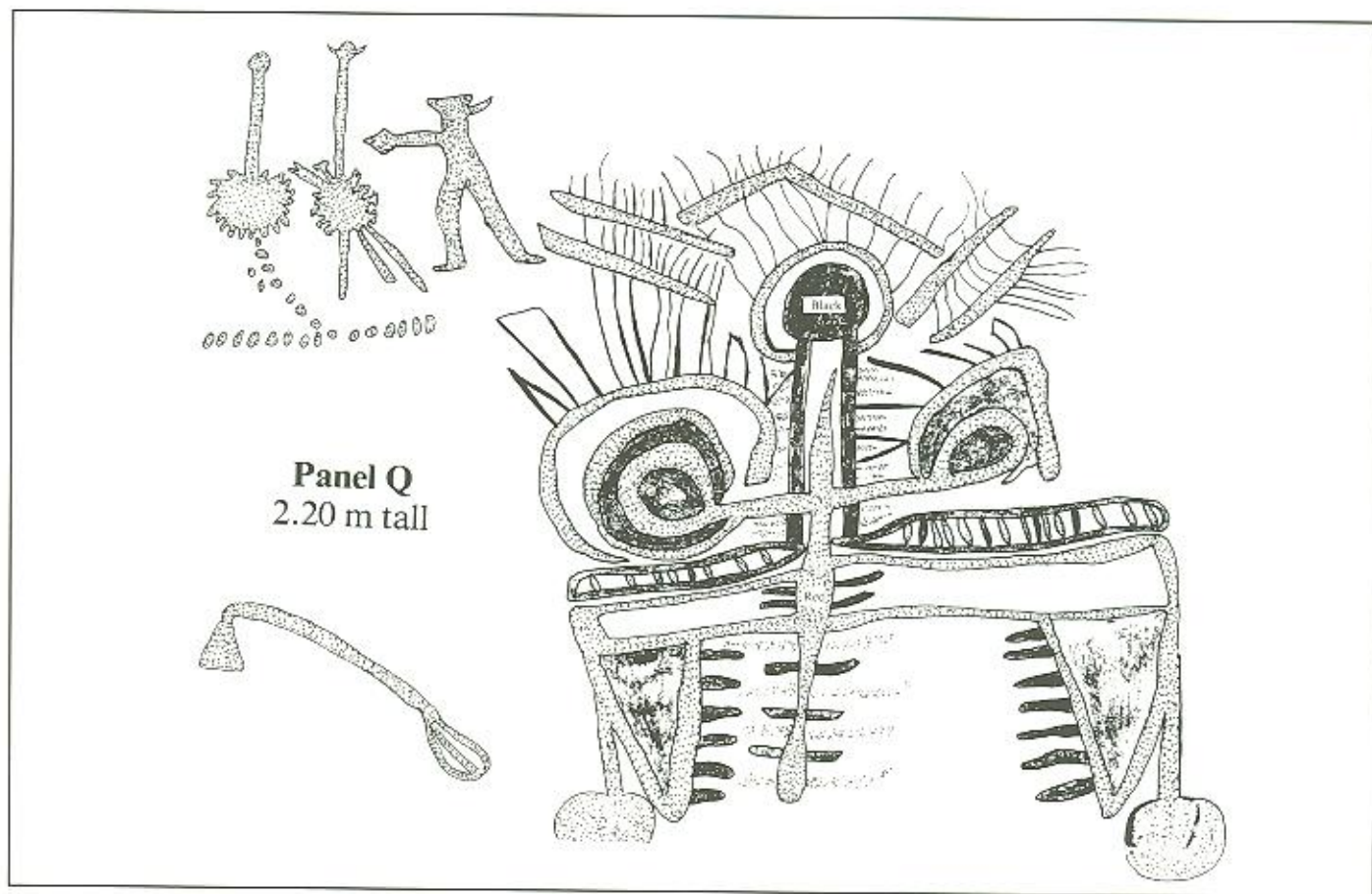
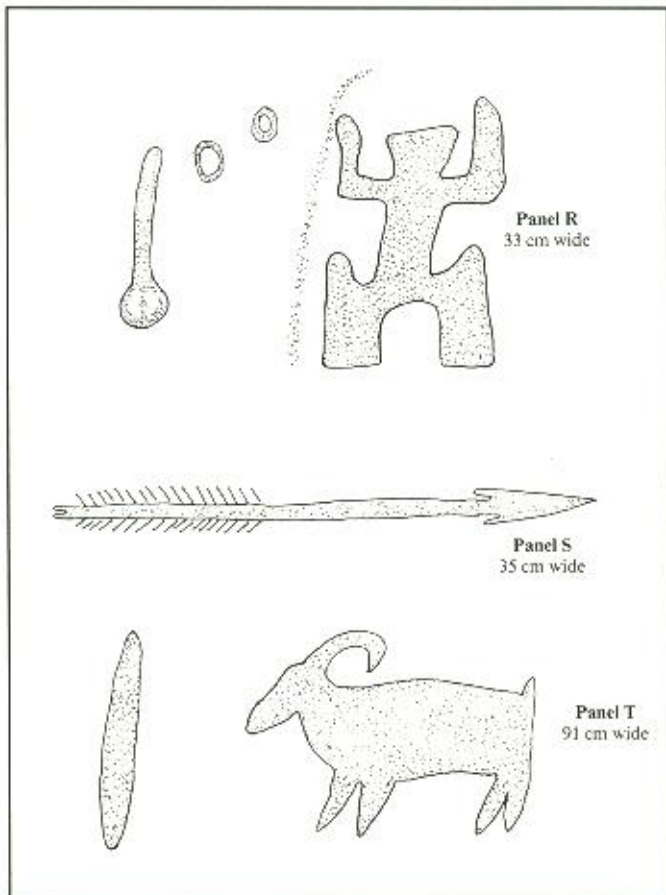


Figure 8. Panel Q is a large black and red mask. A handled item is at the bottom left and an anthropomorph stands adjacent to two bundles at the upper left.



**Figure 9.** Panels R - T are done in light red paint. They show a squat, bucket-headed anthropomorph, an arrow, and a mountain sheep beside geometric designs in the first and last instances.

or ear bobs. They typically include a pattern of white dots applied by fingertips dipped in white paint, an attribute that (like the hairbobs) is obvious on the Panel D mask (see Figure 4). Other masks with hair bobs occur in Panels M and Q, both of which may show a basic Vernal affinity via their rectangular shape.

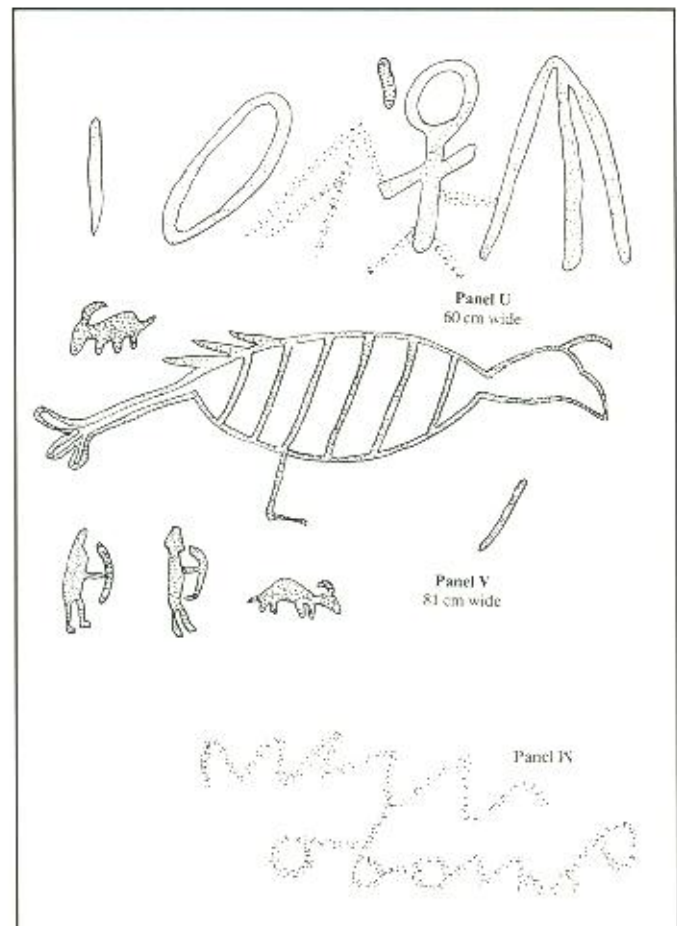
Despite the basic similarities with northeastern Utah's rock art, the greater number of similarities may all come from central and southern Utah; from the area occupied by the Sevier and San Rafael Fremont and their southern neighbors the Virgin-Kayenta Anasazi (see Jennings 1978:157). Much of the Anasazi art, although separated by hundreds of miles from the Jarbidge site, is too similar to be ignored in searching for a general direction of stylist influence or exchange.

