

PATTERNING TO NORTHEASTERN UTAH ROCK ART SITES

by Clay Johnson

To understand rock art as an adaptation to an environment, we must examine entire sites, rather than individual panels. Apparently, little investigation has gone to contexts for rock art sites, their function, and associated archaeological features. The Handbook of North American Indians states:

"Studies of northern Colorado Plateau rock art site locations, aimed at determining site function, have not been done. Interpretation is thus based mainly on the imagery itself." (D'Azevedo 1986:224-5).

Interpreting images out of site context is inadequate because rock art design, technique, and "style" may vary more with chosen surface, site purpose and situation than with cultures. Connections between given cultures and panels of specific rock art "styles" are often still inferences to be tested, not yet demonstrated. Turner (1963:1) emphasized his belief that rock art was a continuum of intergraded designs and that his stylistic classes were purely for the purpose of organizing the data.

Thinking in terms of site offers insights into rock art, its makers, and their purposes. The first criterion is a definition of site, as those who made and used the rock art might define it. My working definition of site is: an aggregation of rock art related through site motif, individual style, concurrent interactions, specific element treatment, and or proximity, along with other archaeological features and the immediate terrain.

In conjunction with my documentation of interactions on rock art panels in Northeastern Utah, I am examining 33 Northeastern Utah sites involving nearly 600 panels for interactive panels, and for patterns to site location and situation. The data suggest patterns of panel orientation, site elevation, topographic situation, site extent, and distance to water. Further, for each site I examine several stylistic factors: use of horizontal surfaces, use of freestanding boulders, and presence of Classic Vernal "style" figures. Interim results are as follows:

Orientation

Of 540 panels examined through 1994, (Figure 1) 52% face generally South, 22% generally East, 18% generally West, and 11% generally North. Figure 2 graphs predominant panel orientation by site for 31 sites. South panel orientation predominates at 55% of sites, followed by East orientation at 29% of sites, and North at 13%. West is the predominant panel orientation at 4% of sites. This matches well with theoretical expectations for interactive rock art sites, which are as follows. South is theoretically the most useful orientation (at northern temperate latitudes). East and West are of lesser (but equal) value than South. North orientation is only useful for summer interactions. That West is

consistently underrepresented in relation to East in the data may be due to cultural bias towards panels of East orientation.

Elevation and Situation

In the following graphs, sites with Classic Vernal style figures (Schaafsma 1980:171-5) are filled squares. Outlined triangles represent sites without Classic Vernal style figures.

Figure 3 graphs elevation data for 33 sites. The dashed line is the lowest elevation within 3 kilometers (k) of each site; the solid line is the highest elevation within 3 k. A 3 k radius illuminates general site topographic situation.

While suitable rock surfaces occur from 1400 to 2400 meter (m) elevations, most of the rock art occurs at 1500 ± 100 m elevations. This corresponds with the lower edge of the pinion-juniper zone, central to a wide range of resources.

Figure 4 displays all sites as if at same elevation, to illustrate similarity of site topographic situations. Sites (especially Classic Vernal sites) tend to be adjacent to both flat valley floors falling less than 100 m in 3 k, and much higher ground rising 400 m or more in 3 k.

Water Source and Distance

Figure 5 graphs site distance from water. There is no patterning of site distance relative to the Green River, the main watercourse through this area. Water sources are small perennial streams or springs, rather than major rivers. Some probable water sources are intermittent or dry today. Most rock art sites occur within 500 m of small, dependable water sources. Sites #17, #21, and #32 cluster around a single dry arroyo that may be a vanished water source.

Site Extent

Figure 6 graphs site extent (greatest linear distance occupied by panels at the site). Sites with Classic Vernal style figures tend to exceed 350 m (averaging approximately 600 m). Other style sites tend to be smaller.

Figures 1-6 above show some patterning to site elevation, situation, extent, and distance from water. Do site environmental variables correlate with cultural variables such as site purpose or chosen style? Does some combination of traits distinguish sites with Classic Vernal figures from other sites?

