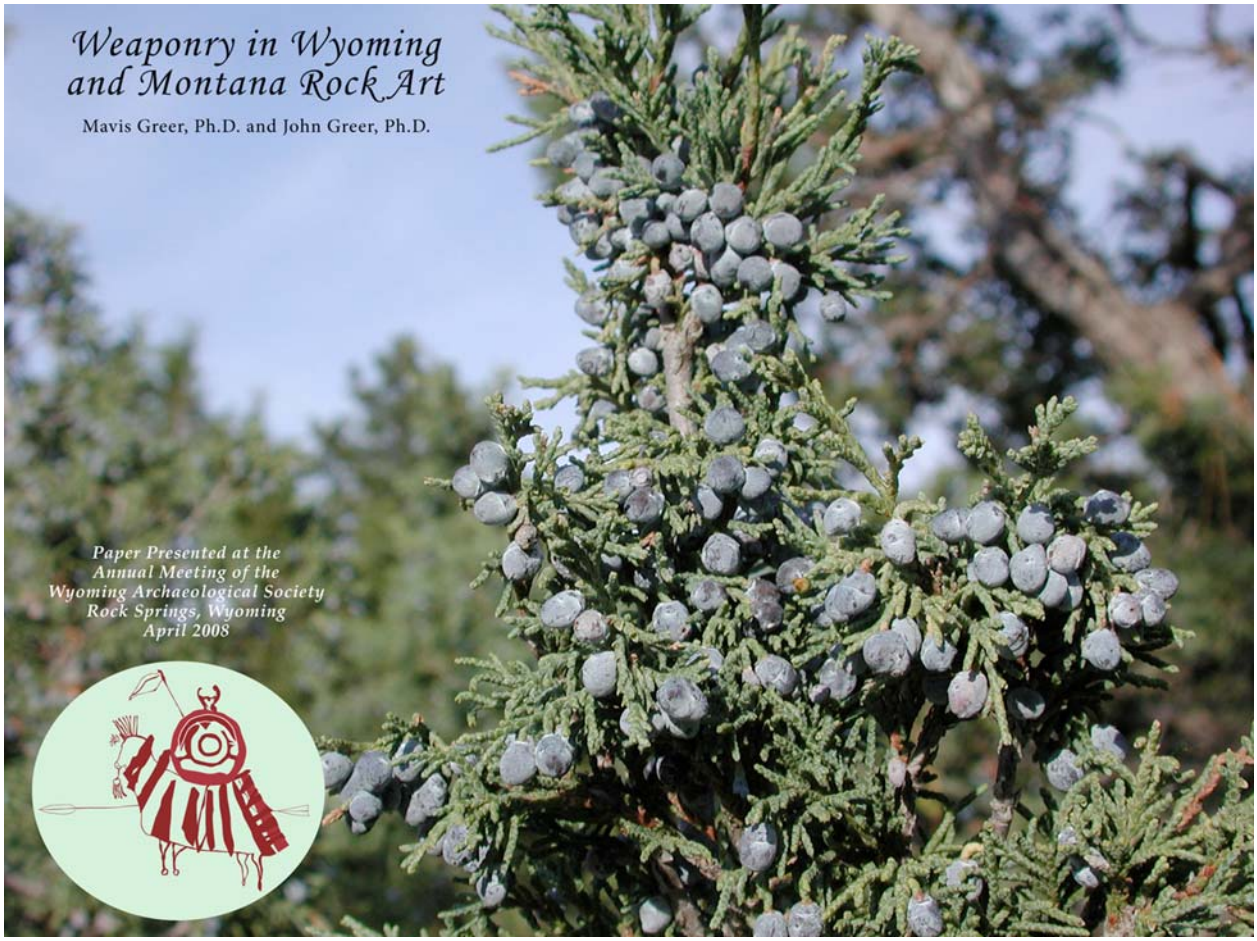
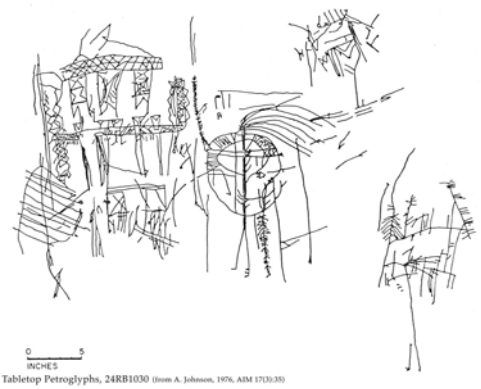



Unlike abstract figures, weapons are assumed to be easily recognizable representational rock art and give us a sense of security that we know what the object is and can consider it within variable cultural contexts. Weapon articles that focus on single kinds of objects are usually informative about the age, function, and history of the item and by extension the rock art panel and the culture who made it, but studies that use rock art weapons as the foundation for regional or stylistic generalizations usually do not provide any absolute data on numbers, kinds, or distribution of these figures and their sites. Therefore, interpretation of function and age at this larger scale is usually based more on imagined impression than on actual counts and morphological detail.