The Anasazi co-existed with the Fremont, living just to the east and south of them. For some reason, perhaps trade or an underlying cultural relationship, they shared some basic rock art motifs (Castleton and Madsen 1981:172-174). For example, the central Virgin-Kayenta area has numerous bucket-headed anthropomorphs, many showing classic Vernal-type traits. Associated meanders often include a mild demonstration of rectilinear designs, not unlike the meanders found at the Jarbidge site. The eastern Virgin-Kayenta rock art area often includes ducks, similar to those displayed in Panel Z, and the western variant often has walking figures, like those so wide-spread at this site, and "abducted-legged" an-

thropomorphs with bucket-shaped heads (Castleton and Madsen 1981:170-171). Both of these traits are well shown by the anthropomorph depicted in Panel R (Figure 9R). In addition, a few panels with black, white, red, and yellow motifs are found in the east central Anasazi area, and these color combinations seem to be particularly common along the Kayenta-Mesa Verde margin (Castleton 1979:164).

North of the Virgin-Kayenta, the Sevier Fremont reflects a complex blend and/or overlap of cultural traits found in all the other Fremont subareas (Jennings 1978:213). The Sevier A rock art style is mildly reminiscent of the Jarbidge site in terms of animal variety, dots, and anthropomorphs, while Jarbidge shares even less similarity with the southern San Rafael rock art. There is a greater degree of similarity between the range of the Jarbidge site anthropomorphs and the northern San Rafael Fremont style (Castleton 1979, 1984; Schaafsma 1986:217, 223).

Round hairbobs, rectilinear designs, and elaborate shield and shield-bearing figures are particularly distinctive associations of the northern San Rafael style and the previously mentioned Uinta (see Panels H and O). The rock art sites found along the northern and southern San Rafael margins also include numerous large deer or elk, mountain sheep, bison, walking realistic figures, and a few anthropomorphs with head styles that are at least loosely comparable to the Jarbidge masks (Castleton



**Figure 10.** Panels U, V, and W are sketch-like, except for the sheep and anthropomorphs in Panel V which are done in light red paint. The bird in Panel V appears to be a grouse of some type.

1979:71, 87-89, 272, 278-282). Mountain sheep motifs are particularly common for the Sevier A style, whereas hunting scenes with sheep as the prey are very common for both San Rafael variants (Castleton 1979:7; Schaafsma 1986:223). Both have been recorded at the Jarbidge site: there are isolated sheep motifs and also panels with sheep being hunted (see Panels J, K, V, Z). Unfortunately, mountain sheep motifs are also generally common for the entire Great Basin area, as is true of most of the non-anthropomorph traits.

### Association Routes

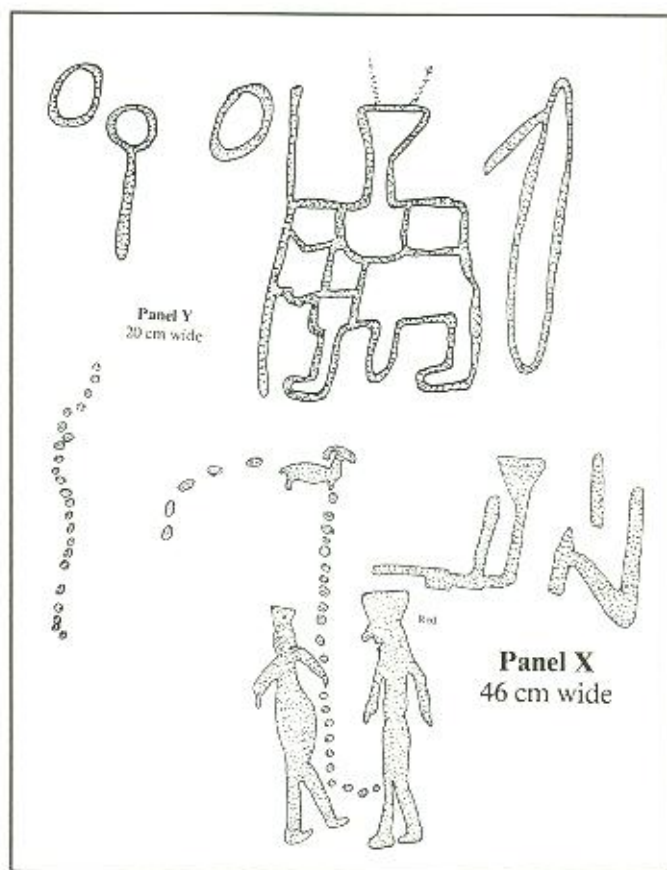
The Jarbidge site represents an unusual pattern in the area. Perhaps no more than a half dozen sites with similar art are known, thus it seems certain that somehow the Jarbidge artists received these stylistic criteria from where they were more popular.

One might suspect a route of introduction or exchange going through eastern and/or southeastern Utah via the Sevier area to the northwest (Figure 14). This cannot be proven with data northwest of the Sevier area, however. Another route, out of the Uinta area, might also be suspected given similar motifs and obsidian trade patterns (Murphey 1985:45-46, 119; Hughes and Bennyhoff 1986:245-246, 251-252). However, there is also too little rock art data from the area in between—from the (western) Great Salt Lake area and from the Eastern Snake River Plain—to add much credence to that possibility either. It should be noted, nevertheless, that the Jackknife Cave and Indianhead Canyon colors and motifs may indicate that at least limited support may lie in a northeasterly direction (Jim Woods, personal communication).

The route mentioned first is supported by Thomas' (1983:310-319) Central Basin rock art data, by some eastern Nevada Fremont/Anasazi petroglyphs (Rusco 1973; Aikens 1978), and particularly by some black and white Fremont/Anasazi anthropomorphs reported from the area of eastern Nevada (Tuohy 1979). Sevier was also mentioned by Plew (1982:50) as having pottery similar to gray, Fremont-like pottery found in the mountains of southwestern Idaho. The glyphs mentioned for eastern Nevada refer to Kachina Cave in White Pine Co. where the anthropomorphs have heads generally comparable to the Panel D, Vernal-type mask. These specifically represent the Cave Valley variant, which is most often found in extreme south central Utah (Castleton and Madsen 1981:171; Castleton 1979:6). And, they have a triangular body and antlers, traits not obvious on the Jarbidge examples. The style has been considered to be representative of the Virgin-Kayenta or a Sevier-Parowan influence in the Central Basin at a date of A.D. 700-1300, with a date of A.D. 1050-1300 specifically preferred for their occurrence (Tuohy 1979:25).

The inference may be that the Jarbidge, Vernal-type heads date earlier than those of Kachina Cave because of the absence of slightly latter traits, such as the combination of antlers and extremely tapered or triangular bodies. At least that is often the claim made for classic Fremont occurrences (Cole 1990:185).

The classic Vernal style is normally assigned a terminal date of A.D. 950 (Tuohy 1979:17-25; Schaafsma 1986:217-218, 220), although the Cave Valley and other variants are thought to persist until slightly later. Thus, the



**Figure 11.** Panel X is done in red paint and Panel Y is sketched in ochre. Panel X depicts two bucket-headed anthropomorphs facing each other and two lines of dots, one leading to a mountain sheep and beyond. Panel Y shows an anthropomorph flanked by geometric designs.

dates assigned to Fremont (A.D. 400-1300), particularly the Uinta (A.D. 800-950), Sevier (A.D. 780-1260), San Rafael's (A.D. 700-1200), and the above Nevada pictograph dating estimates, seem to point at a use range within the last 1500 years and probably a range within A.D. 700 to A.D. 1260 for the Jarbidge site (see Jennings 1978:162). The following framework uses this bracket and other archaeological data in an attempt to refine dating estimates for the use of the Jarbidge Rock Art site.

### SITE AGE

It was suggested that a probable range for the overall site use is A.D. 700 to A.D. 1260. Another indication of this age comes from the weaponry. The projectile points depicted in the pictographs and most of the fragments found in the draw below the site seem to be representative of the Eastgate end of the Rosegate projectile point continuum (see Panels C, D, and S). The one motif exception might be interpreted as a Gypsum or an Eastgate point (see Panel D, left). The "on-ground" exceptions are several small side-notched points that might be called either Rose Spring or Nawthis in style (Holmer 1986:107). Figure 15 shows projectile points found at the site and various other of the more time-sensitive aspects of the site.