Comparison of Selected Traits

I examined all sites (Figure 7) for the presence or absence of five selected traits: (1) site located within 500 m of water source (2) site greater than 350 m in extent (3) all panels on approximately vertical surfaces (4) all panels on rock outcrop or cliff face, rather than on

freestanding boulders (5) more than 7 panels at site. All sites began with a value of zero (0). Each site was then assigned a value of minus one (-1) for each of the five traits missing at that site. Some sites have a mix of Classic Vernal style figures and some other style. In these cases, I scored each site once for the assemblage of Classic Vernal style panels, and a second time for the assemblage of any other style. I posited the existence of the vanished water course discussed above for site cluster #17, 21, and 32. As seen in Figure 7, 89% of Classic Vernal style sites occur on the zero line. Only one site matching these physical and environmental parameters, #30 (Split Mountain), is not Classic Vernal style, although the site has one figure (probably Ute) similar to Classic Vernal style anthropomorphs. The site appears to be a special purpose site (marking a trail crossing at a river); much of the site extent is due to distance across the river between available rock surfaces.

Sites scoring minus one (varying in one trait from typical Classic Vernal style sites) include (#15) one of the two remaining Classic Vernal sites. This site (#15) is unique, as Classic Vernal style combines with a Plains shield and lance motif. Six of the remaining seven sites scoring minus one are mixed sites (where other styles occur on-site with Classic Vernal style panels). Sites #1-5 in Ashley-Dry Fork are not scored for mixed styles herein.

Sites scoring minus two share no obvious characteristics except lack of Classic Vernal style figures.

Five of eight sites scoring minus three (including Classic Vernal site #8) are likely trail junctions, rather than residence sites.

The site scoring minus four (#12) is close to both Uintah Fremont habitation and to a juncture where Brush Creek, flowing west to east, crosses an area easily accessible to north-south travel.

Summary

Rock art in the Uintah Basin is not randomly placed, but quite rigidly patterned as to elevation and topographic situation, distance and type of nearest water source. Additionally, the data suggest possible relationships between "style" and probable site purpose.

Orientation data examined by site or in aggregate conforms well with theoretical expectations for rock art of interactive design. Topography of the sites and the Uintah Basin, as well as specifics of site situation, suggest sites #7-12 and #30-31 may mark places where the best foot travel paths through the area diverge to access various locales, rather than residence sites. Characteristics of these sites (arranged by frequency) are: site less than 350 m in extent, panels on freestanding boulders and less than seven panels, site more than 500 m from water, and use of approximately horizontal surfaces for panels. Only one of these sites (#8) has Classic Vernal style figures, and only one (#30) falls within general site parameters of Classic Vernal style.

Sites with Classic Vernal style figures are typically associated with remains of multiple residences, and reported occurrence of stored corn. Additionally, as I reported in 1993,

Classic Vernal sites typically show evidence of having developed through year-round site occupation (Truesdale 1993: 73-86), while "trail junction" sites so far examined do not.

Classic Vernal style sites tend to be large, with many panels, and patterned on small water sources in benign microclimates offering relative year-round physical comfort, water, firewood, suitable ground for growing corn-beans-squash, and access to seasonal resources over a range of elevations. They are located where relatively flat terrain meets ascents through a variety of vertically arranged ecozones. I believe it safe to conclude that most Classic vernal style sites result from long term residential use by the Uintah Fremont.

Sites that may mark trail junctions tend not to have Classic Vernal figures. These sites certain traits in addition to suggestive topography. Small site extent, variable distance to water, small number of panels, and selection of horizontal or boulder surfaces separate these sites from typical Classic Vernal sites. These sites may or may not have been constructed by the same people that built the classic Vernal sites.

I have compared the mental parameters of "style" and purpose (cultural choices) with physical site parameters, which reflect choice in a less direct way. Sites with Classic Vernal style figures tend to vary both physically and stylistically from sites without Classic Vernal style figures. In some cases (trail junctions), the reason seems to be one of purpose. Purpose may (as illustrated by the likelihood that Classic Vernal site #8 marks a trail) cross cultural or stylistic lines. In other words, style may differ with culture, but may also vary with rock art purpose, or other factors within a culture.