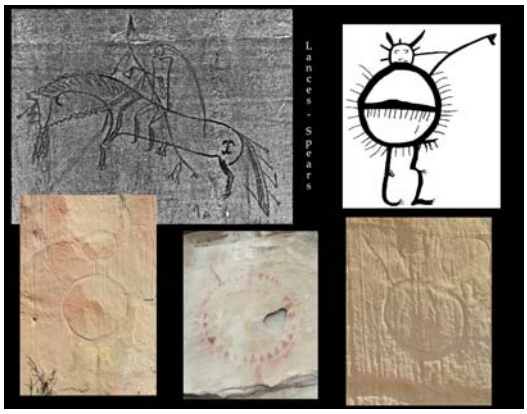
We began this research with the intention of quantifying recorded weapons in northwestern Plains sites to examine stylistic variation in weaponry relative to function. Our analysis focused on weapons in Montana first, and our distributional plotting of weapon types and consideration of their functions relative to scenes in which they occur, unexpectedly suggested changing uses of environmental settings through time for rock art production by different populations making it. We then expanded our analysis to Wyoming focusing on the northern and eastern parts of the state, classified in the northwestern Plains and Rocky Mountain geographical areas. For this paper we are not considering the southwestern counties considered Great Basin environments. Our goal is to show how weapons are distributed in the rock art of these two states through records on file to date and comment on the environmental shifts in weapon portrayal found in Montana rock art distribution relative to those of Wyoming.

Our search for hard data soon revealed State files and professional publications generally are not specific enough on numbers and kinds of figures for a detailed regional study. One striking fact for both states is that the majority of the rock art site forms contain no descriptive information beyond pictographs or petroglyphs. However, we closely examined all site forms in the state record files, publications that contained data identifiable to a specific site, our site leads and unchecked information, and our thousands of photos from years of fieldwork. This resulted in a sample of 651 Montana sites and 334 Wyoming sites. Although we expected a lower number of recorded sites in Wyoming than in Montana because of the sizes of the states, the numbers were close considering we did not use the sites in the southwestern counties where there is a high density of rock art. Regardless of these numbers, the state databases are both far from complete records, and the actual numbers of rock art sites are much greater. However, the sample is considered adequate for an initial review even though it is obviously biased in favor of where surveys have been done. The sample does provide a beginning point for quantifying what weapons are portrayed in the rock art of a definable region and reflects geographical distribution of this site type.

Although, as we noted, most available site forms provide minimal to no information on individual figures, with the bias toward weapons in rock art literature, we assumed that weapons would be described in better detail than other figure types, but we were wrong. Even so, they usually are more frequently mentioned than other kinds of figure types at least to the level of general class — such as bow and arrow, lance, or gun. Some site forms guess at weapon types, and although our field visits to a moderate percentage of sites provided additional detail mainly through photographs, in some cases the figures were drawn ambiguously on the wall, and it is impossible to discern necessary detail for classification. Thus, our assumption that weapons are always easily recognizable was false, and our inventory sample was further limited to figures definable as specific weapons again reducing our database.

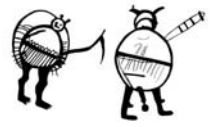


Tabletop Petroglyphs, 24RB1030 (from A. Johnson, 1976, AIM 17(3):35)




Even when there is no question that a weapon is a weapon, the analysis classification system must be broad because of terminology inconsistency between recorders. For example, recorders generally mention bows generically, so to separate different kinds of bows, it is necessary to have seen the site or to have good drawings or photographs. The terms *lance* and *spear* are often used interchangeably, which is not surprising since they cannot be distinguished in most rock art. So, additional limitation in classification is due to terminology problems, which results in lumping various kinds of weapons, such as *arrows*, which include all possible forms, and other composite categories like *lances and spears*.