### Weaponry Depicted

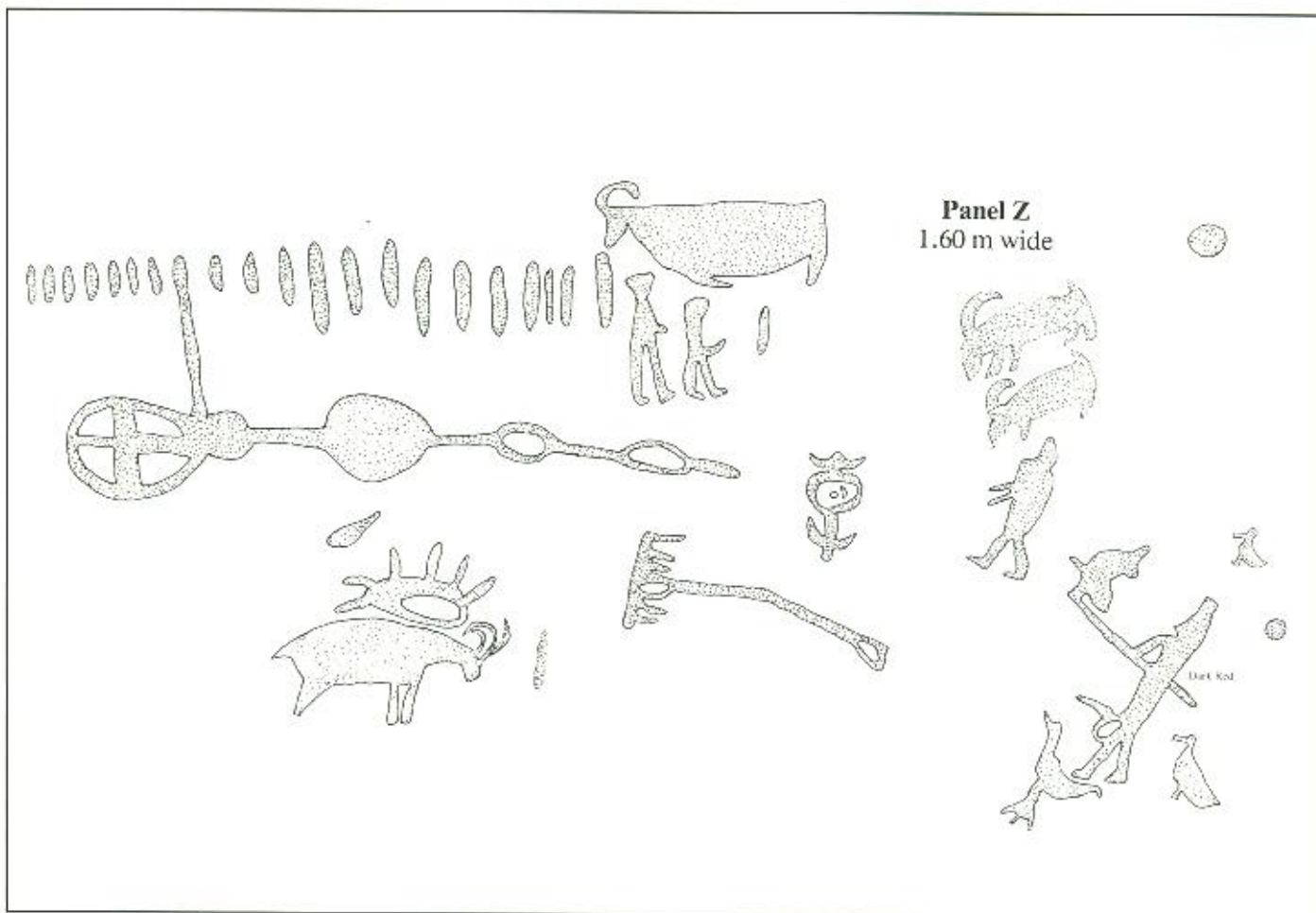
The small side-notched points and Eastgate points found and found-and-illustrated at the site respectively were thought to co-occur at Nahas Cave, to the near southeast around c. A.D. 1000 (Plew, et al. 1987:17, 45, 47). This, it will be remembered, would be two hundred sixty years earlier than the upper bracket proposed for the current site and three hundred years younger than the lower bracket. The most common range of dates in the Great Basin would also put both points within A.D. 700 to A.D. 1260, plus or minus several hundred years (Holmer 1986:106, Fig. 16).

The Eastgate point is well known from both Fremont and late Archaic contexts within the Great Basin area, and in classic form it is most often considered to date between A.D. 700 and A.D. 1300 (Thomas 1983:179-181; Holmer 1986:106-107). The Nawthis side-notched point dates from A.D. 950 to A.D. 1250 in Fremont sites and the Gypsum point is generally considered to pre-date Eastgate and Nawthis by at least several hundred years, although it is certainly noteworthy that Backhoe Village, a Sevier Fremont site, has a radiocarbon date of  $830 \pm 110$  A.D. associated with several Gypsum-like points (Madsen and Lindsay 1977: Tables I and II). The bow and arrow is also frequently depicted at the Jarbidge site and that association is thought to reflect use younger than A.D. 600, and probably younger than A.D. 700 (Holmer 1986:106).

Therefore, most of the use coming after A.D. 800 seems probable, at least given the commonness of the bow in the paintings. An earlier use cannot, however, be completely ruled out given a few recoveries of arrow points in regional cave deposits dating from A.D. 300 to A.D. 450 (Holmer 1986:106).

### Animals Depicted

Unfortunately, the local archaeology helps very little in the age span proposed above. The Columbet Creek Rockshelter is within eyesight, but offers no C14 dates and no faunal listing to show what was being hunted, although it is probably correct to assume that its clay sheep and human figurines occur with Rose Spring, Elko, and Eastgate points around A.D. 1000 (Plew 1982:47; 1986:36). Likewise, Deer Creek Cave offers very little in the way of time sensitive support for the Jarbidge site's animal figures being hunted in the vicinity during A.D. 700 - A.D. 1260. Mountain sheep remains are certainly very common around A.D.  $1235 \pm 40$  and slightly earlier at Deer Creek Cave, but they are also present from about 3135 B.C. onward. Likewise, there are fragments of "possible" antelope, bison, elk/deer, bear, and dog/coyote bone scattered throughout, although they only co-occur in the later deposits (Shutler and Shutler 1963:17-29). Nevertheless, a little further east, Murphey (1985:118) has reported that mountain sheep, deer, and perhaps an-



**Figure 12.** Panel Z is done in light and dark red paint. The motifs include four bucket-headed figures, one surrounded by ducks, some mountain sheep, and a variety of geometric designs. Most notable of the geometric designs is a chain of loops and circles and a large rake.

elope replaced bison as a primary food source at Devil's Creek around A.D. 1100.

The totality of data offers support, albeit very weak support, for the idea that most of this site was created after A.D. 700 and probably after A.D. 800. Its final occupation was apparently before A.D. 1100, when Desert side-notched points are established as regional time markers (Plew, et al. 1987). Thus, the original bracket of A.D. 700-1260 can apparently be refined to A.D. 800-1100.

### Age Estimates

Correlations with accepted chronology for projectile points and also for Great Basin rock art is presently the only way to bracket date the site. However, simple seriation of the site panels based on the criteria of motif style, specifically anthropomorphs and their associated items, color, color combinations, and artistic quality also produces four clusters of panels (Table 3). Most often such variation has been explained in terms of different ages of use (Cole 1990:34-41).

The interpretation that these "clusters" may be assignable to several distinct painting episodes is preferred over the possibility that they represent substantial artistic variety at a single time somewhere in the age bracket. The resulting model is certainly quite speculative. It is offered only to be tested by sophisticated dating techniques sometime in the near future. It perhaps overly

emphasizes when certain artifact and art styles are thought to occur in other areas—e.g., the Fremont-Basin area.

The first use is the most awkward in terms of its temporal placement. It involves a few painted petroglyphs and some panels done in what seems to be a poor quality red paint. In addition to isolated, handled items, motifs attributable to this episode are few. They include a large, antennaed anthropomorph which is holding a staff (or a shaft) and this figure is adjacent to two circles, and to one handled and one tailed circle (Panel L). There are also two smaller solid-painted anthropomorphs of this type with staffs and circles nearby, as well as some slashes, simple geometric designs (including a track), a deer/elk, and three rectilinear meanders (Panels U and AA). The date assigned to this use is A.D. 850, but an earlier date is certainly possible based on the crudeness of the art in relation to the next proposed episode of use.

The second use is the most spectacular, both in terms of the variety of the paint and the variety of motifs involved. A date of A.D. 900 is suggested, based on the presence of a small, Vernal-type mask (Panel D), some Rosegate arrow motifs (Panels D and S), and the ages assigned to the use of black, yellow, white, and red paint in the Great Basin by Castleton (1979, 1984). The red paint is of high quality, and two small panels are painted in white or black. A variety of creatures are represented in-