More thorough treatments of site may offer models for site purpose or use and reveal further relationships between style and site. This study demonstrates again that rock art is not a random picture painted or scratched on a handy rock. Rock art is an artifact resulting from technology and environmental adaptation, with patterning due to those factors.

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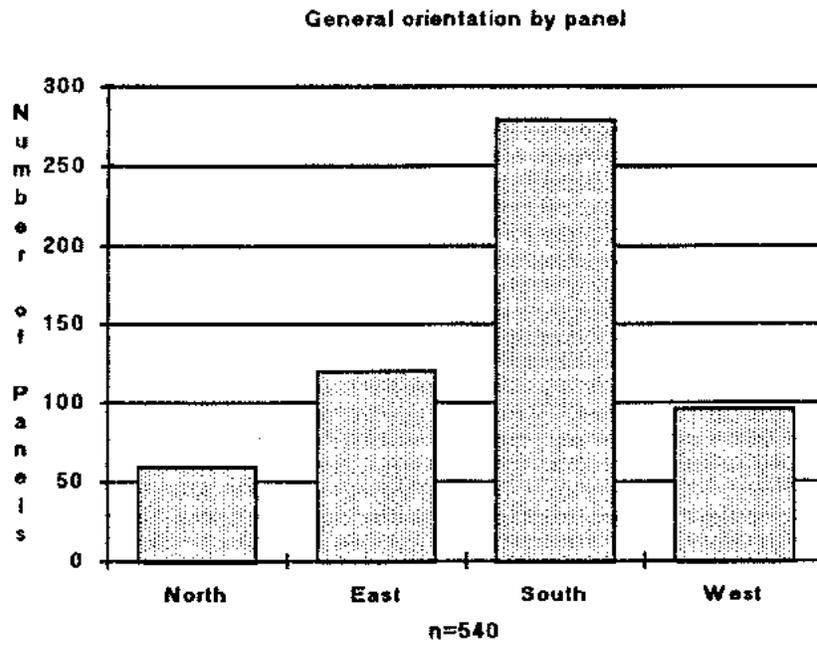


Figure 1. General panel orientation for 540 Uinta Basin panels.