Shields are usually identified in the literature correctly, but for our purposes, we decided to limit weapons to active not passive items, and thus shields are not included as a stand-alone category. Shield-bearing warriors, however, are often portrayed with active weapons such as oblong rounded clubs, elk-tine clubs, and lances. The *bow-and-arrow* category includes not just bows but also

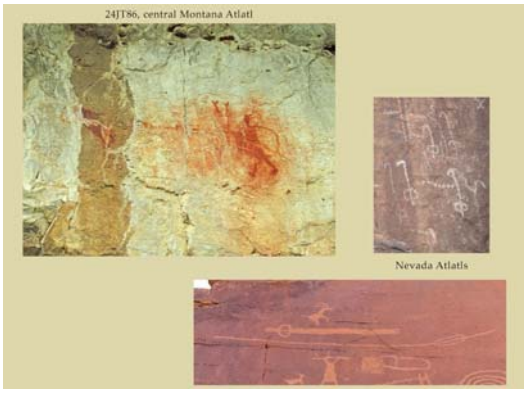

24YL1, Pictograph Cave


24FR2, Bear Gulch

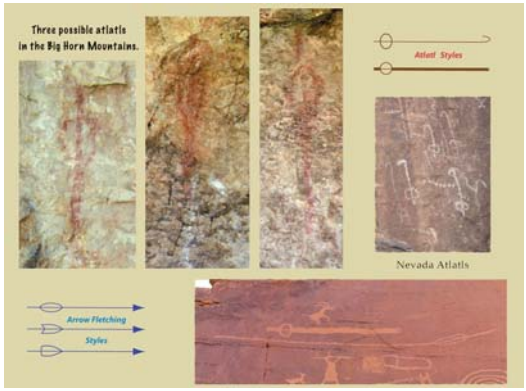

24ML563, Signal Mountain

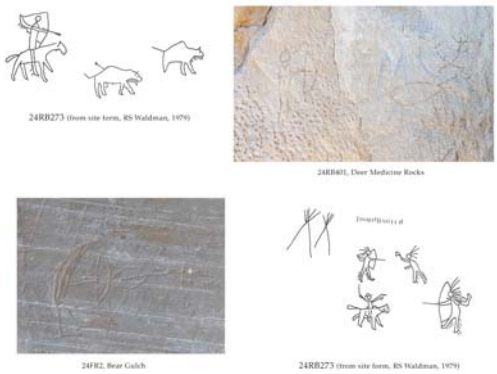

24YL1203, North Canyon Creek

arrows shown with them. *The arrow* category includes all short lines with triangular ends, lines with obvious fletching but no point, and arrows in the hands of humans when they are not accompanied by a bow. Other arrows sticking into objects — such as shields, animals, and humans —were itemized into three separate categories. Other weapons include hatchets, guns, and the atlatl. In the end we were able to find 477 classifiable weapons in the 651 Montana sites and 116 classifiable weapons in the 334 Wyoming sites we examined.



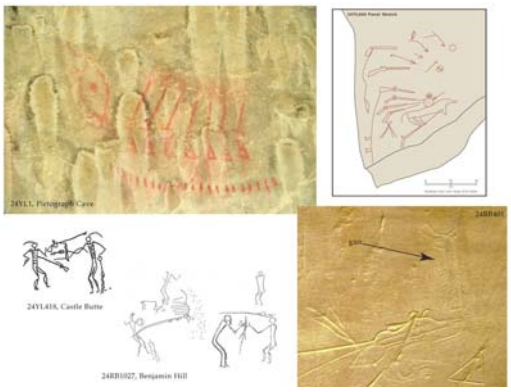

One of the earliest weapons recognized world wide is the atlatl. We know that it was used throughout the northwestern Plains, and although atlatls are commonly portrayed in the Southwest and Great Basin, only one has been identified in Montana. Keyser noted this one in the central limestone mountain zone. It also is the only example of an atlatl shown with a shield that we know of in this region. In Wyoming non Great Basin rock art, three figures on the east side of the Big Horn Mountains were labeled as possible atlatls on the original site form. We visited this site and examined these figures both on the wall and through computer photo enhancements. We believe these are arrow representations rather than atlatls. However, there is a fine line between arrow and atlatl portrayal in rock art when only the end with the arrow fletching or the end with the atlatl handle is shown. Based on examples primarily from the Great Basin where they occur more commonly, the atlatl handle is more circular than the flattened, more curved arrow fletching. Another clue to identification is that arrow fletching has a tapered distal end, unlike atlatl portrayals. Unfortunately, there are exceptions to these criteria so each figure must be examined on its own merit. In this Big Horn case, the attributes of the tapering support an arrow rather than atlatl designation for all three.