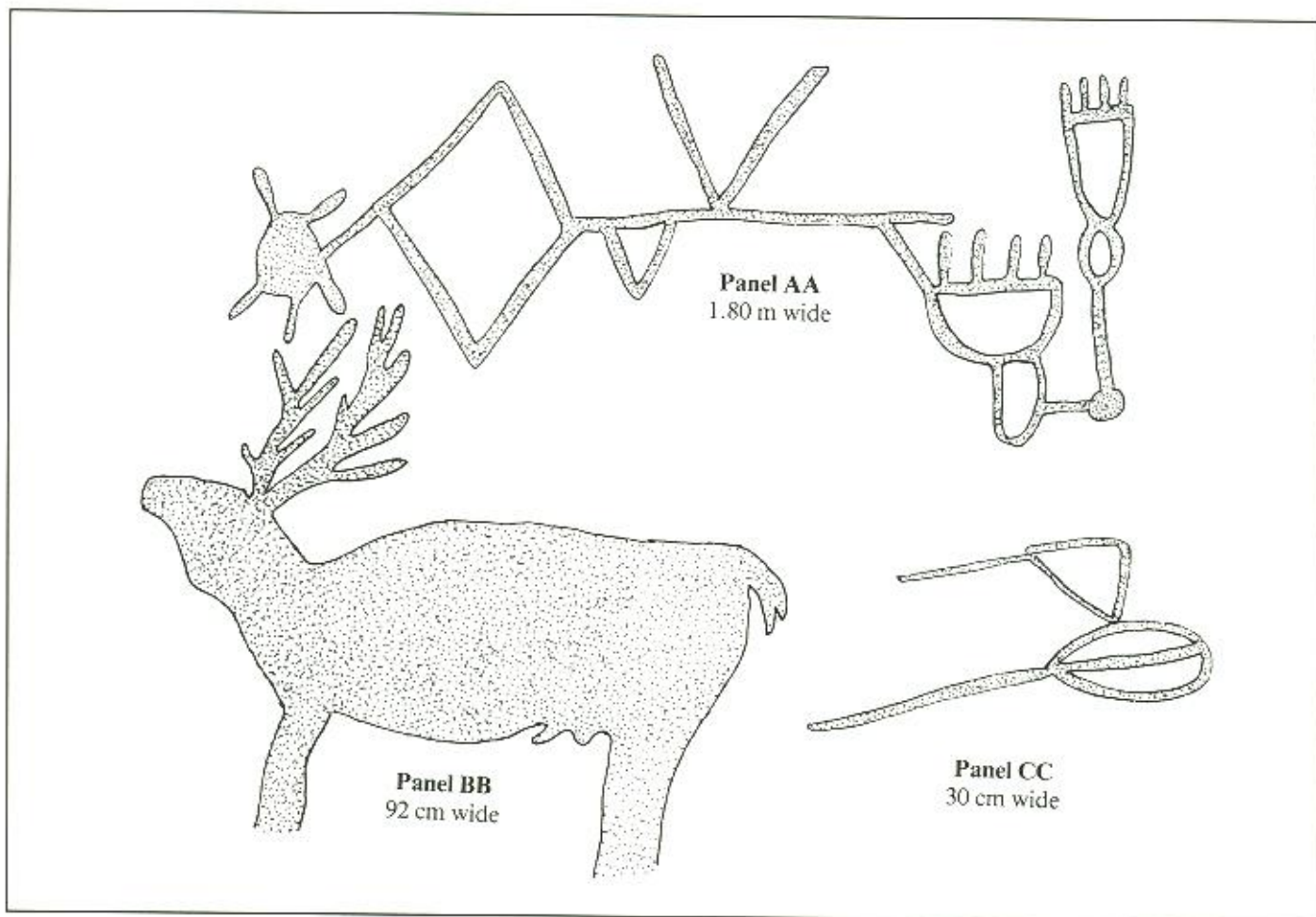
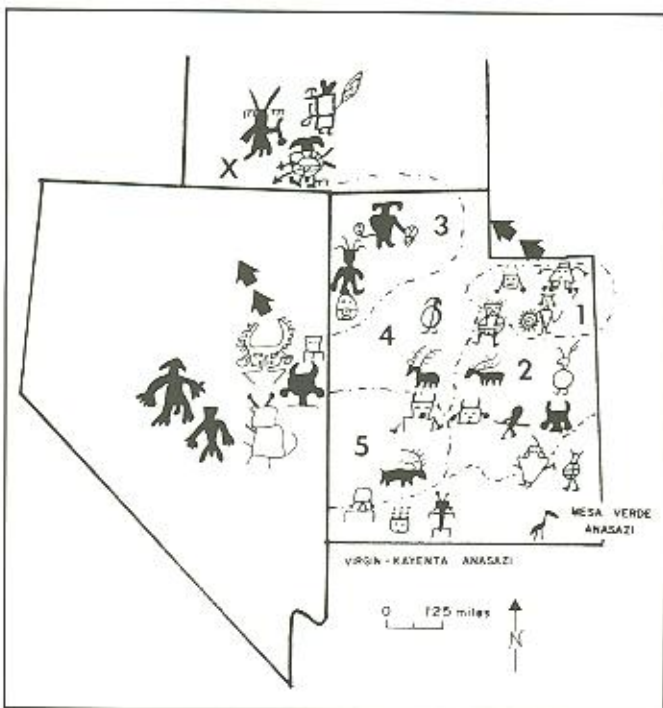


Figure 13. Panels AA - CC. These motifs include a long rectilinear meander (etched in red ochre), a single dark red elk, and two petroglyphs painted red. The petroglyphs mark the north end of site.

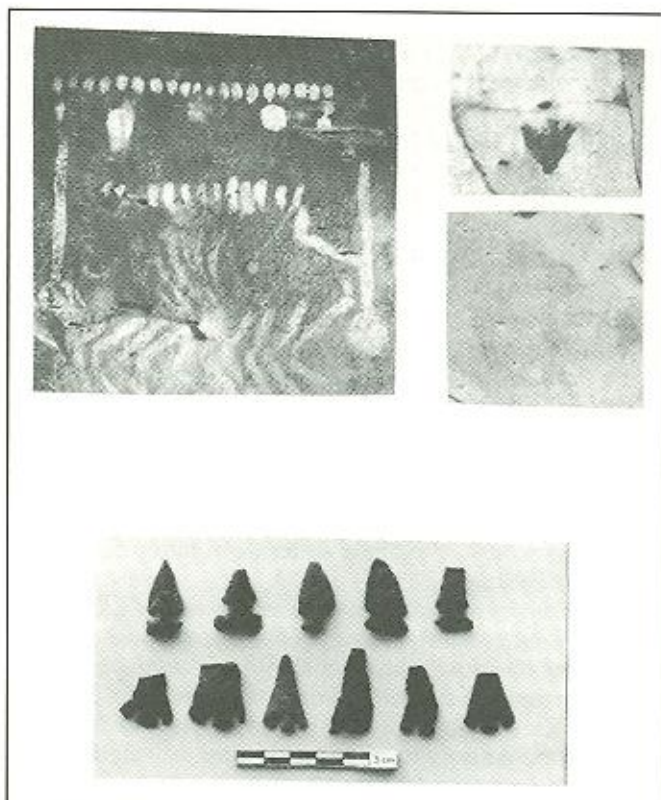
cluding dogs/coyotes, bears, birds, bison, perhaps antelope, and most commonly the deer or elk motif (54%). Small hunters with bucket-shaped heads (70%) are depicted, sometimes shooting deer or elk with arrows. Rounded-headed figures occur less frequently (30%). Some animals have an aura painted around them in white. Other motifs include circles, dots, and simple rake designs. There are a few solid-ended, handled items and one that is partially hollow-ended.

The third episode dated at A.D. 950 involves only black and red paint—no yellow or white pigment was used. Most of the red paint is of a lesser quality although one or two anthropomorphs of an exceptionally good quality red paint occur in some of the panels. Black paint is used in a large, square, red and black mask and in a small black anthropomorph. The only animals represented are a few ducks and mountain sheep. Except for the small black one, the anthropomorphs are mostly large in contrast to the associated motifs. Many show erect penises (50%), and most are depicted as walking or standing. These figures generally have bucket-shaped heads (86%), although there are a few with oval-shaped heads (14%). One shield warrior has a long bow, and one anthropomorph has a rectangular head with a single feather or horn in the back. Other motifs include another mask (much smaller), the long trails of fingertip dots, finger slashes, mountain sheep tracks, L-shaped brackets, hollow suns, and rake-ended, triangular-ended, and solid/oval-ended handled items.<sup>5</sup>

The artistic-realistic quality of the Jarbidge site rock art declined dramatically during the last period (A.D. 1000). Most motifs are sketch-type drawings done with pieces of on-site ochre, although two panels include painted petroglyphs. Poorly executed glyphs of small bucket-headed (25%) and/or horned anthropomorphs (75%) are present



**Figure 14.** The Fremont areas: 1, Uinta; 2, San Rafael; 3, Great Salt Lake; 4, Sevier; and 5, Parowan. An X marks the Jarbidge Rock Art Site. The Idaho glyphs are from the Kanaka-Briggs Creek site.



**Figure 15.** From top, a vernal-type mask (Panel D), an Eastgate projectile point motif (Panel J), a hunter shooting an elk-deer with bow and arrow (Panel D), and the projectile points found along the slope and in the draw just below the rock art. All but the mask also emphasize the hunting relationships of the site.

along with one small panel depicting a hunting scene. Other motifs include mountain sheep, circles, tailed circles, one elaborate handled item, and a few fingertip slashes and dots. There is one very large grouse and one curvilinear meander. There is also one very clear depiction of an Eastgate projectile point.