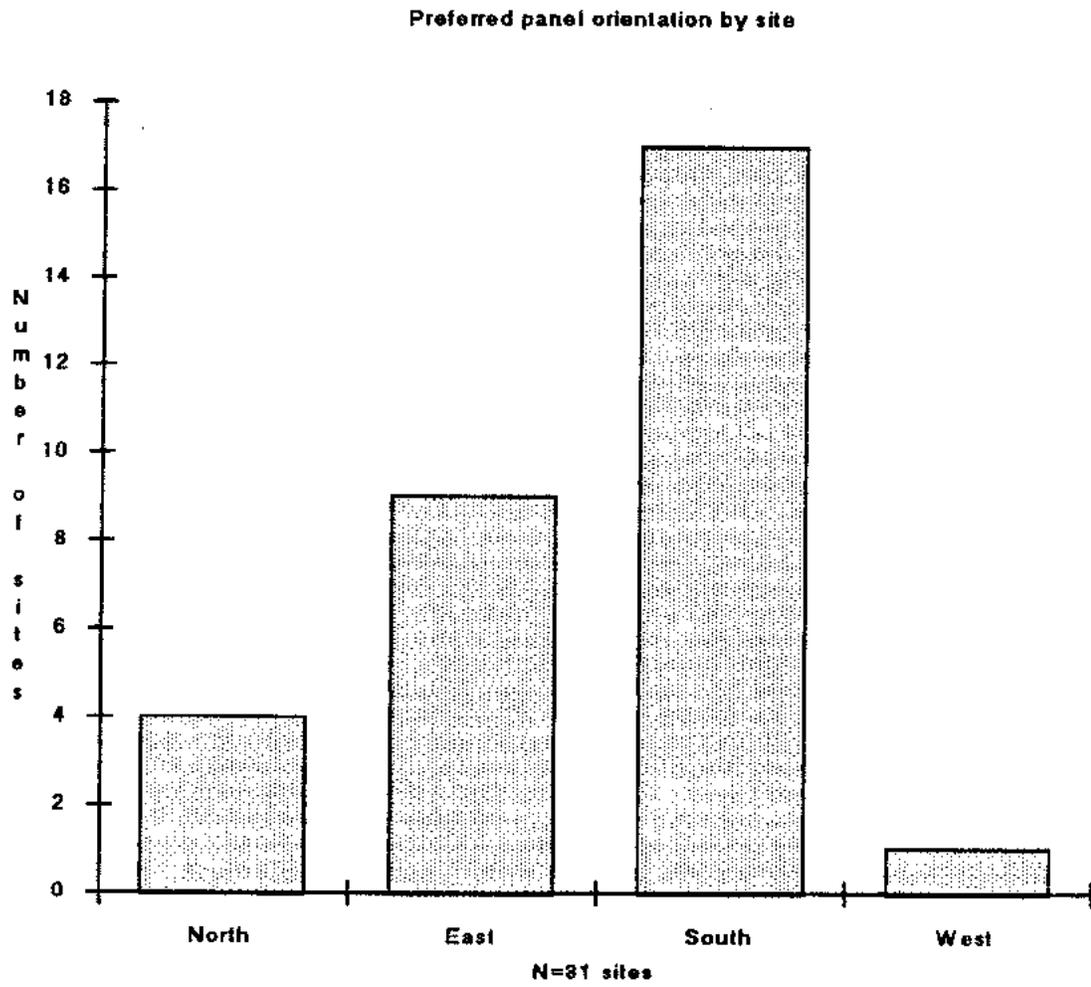


Figure 2. Preferred panel orientation by site: 31 sites.