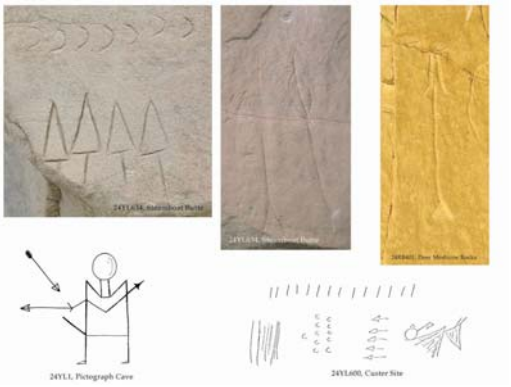


In contrast, bows occurring with humans usually are easily identified. Different styles of bows can be recognized — such as simple bows, complex bow-spears (which Keyser has recently written about), and various forms of recurved bows, some of which are probably sinew-backed or made with mountain sheep horn. People are shown carrying and shooting bows both in pedestrian position and while mounted on a horse, both with and without shields. Bows are fairly good indicators of age since the time of their arrival is established in the region, and individual styles may eventually make possible further enumeration of late-period rock art into finer, more concise time periods or better ethnic identification based on specific technology and weapon use.

In Montana and Wyoming bows are most frequently found in hunting and warfare scenes, and they are common in plains settings associated with these functions. Bows usually are not in scenes portraying ceremonial rock art with the exception of a few Dinwoody figures. Francis and Loendorf discuss the bow Water Ghost Woman holds in a Big Horn Basin site and indicate it demonstrates her power and association with evil activities, such as shooting people with invisible arrows to cause illness. The abstract ceremonial art dominating the mountain regions of Montana has a notable lack of bows.



In pinning down dates, it is even easier with guns, and 15 Montana sites and three of the examined Wyoming sites contain these weapons. Most have only one or two guns, but two sites, both in Montana, portray more than twenty. Image precision ranges from minimal to detailed. Most are in conflict scenes, but they also occur in rows, especially when many are shown on one panel.



Arrows, both with and without visible points, and either by themselves or held by a person, are the most frequently portrayed weapon in both states. Francis and Loendorf have discussed the pros and cons of attempts to use known projectile point typology specifically to date rock art arrowpoints, and they have shown that these are mostly

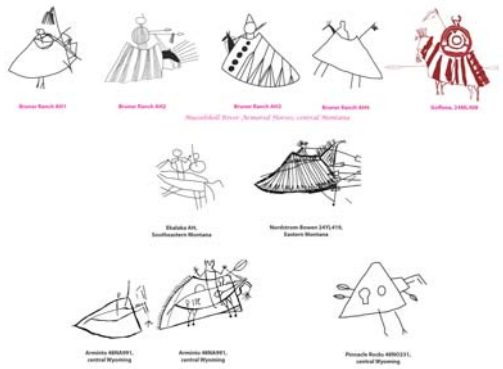
unsuccessful because points do not have adequate detail, and some are overly stylized. Exaggeration of size, for whatever purpose, is common, and a larger size on the drawing does not necessarily relate to a larger size in real life. However, recently Keyser has examined possible metal points at the Bear Gulch site in central Montana and found they are drawn in sufficient detail and size to identify their original form providing information on their relative age, their absolute age of manufacture, likely places of origin, and means of arrival into this area. Because the multi-year Bear Gulch recording project is one of the few intensive rock art studies done in the region, its information is an exception and underscores the value of detailed recording. Such intensive recording is mandatory if the goal of rock art research, in general, is to learn not only about an individual site, but also about regional cultural history, and patterns and processes of cultural change.

Stand-alone arrows had 88 occurrences in Montana rock art and 42 in Wyoming. This is compared with 54 arrows in Montana and 24 in Wyoming inserted into shields, animals, and humans. Assuming that the small sample is representative of the region as a whole, it shows that about half of arrows have hit a target, and in these cases usually only the fletching end is exposed. Although these are not helpful in dating, they do provide functional information, especially relative to hunting or conflict scenes. Static poses of humans, animals, and shields pierced by arrows may portray an actual event, but the arrows in these cases usually are excessive and often pierce non-kill spots such as the neck or ankles, a common occurrence in prehistoric graphics across North America. As such they likely represent some other form of ritualistic portrayal, such as a request for supernatural assistance.