### Fremont People?

Some wonder if the nearby Columbet Creek rockshelter, specifically the clay figures and associated materials, could represent a Fremont-type assemblage (Butler 1983:9). Butler (1983:2-4) has also reported on a few Fremont pottery sherds from the mountains located just east of the present site. In addition, a strong "Fremont affinity" was found nearby at Devil's Creek (Murphey 1985:119, 122-123), and classic Fremont assemblages have been reported from the Grouse Creek-Goose Creek area slightly further to the east (Dalley 1976:20, 70, 117, 125). Certainly, as with the rock art, the generality of Fremont evidence has not yet proven to be particularly common or even widespread out of the core areas and into this region. The Great Salt Lake and Sevier core areas begin some 200-250 km to the east/southeast, respectively.

Elsewhere, to the southeast, and in a broad band extending south through Nevada, late archaic assemblages and a few paintings showing contact with Fremont and/or Anasazi cultures are well documented in the western and central Great Basin up to 300 km west of their territorial margin between A.D. 500-1300 (Elston 1986:146).

**TABLE 3**  
**AGE ESTIMATES CORRELATED WITH PANEL ATTRIBUTES**

USE (Episode)	AGE (Estimate)	PANELS (Total)	COLORS	MAJOR MOTIFS
I	A.D. 850 (or earlier)	A, L, R, Y, U, AA, CC  (7)	Light Red	Anthropomorphs (Bullet-Headed) Circles, Deer-Elk Handled Items Rectilinear, Meanders
II	A.D. 900	C, D, E, F, G, S, BB  (7)	Dark Red Light Red Black White Yellow	Animals (Bears, Birds Bison, Dogs, Elk) Anthropomorphs, (Bucket/Oval) Arrow Points/Arrows, Finger Dots, Tailed Circles
III	A.D. 950	H, M, N, O, P, Q, T, X, Z  (9)	Dark Red Light Red Black	Anthropomorphs (Bucket-Headed People, Shield Warriors, Masks), Finger Dots, Slashes, Handled Items, L-Shaped Brackets, Mountain Sheep
IV	A.D. 1000 (or later)	B, I, J, K, V, W  (6)	Ochre	Anthropomorphs (Abstract Horned, Bucket-Headed), Circles, Handled Items, Mountain Sheep, Meanders, Single Lines/Slashes

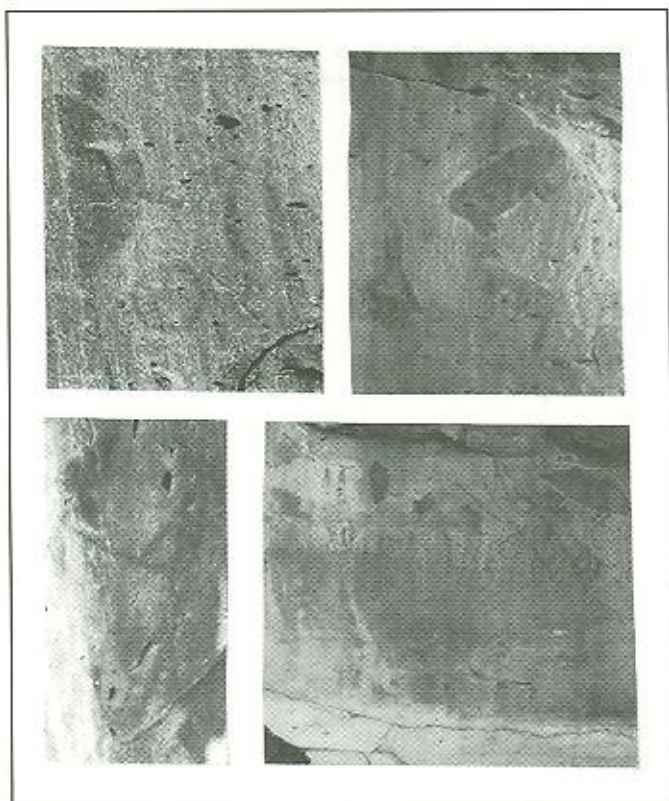
However, this same zone shows evidence to support the use of non-Fremont rock art, or at least non-classic Fremont rock art, to mark ambush spots during the enactment of communal big-game drives (Schaafsma 1986:220-221), an interpretation for the Kanaka-Briggs Creek site located near Buhl, Idaho (Murphey 1985). Curiously, many of the Kanaka motifs are very Fremont-like. Other Fremont-type evidence, including a house floor, are also known for the vicinity (Butler 1986:132). These sites, like the Jarbidge site, are clearly isolated from major habitation sites of approximately the same vintage. The significance of this isolation, functional, socio-political, both, or neither, is not yet understood.

The underlying problem still continues to be why and when Fremont trails occur in the region. Do traits such as the Jarbidge glyphs reflect Fremont culture or just Fremont influence? If there was a regional Fremont, did it evolve *in situ* or was there population intrusion preceding, or contemporary with, the Shoshonean population? This writer agrees that considerably more socio-economic data and settlement data are needed to shed light on the problem (see Plew, et al. 1987:7). It is in the light of this need that the following observations are presented for the Jarbidge Rock Art Site.

#### SITE FUNCTION

The projectile points, cairns, and hunting blinds support the hypothesis that the site functioned at least partly as a big-game killing locality. The narrow v-shaped end of the draw, where the site is located, is an ideal ambush place, and the 1 km climb out of Columbet Creek to this place would have tired prey and made them slower, easier targets. A number of panels depict squatting hunters with weapons, hunters holding or shooting bows, hunters near wounded or dead mountain sheep, and in two cases hunters actually shooting elk or deer (Panel D). Other panels appear to depict hunters surrounding, directing, herding, following, or tracking wounded prey, sometimes with dogs (or coyotes) nearby, suggesting their involvement in the hunt or scavenging afterwards (Panels C, D, E, H, I, J, V, and X).

Figure 16 has photos of some of the animal and some of the animal-anthropomorph depictions at the site. There are big-game animals and/or tracks represented on 48% of the panels, further supporting a big-game hunting relationship, although not necessarily a relationship tied to the marking of individual ambush spots with rock art (see Murphey 1987), as other possibilities also exist. In fact, the spectrum of archaeological evidence seems to preempt a clear-cut correlation between all four uses and the on-site ambushing of big-game animals.



**Figure 16.** From top left, a large big-bellied figure and a smaller shield warrior near an abstract mountain sheep (Panel O), a walking figure near a bison and a dog-coyote (Panel D), a bucket-headed figure with a duck at his feet, another on a shaft or pole (Panel Z), and an elk-deer and a bear (Panel D). Note the aura of white around the bison at top right and bear at bottom right.

Only one pigment sample, the one chosen to represent the last use of the site, seems to represent an undisputable use of ochre from the site quarry. The other pigment samples seem to reflect other sources for ochre. It seems illogical that all of the on-site mining was related to marking or celebrating big-game ambushes that took place here or nearby. Although this is a good-sized rock art site, there is not enough painted area to account for the removed ochre. Rather, it seems more logical to infer that much of the ochre was removed for various uses elsewhere, visits made to the site and stays at this site just for ochre mining are even possible.<sup>6</sup> It is noteworthy in this light to mention that indications of habitation are present.

The disturbed rockshelter where Panel D is located has charcoal and a few flakes in a back dirt pile. There does not seem to be the preponderance or variety of cultural material one would expect from intensive use, such as bone fragments, fire-cracked rock or broken tools. There was, however, some camping-type activity at the site.

In addition to hunting, ochre quarrying, and a minimal amount of habitation, some magico-religious use needs to be considered for building an eventual understanding of the site's overall function. Many motifs represent an apparent ceremonial and/or magico-religious function. One mask is adjacent to bundles with inserted shafts or stick-like items, and another mask is flanked by some of the numerous handled items (perhaps rattles, wands, drum sticks, etc.). It seems probable that much of the

rock art reflects ceremonial or ritual activity that occurred in conjunction with or supplemental to some of the other uses.

The four periods might even be linked to these several slightly different functions. The first use could be, judging from the panels and their location, related to temporary habitation, perhaps with some ceremonial and ochre removal. Figures painted in white, red, black, and yellow suggest the second use at A.D. 900 may have been completed before or after hunting a variety of animals in the vicinity including bison, elk, birds, and perhaps even bears. The second use may have been a magico-religious event that was related to ochre removal or an event that either commemorated or preceded the hunt. The third use at A.D. 950 may have represented a similar function, although the only animals represented are mountain sheep and ducks. The use of what appears to be a lesser quality paint (with the notable exception of the better jarosite-based paint used on a few figures) and only two colors suggests a somewhat more decadent celebration. The number of figures with exposed phallics, and the number of handled and other possible magico-religious motifs, might even indicate a shift in the ritual behavior taking place.

A final use at A.D. 1000 (or later) may coincide with the construction of the cairns, the game blinds, the use of Eastgate and small side-notched projectile points, and the specific use of this setting as an ambush site. All hunting blinds and cairns are situated immediately above and below the panels of this episode and the arrow points were collected below the blinds, thus supporting the notion that this rock art may have marked individual ambush spots. Ochre from the site seems to be used for sketching and as a base for paint. The rock art is much more casual in terms of the representations.