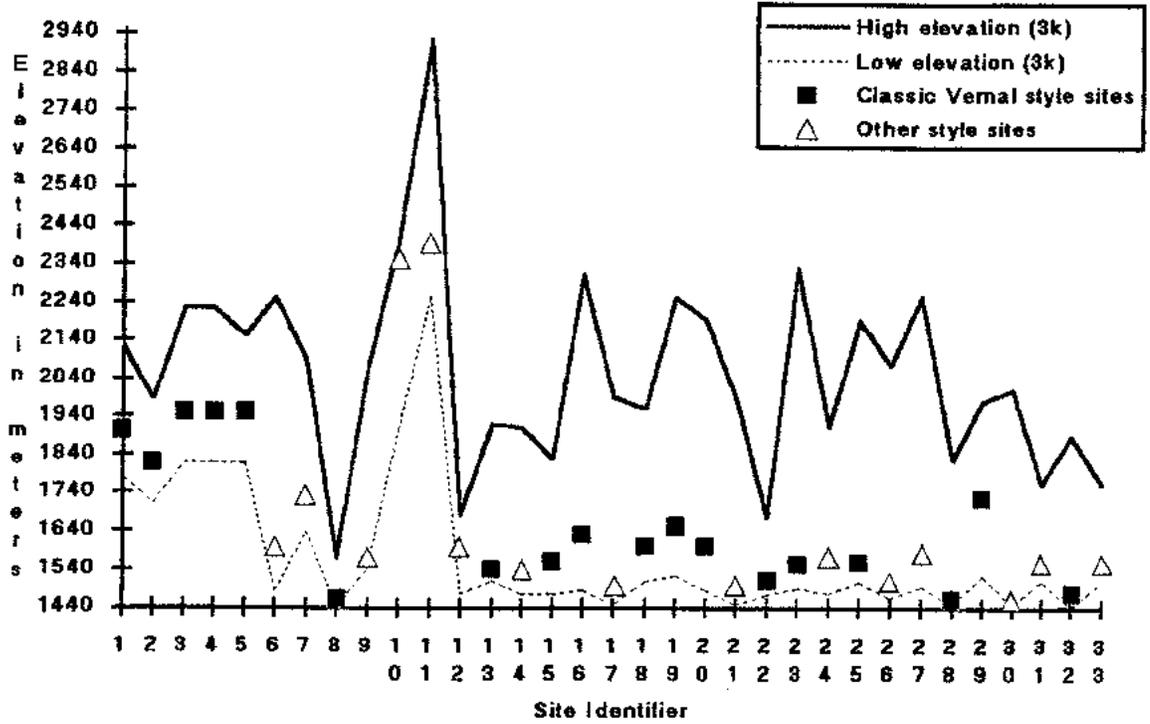


Figure 3. Site and 3 k radius elevations for 33 Uinta Basin rock art sites.

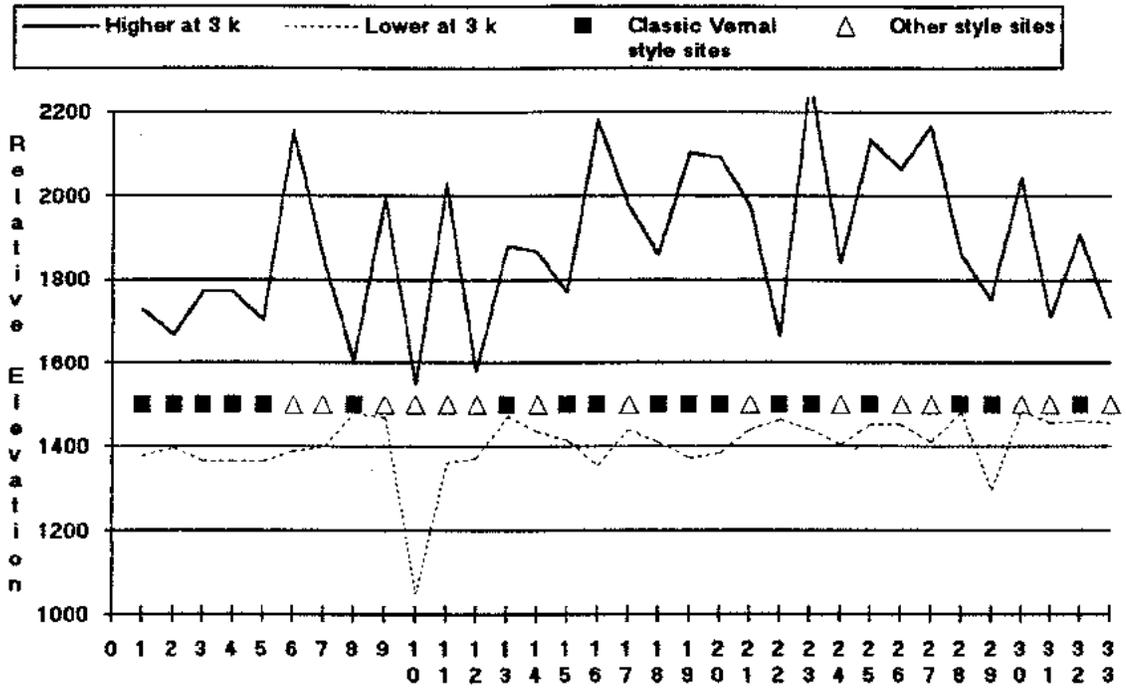


Figure 4. Relative site high-low elevations: site elevation set at 1500 m.