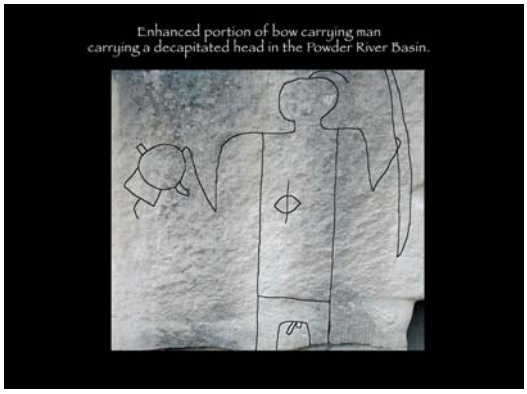

For our classification we separate shields with elk tined or spiked clubs, rounded clubs, and lances. These data on shield distributions were most notable in showing differential use of environmental settings in Montana, and this appears to hold true in non Great Basin Wyoming. Shield figures are most numerous in the plains, where sage-covered dissected landscapes are broken by scoria and sandstone-capped knolls and ridges interspersed among ponderosa pine and juniper forests. Noticeably fewer shield figures are in the Rocky Mountains and their island outliers, which contain limestone caves and rockshelters within pine and fur

forests. In Wyoming shields often occur in a plains setting but immediately at the base of the mountains, such as along the fringes of the Big Horns.

Shield figures of the mountains generally have no weapons, or they have what was loosely termed a lance, which is simply a line extending from the shield and could be a ceremonial staff or coup stick rather than a thrusting weapon since it is minus a point, club, or spike. Shields shown together with injurious weapons after the coming of the bow and arrow were in a plains context supporting a pattern of cultural use relative to landscape.



Armored horses occur in the rock art of both states. Of three recorded armored horses on the Wyoming plains, two are pierced with injurious weapons. Of the seven recorded in Montana, only one is pierced, and it is the most attacked armored horse on the Northern Plains from Alberta to Colorado. Five of the ten armored horsemen within the study area have associated lances or spears. While horse armor may have been designed specifically for battle protection, with only half of the portrayals associated with weapons, there is a good case for armor having other functions on the Northwestern Plains, such as environmental protection.




The small number of weapons in the early rock art appears to have no environmental preference. Since the mountains and plains environments remained stable during the Late Prehistoric, there would have been no environmental restrictions on drawing injurious weapons in limestone mountain areas, so there had to have been a cultural shift.

Weapons became prevalent in the rock art after about AD 500 with the introduction of the bow. If weapon portrayal had been important before that, there would be many more figures showing the atlatl and its use, as there are in the Southwest and the Great Basin. The paucity of weapons in earlier art may be due to adequately plentiful game and low inter-group conflict, as is suggested by other archeological data from excavated sites. Ceremonies involving rock art may

not have been necessary for assurance of game availability or personal protection, or such subjects simply may not have been deemed important or appropriate for rock art.

In this region earlier rock art appears to be oriented more toward the mountain environmental settings, and based on almost no weapons portrayed in mountainous areas, it is appropriate to place the date of general rock art decline in this setting to about AD 1200, when inter-group conflict began to increase across the Plains. By the time the gun and horse arrive by the early 1700s, conflict has increased dramatically, dominates the rock art of the plains, and is not evidenced in rock art in mountain environments. Archeological remains and sheer numbers of sites show that people continued to use the mountains for habitation, hunting, and probably periodic warfare, as suggested by conical war lodges and ethnohistorical sources.

The few late rock art sites in the mountains show shielded people with unmenacing lances that may be ceremonial staffs. Considering the good rock art preservation in mountainous areas of panels dating from at least the Archaic onward, the paucity of biographic scenes and lack of weapons shown in the mountains argue for changing use or importance of that settings by local or new groups during the Late Prehistoric through the early Historic. Rock art was made less frequently in these locations than it had been previously, and biographic scenes are rarely encountered. The decline of ceremonial scene production suggests a change from making new rock art for this function to possibly using what is already there and new cultures incorporating it into their belief systems, similar to the adoption of all rock art sites as sacred today.

In conclusion, weapon distribution in the rock art of the northwestern Plains and adjacent mountains suggests movement away from the forested limestone caves and canyons and into the sandstone bluffs of the plains with rock art increasingly including more injurious weapons. The main impetus for change was almost certainly the infusion of new groups with different practices and beliefs, and most of all, the introduction or escalation of intensive conflict. The limestone mountains do not loose their emotional appeal to people as ceremonial or story telling centers, but the sandstone dominated plains become the main focus for rock art production and its portrayal of the growing cultural importance of weapons aimed at other people.

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2002 *Ancient Visions: Petroglyphs and Pictographs from the Wind River and Bighorn Country, Wyoming and Montana*. The University of Utah Press, Salt Lake City.

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