This scenario suggests the weakening of a very strong Fremont-like aspect to the evidence by the last use of the site. Fremont rock art most often is associated with a magico-religious relationship to big-game hunting and is not known to mark the actual ambush sites, as it does in the central and western Great Basin, except perhaps at the Kanaka-Briggs Creek site (Murphey 1987). The idea that some of the Jarbidge rock art occurs with blinds and perhaps simple fences at a kill scene around A.D. 1000 needs more study. It has previously been suggested that more elaborate corrals and fences occur thereafter in this region, probably in relation with Shoshoni and/or Fremont evidence, and that simple ambush walls are thought to be present earlier (see Plew 1980:29-30, 140-146; Murphey 1985:119). The testing of this communal hunting sequence by further study and on-site excavation of such sites, especially those associated with rock art, could increase our understanding of communal hunting and its significance to the late prehistoric peoples of southwestern Idaho. The foundation of a late period rock art sequence, at least in part, would be an added bonus to this work.

## CONCLUSION

The Jarbidge Rock Art Site supports the premise that there is a strong similarity between Fremont rock art and some of the rock art found in southwestern Idaho. The dates suggested for the Jarbidge site and interpretation of



this site functioning at least in part for hunting fits with models suggested by this writer (1987) for the Kanaka-Briggs Creek site near Buhl, Idaho. Nevertheless, the specific range of site use and the origin of the associated rock art motifs from within the Fremont area, and what these and other traits mean in terms of a resident population in southwestern Idaho remains open to study. Could this evidence indicate a Fremont presence or does it just mirror the influence that Fremonters had upon their western Snake River neighbors?

#### NOTES

1. Albert Taylor, a Shoshone, lived in a small cabin near the mouth of the draw until 1956. Mr. Taylor reportedly considered this site to be his special place and several times during the late spring he would place small jars or tin cans filled with wild flowers into clefts situated beside some of the panels. Mr. Taylor revealed the site to four of his friends (the Bartons and Murphys in the early 1950's).
2. Ochre mining is obvious at two places near the base of the cliff. Pointed cobbles carried in from the stream bottom or elsewhere are scattered on the ground below these ochre lenses. Many of the cobbles show definite evidence of use as large hammer stones. An estimated 40 cubic meters of ochre may have been taken from this site, although this figure does not take into account natural erosion.
3. The ochre quarry samples were dominated by albite (a feldspar), quartz, calcite, and possibly a trace of hematite. The red pigment samples also contained jarosite, some unknown minerals, and they lacked calcite, except for the sample representing the last episode of use (which matched the quarry samples).
4. Several Washington sites and Buffalo Eddy in northern Idaho have red, black, and yellow motifs (Keo Boreson personal communication:1988). North-central Wyoming also has a few motifs and motif combinations done in red, black and white. Pictograph Cave near Billings, Montana, contains about 100 figures painted in black, red, and white, in that order of frequency. Some motifs portray historic items and others are probably protohistoric or prehistoric. It is felt that most of these figures indicate cultural relationships to the east, toward the Plains (Frison 1978:413). Jim

Woods (personal communication) notes that the big panel at Indianhead Canyon has red, black, white, and very little yellow, while Jackknife Cave (also on Idaho's eastern Snake Plain) has red and black.

5. Several reviewers have felt that use number 3 is actually older than use number 2. They have pointed out the large size of the anthropomorphs, the relative absence of bows, and the masks as evidence. Mountain sheep and the supplemental motifs have been key to the present placement.
6. Since ochre staining occurs on many Clovis points and preforms found in the Simon Clovis cache, the use of ochre as a decorative and/or magico-religious medium dates from at least 11,000 B.P. in the Western Snake Region (Woods and Titmus 1985:6-7). In the extreme west of southwestern Idaho, the use of ochre to line the floors of graves and on grave goods is a diagnostic characteristic of the Western Idaho Archaic Burial Complex, ca. 6000-2500 B.P. (Pavesic 1985:81; Green, et al. 1986:39-40). Just thirty-five km northeast of the Jarbidge site, Murphey (1985:109, 111, 113, 119) has reported ochre-stained animal skulls, ochre-stained tools and ochre-stained hunting blind walls occurring between 2100 and 600 B.P. Likewise, the Baker Cave excavations located 145 km northwest produced ochre-grinding slabs in association with crude drywall masonry, weaponry, and a variety of domestic, fabricating, general purpose, and decorative items from 810 to 930 B.P. (Plew, Pavesic, and Davis 1987:94-98). Closest to the Jarbidge site is the Columbet Creek Rockshelter which contained a leather pouch filled with red ochre in association with clay figurines and Rose Spring-Eastgate projectiles (Lynch and Olsen 1964).

#### ACKNOWLEDGEMENTS

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# SHORT CONTRIBUTIONS

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## BOOK REVIEW

### *QUANTIFYING DIVERSITY IN ARCHAEOLOGY*

Edited by Robert D. Leonard and George T. Jones. Cambridge University Press, 1989, x+168 pp., tables, illustrations, references. \$44.50 (cloth)

Reviewed by Mark G. Plew  
Boise State University

The last decade has witnessed an increased interest in the application of diversity measures in archaeology. These are derived largely from ecological models which attempt to identify ranges of variability. Leonard and Jones provide a useful albeit modest contribution to this developing literature. The volume consists of four sections including concepts, components, assessments of diversity and commentaries. The first contains three papers dealing with concepts of diversity. Following an introduction by Jones and Leonard, Bobrowsky and Ball provide a very useful overview of the theoretical and mechanical bases of ecological diversity models in archaeology. The paper summarizes various measures while assessing common misapplications to archaeological data. Rindos discusses diversity in the context of Darwinian variation and selection.

The second section of the volume contains five papers dealing with various components of diversity analysis. Kintigh, for example, uses the Monte Carlo technique to demonstrate its utility in assessing the impact of sample size on measures of diversity. Simek examines diversity in intrasite spatial analysis while Jones, Beck, and Grayson apply diversity measures to the examination of expedient lithic technologies. The theme of sample size effects which pervades most of the papers in this section of the volume is further exemplified by Grayson's discussion of sample size effects and relative abundance in regard to spiral fractures.

Schiffer's paper deserves special note as it does not deal with diversity but examines formation processes at Broken K pueblo as a basis for refuting Hill's earlier interpretations.

The third section of the volume, entitled "Assessments of Archaeological Diversity", includes five papers representing broader applications of the analysis of diversity. Prominent among these is Thomas' brief summation of applications of diversity analysis in the Monitor Valley. Thomas believes that analysis of regression constants holds sample sizes constant, permitting examination of a relative degree of assemblage diversity. He appropriately

observes that relative measures of diversity cannot be used to classify assemblages in the context of Binford's (1980) forager-collector continuum, but argues that log-linear regressions may be used to rank assemblages along a sliding scale of relative residential intensity. Thomas importantly recognizes that such approaches are a prerequisite for analysis of diverse data sets. Leonard, Smiley, and Cameron attempt to demonstrate changing lithic procurement patterns among the Anasazi by examining evenness values and abundance of formal and expedient tools produced from a range of local and non-local materials. Their approach is in some ways similar to Thomas' and suggests the probable value of such methods. Rothschild examines the impact of urbanization on faunal diversity while Rice looks at ceramic diversity in terms of production and use. Conkey's paper stands apart from the other papers in this section as she reviews the use of diversity measures in the analysis of style.

The last section of the volume includes commentaries by Cowgill and Dunnell. Cowgill offers sufficient caution regarding the potential for misapplication of diversity measures. He importantly observes that diversity in the archaeological record is best considered in the context of large data sets which make it possible to identify discreet activities not discernable from small assemblages. Dunnell appropriately observes the need for the construction of theory to relate diverse data sets to concepts of diversity.

Though *Quantifying Diversity in Archaeology* is a useful contribution to the growing literature on diversity analysis, it is characterized by a high degree of redundancy in regard to the problem of sample size effects. It further suffers from a failure to articulate a cohesive analytical framework for analysis of diversity. Grayson's comment that his paper represents nothing new and Dunnell's characterization of diversity as a group of measures in search of application, typify the volume. Perhaps the most useful contribution beyond the commentaries which expose the theoretical and methodological shortcomings of diversity analysis is Bobrowsky and Ball's summary.

*THE UTES OF UTAH LAKE*

by Joel C. Janetski. University of Utah Anthropological Papers Number 116, 1991. x+81 pp., maps, illustrations, references.

Reviewed by T. Virginia Cox  
Boise State University

This publication is based on Janetski's dissertation (1983) and is the result of his continued interest in Great Basin Lacustrine Subsistence (Janetski: 1986, 1988, 1990a, and 1990b). The research was focused on developing a model of protohistoric life for the Ute of Utah Valley that could be substantiated by archaeological investigation. He also states that he was interested in demonstrating hunter-gatherer variability, testing the validity of the "Lacustrine Subsistence Pattern concept developed by Robert Heizer and his students at the University of California, Berkeley" (xi). In this monograph Janetski proposes to:

- (1) summarize Great Basin wetland environments and ethnographic research in those areas;
- (2) to synthesize the environmental, ethnographic and ethnohistoric data on the Western Ute of Utah Valley;
- (3) to present a comparative discussion of the Timpanogots and Utah Valley and other Great Basin hunter-gatherers, especially those inhabiting regions containing significant wetlands" (xi).