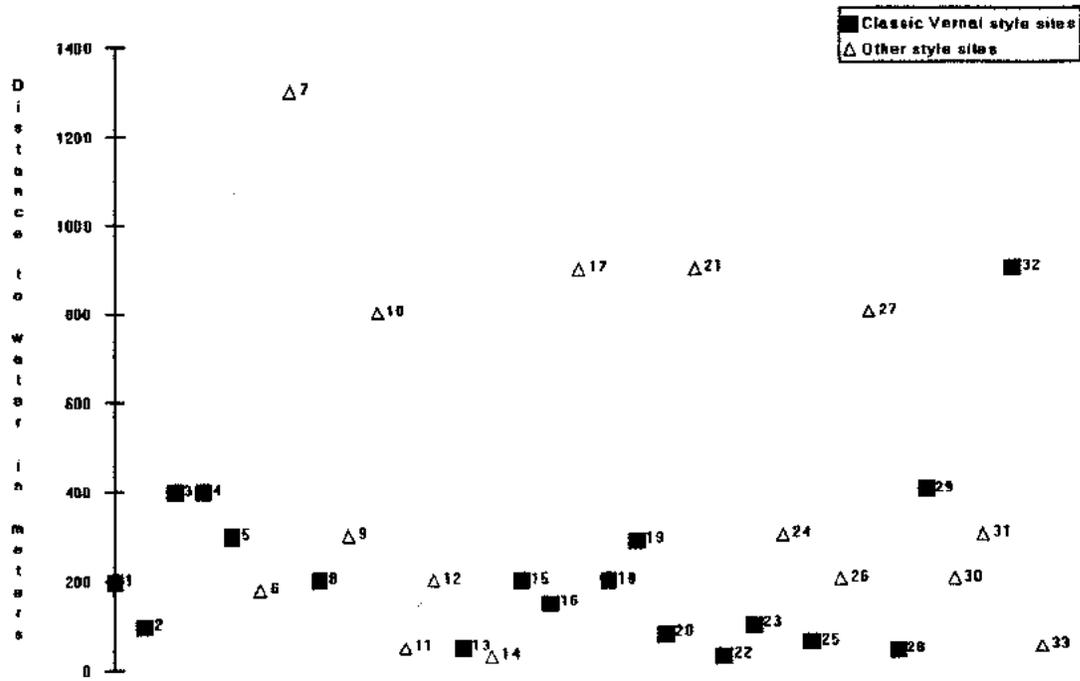


Figure 5. Site distance from water source in meters.

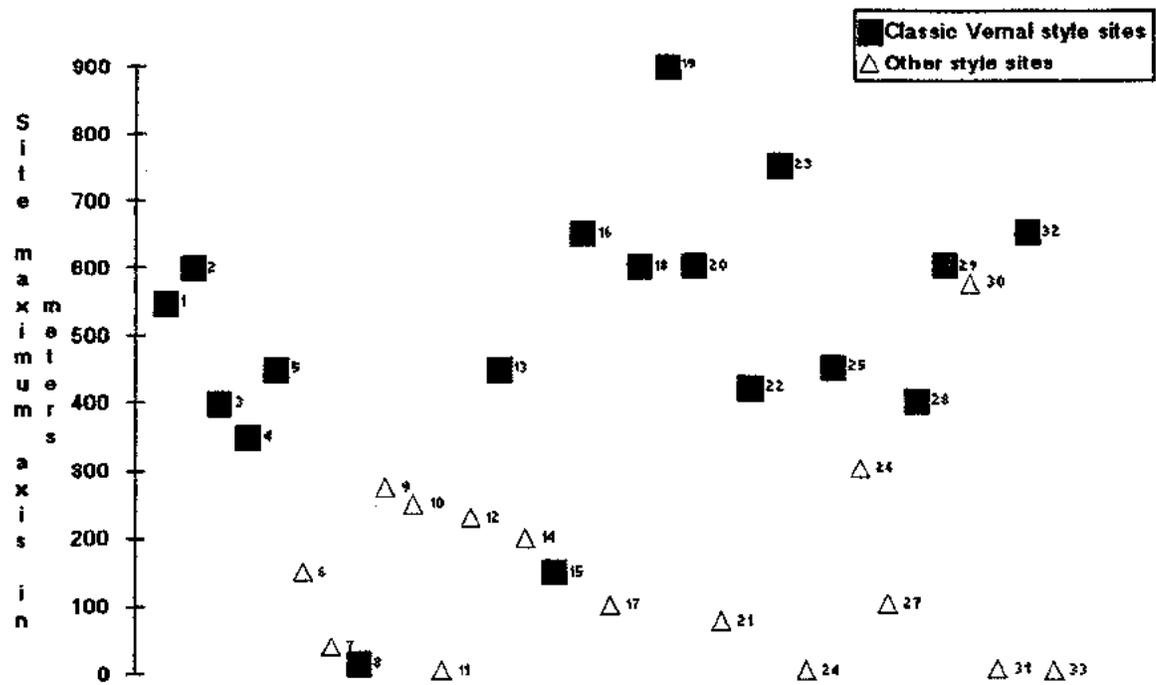


Figure 6. Site extent in meters.

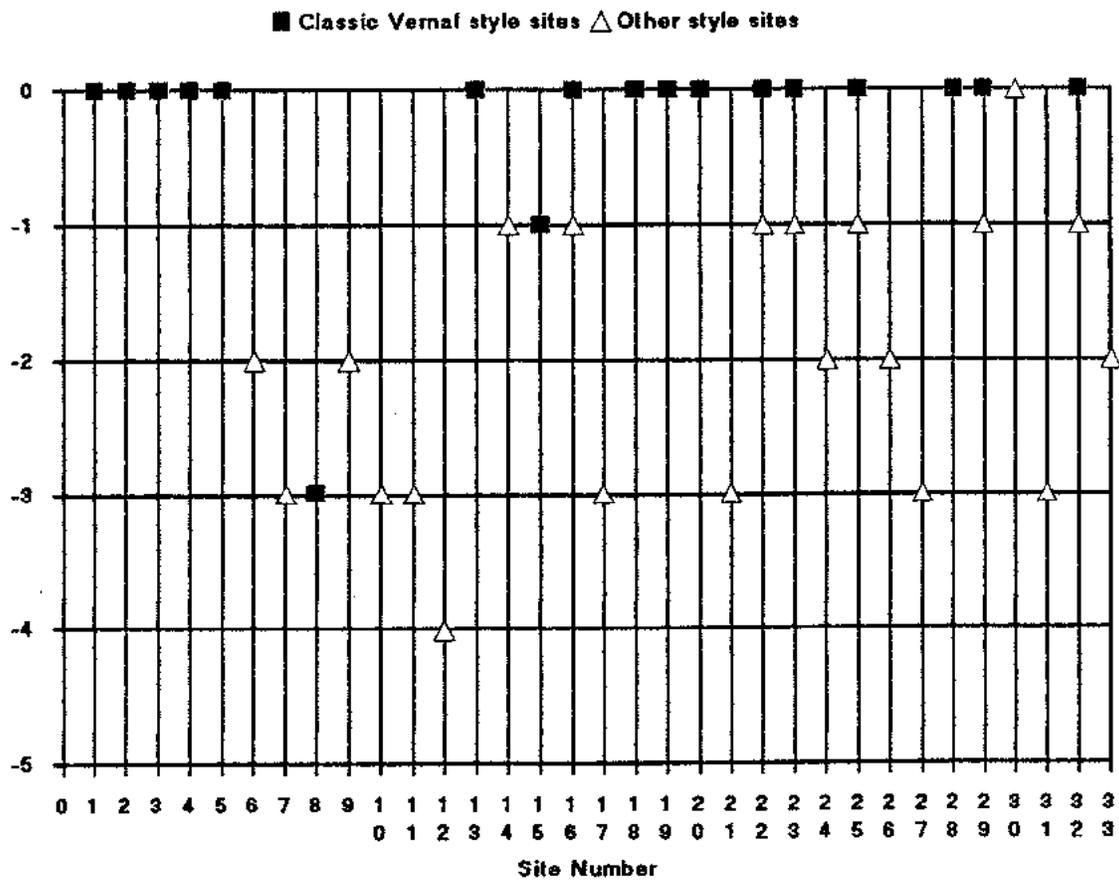


Figure 7. Sites with Classic Vernal style figures vs other sites: selected traits.