The volume is divided into four sections or chapters. The first "chapter" or Introduction is fairly long, 16 pages, and is devoted to discussions of objectives, ethnohistory, source material, Great Basin environments, Great Basin Ethnographic Research and the development of the Great Basin Lakeside Adaptation concept. In the section on Objectives, Janetski lists two goals. The first goal is to "present in a systematic fashion what is known about the environments of Utah Valley and the Ute who lived there at the time of contact, the late eighteenth and early nineteenth centuries" (p. 1). He argues that the Utes and other prehistoric peoples of the region can only be understood if a description of their lifeway can be obtained. The second goal, which he claims is not as discrete, is "to set the lacustrally oriented Utah Valley Ute in the context of the Great Basin, especially relative to other groups living in wetland environments" (p. 1). This objective is related to the argument he makes for the variability of Great Basin wetlands and what he refers to as a "bias in the literature of Great Basin wetlands" (p. 1). To achieve his goals and objectives he uses many different types of resources, i.e. historical documents, archaeology, ethnography, linguistic, and environmental accounts.

Another section of the Introduction that is of interest is his discussion of the use of Ethnohistory as a methodology. While the use of ethnohistorical records are heavily utilized in this report, the author is well aware of some of the problems in using such data. He refers to them as "pitfalls" and mentions that ethnohistorical materials "are usually fragmentary, scattered, full of irrelevancies, inaccuracies, inconsistencies and bias, and often contain only

indirect references to topics of interest to anthropologists" (p. 2). But accuracy of details can be checked by reviewing a number of sources. He states that he "attempted to limit conclusions to patterns with multiple documentation and those which derive support from both the ethnographic and the primary historical records" (p. 3).

Discussion of ethnohistory is continued in the section on source materials. Janetski lists material from six periods. These periods are: Spanish Explorers 1775-1820; Fur Trappers 1820-1850; Government Explorers 1840-1880; Emigrants and Settlers 1845-1860; Indian Agents 1847-1870; and Ethnographic Studies 1900-1940. Each of these periods are discussed in some detail with major sources identified. This gives the reader a firm base to evaluate the data presented in the ethnographic section and to evaluate the conclusions reached.

To further set the stage Janetski has a detailed discussion of the Great Basin Environments which mainly addresses water availability such as lakes, rivers, and other sources of wetlands. Included in the discussion are the Lahontan Basin and the Bonneville Basin, with special references to the present with regard to fisheries.

In Great Basin Ethnographic Research he discusses the negative images presented of the Indians of the Great Basin by the early travelers. The notion that all Indians of the Great Basin led a uniformly low-level existence is long standing and has hindered understanding Great Basin ethnographic variability. The ethnographic data baseline was set in the 1930s by Steward's work with the Western Shoshone (Steward 1938) and the Northern Paiute (Steward 1933). Janetski believes that Steward's work (1933, 1938) "has been the basis for continuation of the stereo-typical view of Basin life developed in the previous century" (p. 13).

The last section of the Introduction discusses the development of the Great Basin Lakeside Adaptation concept, which is very important to Janetski's ethnographic analysis of the Utah Valley Utes. The concept deals with a recognition of the range of cultural diversity in the region and the possibility that this diversity provides strategies for adapting to varied environments in the Great Basin, especially adaptation to lakeside and riverine environments. Important to understanding Great Basin Ethnographic Research is the debate between the Desert Culture concept of Jennings (1957) which is based upon the archeology of Danger Cave and which fits the cultural pattern described by Steward (1938) for the Gosiute Shoshone including cyclic wandering, and the Lacustrine Adaptation supported by Heizer (1967), Napton (1969), and others (Ambro 1967; Cowan 1967). In discussing the Lacustrine Adaptation Janetski introduces terms such as

limnomobile (Thomas 1985) and limnosedentary (Heizer 1967).

Introductory to the section on the Utes of Utah Valley is a short section on the Western Ute. This is a general description more useful in its identification of the various groups that make up the western Utes than in any detailed description of their lifeway. The heart of the monograph is the section on the Ute of Utah Valley. Using data obtained from historical sources of many kinds, ethnographies, and archaeology Janetski has reconstructed a lifeway that was for all intent and purposes drastically altered around the early 1850s by Mormon settlers, "a process that included several serious Indian-Mormon conflicts" (p. 32). Mormon settlement also had a profound effect on the valley itself as a result of the introduction of agriculture.

The group of Utes living in Utah Valley are referred to as the Timpanogots. This, according to ethnographic sources, could be translated as "Fish People". They lived along the rivers that emptied into the lake and their fishing technology indicated both individual and communal fishing activities.

This part of the ethnography provides the reader a view of a number of culturally related groups living in a riverine environment which they exploit effectively. Some seasonality of land use is documented with evidence "best for late fall through late spring residence of the valley" (p. 36). However, the valley was used by some Utes during all four seasons.

In this "lifeway" description Janetski gives what appears to be an extensive compilation of information about the Timpanogots. He describes as categories of information: hunting and gathering, clothing, ceramics, stone tools, social-political organization, ideology, power and curing, and dances, to name a few.

In reconstructing the Ute lifeway for the Utah Valley Janetski emphasizes three patterns: (1) the Timpanogot settlement pattern is apparently characterized by a valley focus; (2) Ute subsistence was heavily dependent on the resources available in the valley in and around the lake and streams; (3) and the data on the Timpanogot's political organization suggests that some level of organization beyond the family was in place at the time of Spanish contact (pp. 58-59).

Janetski concludes his monograph by placing the Ute of the Utah Valley in the context of the Great Basin. His research supports such comments as, "Tremendous variability existed in the lifeways of the people who inhabited the Great Basin, and that variability was inextricably tied to environmental characteristics" (p. 61). The Timpanogots were hunters and gatherers adapted to wetland environment and in comparison with other Great Basin inhabitants were not unique. Janetski believes there are parallels between the Timpanogots and the Northern Paiute living around Pyramid and Walker Lakes and other lakes of the Lahontan and Bonneville Basins. An overview of the peoples living in the vicinity of lakes and wetlands supports this conclusion.

Janetski concludes that there are "major gaps in what we know about hunter-gatherer wetland strategies in the Great Basin" (p. 64). Focusing on the environment and

subsistence, the conclusion is made that "the Great Basin Lacustrine Subsistence Pattern, based on archaeological research as defined by Napton (1969), falls short of describing the strategies utilized by Great Basin hunter-gatherers living around wetland systems" (p. 66). However, Janetski offers the following conclusions based upon the data presented in the monograph:

1. Hunter-gatherer strategies at any one time in the Great Basin formed a clear continuum, ranging from highly mobile foragers in the drier valleys to seasonally sedentary collectors in the vicinity of the major fisheries and other resource-rich regions such as Owens Valley.

2. These strategies evolved within a particular environmental setting as maintained by Kelly (1985), Steward (1938), Thomas (1981a, 1985), and others.

3. Sociopolitical organization of those groups following a collector strategy was more complex.

4. A key factor in the commitment to one strategy over another was the presence of bulk, storable resources that were also spatially and temporally predictable (p. 67).

This monograph makes a major contribution to the ethnographic data base for the inhabitants of the Great Basin. It is far removed from the early ethnographies which described the Great Basin Indians as "those who had little to lose" (cf. Underhill 1953:252). The use of ethnographic sources, historical sources and archaeology make for a comprehensive cultural reconstruction for the area, or at least as comprehensive as can be expected since the group referred to were impacted and removed from the land in the 1850s. Any ethnography attempted at a later date would have had to rely heavily on the "recall" of informants concerning how their parents or possibly grandparents lived. The use of ethnohistorical data is (with limits understood) useful in cross-checking "recall" information and filling in the gaps (Thomas 1973). The same can be said for the use of archaeological data. By integrating these three approaches information can be checked and cross-checked and the results will be far more valid than the use of any one of these approaches alone.

Janetski's use of ethnographic and ethnohistorical data to test a theory proposed in archaeology, the Great Basin Lacustrine Subsistence Pattern, is laudable. His description of the historical sources and ethnohistorical methodology is excellent. The combination of all the various ways we have for retrieving data and describing people and their lifeway as they once existed, will yield a more valid picture of these people than the use of just one approach can accomplish. Janetski has made a valuable contribution in several ways. He has, in his use of ethnohistory (historical documents), archaeology, and ethnography in reconstructing the lifeway of the Ute of Utah Valley, demonstrated the value of a holistic approach in the formulation of a cultural description. This has enabled him to compile a comprehensive ethnography of a group who were impacted by western culture and displaced as early as the 1850s. Lastly, for those readers interested in fisheries in the Great Basin environment, Janetski provides a quantity of information on fish and their habitat.

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## AN UNUSUAL STONE ARTIFACT FROM NORTHWESTERN OWYHEE COUNTY

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This report describes an unusual pestle-like tool found near the bank of the Snake River on the Stanley Williams farm between Homedale, Idaho, and the Idaho-Oregon border (see Figure 1).