SITE DATA

Site # (ref. only)	Site Name	Site Elev. m	3k El: High m	3kEL: Low m	Water: Dist. to m	Site: Extent m	Style: CV, O, M (bc)	Water: >500 m (-1)	Site : <350 m (-1)	Panel Hrzntal (-1)	Boulldr Panel (-1)	<7 Panls (-1)
1	Ash/ DF McK: C	1900	2128	1780	200	550	CV, ?	0	0	0	0	0
2	Ash/ DF Merk	1816	1984	1713	100	600	CV, ?	0	0	0	0	0
3	Ash/ DF McKA1	1951	2222	1817	400	400	CV, ?	0	0	0	0	0
4	Ash/DF McKA2	1951	2222	1817	400	>350	CV, ?	0	0	0	0	0
5	Ash/DF McK B	1951	2153	1817	300	450	CV, ?	0	0	0	0	0
6	Arrowhead Pnt.	1597	2253	1485	180	150	O	0	-1	0	0	-1
7	Stone Bridge	1737	2085	1637	1300	100	O	-1	-1	0	0	-1
8	The Bend	1463	1567	1443	200	15	CV	0	-1	0	-1	-1
9	Birch Creek	1573	2069	1542	300	250	O	0	-1	0	-1	0
10	Blue Mtn.	2353	2402	1902	800	250	O	-1	-1	-1	0	0
11	Brownie Creek	2396	2926	2266	60	4	O	0	-1	0	-1	-1
12	Brush Creek A	1600	1879	1475	50	450	O	0	-1	-1	-1	-1
13	Cliff Creek A	1540	1920	1510	50	450	CV	0	0	0	0	0
14	Cliff Creek B	1540	1909	1475	50	200	O	0	-1	0	0	0
15	Cliff Creek C	1580	1829	1475	200	150	CV	0	-1	0	0	0
16	Cub Creek Main	1630	2313	1485	150	650	M	0	0	0	(-1)	0
17	Hogback 1	1509	1990	1448	900	100	O	*	-1	0	-1	-1

* I posit a now-vanished water source within 500m of site cluster 17, 21, 32.
 Numbers in parentheses refer to traits of non-Classic Vernal panels at site.

SITE DATA(continued)

Site # (ref. only)	Site Name	Site Elev. m	3k El: High m	3kEL: Low m	Water: Dist. to m	Site: Extent m	Style: CV, O, Mlx	Water: >500 m (-1)	Site : <350 m (-1)	Panel Hrzntal (-1)	Boulldr Panel (-1)	<7 Panls (-1)
18	Cub Crk So.	1600	1960	1510	200	600	CV	0	0	0	0	0
19	Daniels	1648	2253	1522	290	900	CV	0	0	0	0	0
20	Elephant Toes	1600	2192	1485	80	600	CV	0	0	0	0	0
21	Hogback 2	1509	1990	1448	900	75	O	*	-1	0	-1	-1
22	Kurtz	1510	1674	1473	30	420	M	0	0	0	(-1)	0
23	L Rainbow	1550	2329	1490	100	750	M	0	0	(-1)	0	0
24	Cliff Crk P 10	1570	1909	1475	300	2	O	0	-1	0	0	-1
25	McKee Sprng	1554	2192	1507	60	450	M	0	0	0	0	(-1)
26	Red Wash	1509	2073	1463	200	300	O	0	-1	0	0	-1
27	Schmoo Rock	1585	2255	1494	800	100	O	-1	-1	0	0	-1
28	Chew	1464	1826	1446	40	400	CV	0	0	0	0	0
29	Slot Rock	1726	1979	1522	400	600	M	0	0	0	(-1)	0
30	Split Mtn.	1463	2009	1446	200	600	O	0	0	0	0	0
31	Black Riders	1555	1764	1510	300	4	O	0	-1	0	-1	-1
32	Sweller Shelter	1478	1887	1440	900	650	M	*	0	0	(-1)	0
33	Old Sheep	1555	1764	1510		50	O	0	-1	0	0	-1

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Numbers in parentheses refer to traits of non-Classic Vernal panels at site.