The object was unearthed by Mr. Larry Anderson during agricultural operations and shown to the author by Mr. Anderson's brother Steven. Though evidence of aboriginal activity is commonplace in the region, the item is extremely unique. Within the vicinity of the Williams farm are sites of varying size which are characterized by ground and chipped stone artifacts, stone and bone debitage, mussel shell and firecracked rock (see Huntley 1988). Although mortars and pestles are common, the object described here has not been previously reported.

As noted, the artifact possesses the general morphology

of pestles found in the region. A number of characteristics, however, which include notching and polishing, are notable. The object is 50 cm. in length and triangular in cross-section. The proximal end has a circumference of 22 cm, while the distal end is 16.5 cm. in circumference. The object weighs 13.8 kilograms and appears to have been produced from rhyolite. The proximal end is worn and smooth as are many pestles. The distal portion of the artifact exhibits damage typical of pounding. A large distal end flake spall appears to be the result of heavy impact.

Unlike most pestles the object is polished over the entire surface. Also notable are a series of highly polished notches along the lateral margins which create a "wash-board" effect (see Figure 2 and 3) The margins have 30,

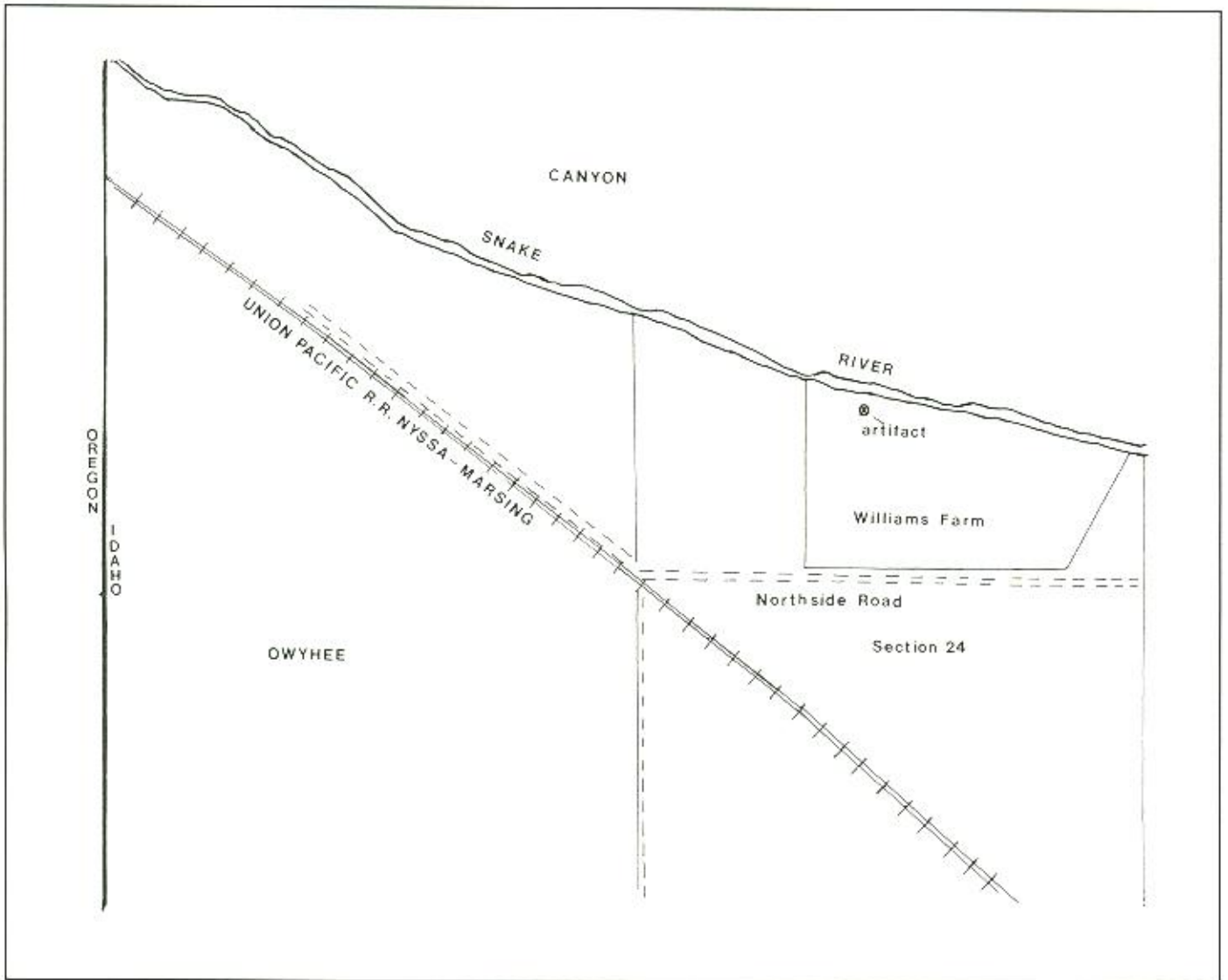


Figure 1. Map Showing the Location of the Discovery of the Pestle.

12 and 6 notches. The notches range from 1-1.5 mm in depth and are placed approximately one centimeter apart and are slightly slanted to the margins of the pestle. There is some scarring along one lateral ridge suggesting some impact and striations resulting from tilling activity. There appears to be very slight red ochre staining.

The function of the object beyond its obvious use as a pestle is unknown. Further, it is unclear as to whether the notching is associated with the original manufacture or later modification. The red ochre staining may suggest rit-

ual use, though the notches may have served to facilitate gripping of the artifact. Whatever its purpose it represents an item new in the material culture of southwestern Idaho.

#### ACKNOWLEDGEMENTS

Photographs of the object were taken by Chuck Sheer, Boise State University with the assistance of Dr. Max G. Pavesic.

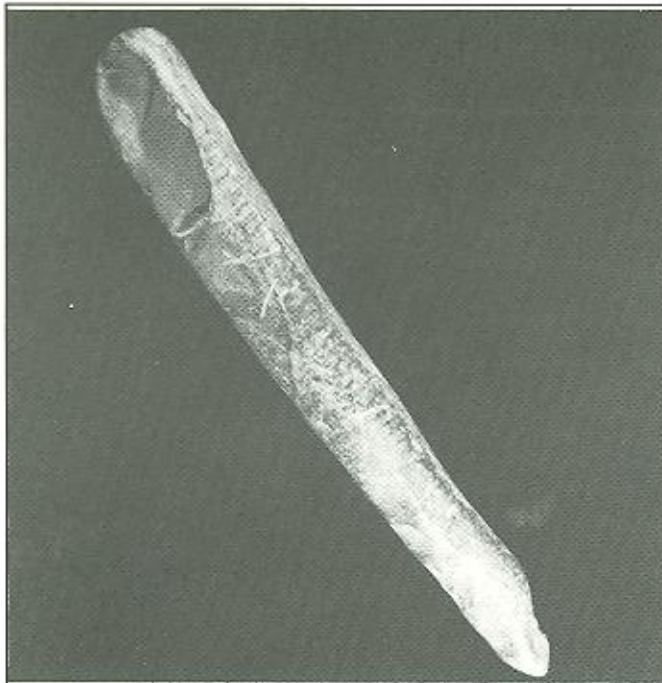


Figure 2. Photograph of Pestle Showing Notches and Large Distal Spall.

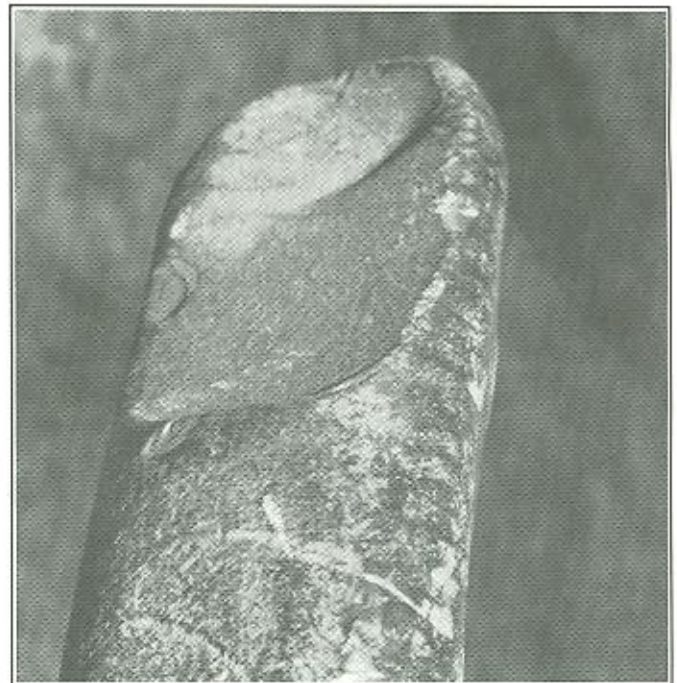


Figure 3. Close-Up Photograph of Distal End of Pestle.

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