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The Pectol Shields and the Shield-Bearing Warrior Rock Art Motif

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IN 1925, Ephraim Pectol discovered three large hide shields in a dry cave on Calf Creek (known today as Sulphur Creek) near Torrey, Utah. The first description of the shields (Beckwith 1927), taken directly from conversation with Pectol, indicated that the shields were found in a cache, covered with a layer of cedar bark about 10 cm. thick and buried beneath about 45 cm. of soil. Cedar bark was also interlaid between the shields and "on removing the third shield, a similar layer of bark was found covering the cone of earth over which the shields were placed, to keep them retained to shape as in a mold" (Beckwith 1927:1031). Beckwith concluded that the shields were ceremonial objects used by a high priest.

Noel Morss examined the site in 1928 and suggested that the manner in which the shields were stored was similar to Fremont caches of artifacts. Nonetheless, he believed the shields to "date from comparatively recent if not from historical times" (Morss 1931:69). This conclusion was based on the uniqueness of the shields when compared to other Fremont site artifacts, the resemblance of the shields to those of the modern Apache, and the similarity of the shields to pictographs of painted shields associated with horses at rock art sites in Utah.

The next examination of the Pectol shields was by Carling Malouf, who measured and sketched them 14 years after their discovery. Attending a lecture presented by Pectol where the shields were shown to the audience, Malouf noted that Pectol thought these artifacts were

about 3,000 years old and part of a diffusion scheme between Utah and Egypt via Peru (Malouf MS:1). Malouf (1944:327) disagreed, however, and believed the shields were likely of recent indigenous origin.

In trying to assess the age of the Pectol shields, it is noteworthy that both Morss and Malouf, who examined them, believed they were recent in age and not products of the Fremont. This belief was not questioned until Marie Wormington excavated the Turner-Look site and assigned it to the Fremont on the basis of architectural remains, the presence of maize, and the types of ceramics (Wormington 1955). Wormington also studied several rock art sites in the vicinity of the Turner-Look site, where pictographs of shields and shield-carrying anthropomorphic figures were found. Comparing the rock art along the Utah/Colorado border with that in the Fremont Drainage, she wrote (1955:165) that there

are found certain pictographs which may be assigned to the Fremont Culture. Trapezoid bodied anthropomorphic figures, with horned headdresses and decorated chests, which are often shown with outspread fingers, have long been recognized as diagnostic. It appears that shield-like devices and pictures of individuals bearing large shields are equally significant. Morss was inclined to believe that these pictures, as well as actual specimens of large hide shields found in the Fremont area, were of recent origin, but further evidence indicates that they are part of the Fremont complex.

The evidence Wormington offered is the co-occurrence of trapezoid-torso figures and shield-bodied figures at Utah and Colorado rock art

sites that also contain evidence of Fremont occupations. In the discussion, Wormington illustrated examples of shield-bearing pictographs and petroglyphs from a variety of locations in Utah and Colorado. Some of these are within Fremont territory, and others are from distant locations such as Pictograph Cave, Montana. The recognition that rock art figures from the northern Plains were similar to others in Utah and the assertion by Wormington that shield-warrior rock art figures were products of the Fremont set the stage for future researchers.

C. Melvin Aikens excavated a series of Fremont-age sites in Utah and agreed with Wormington that the Pectol shields were products of the Fremont (Aikens 1966). Summarizing the collected information available, Aikens (1966:11) offered a hypothesis suggesting that

The proto-Fremont people were bison hunters of Northwestern Plains origin, probably Athapascans. They expanded westward and southward into Utah at approximately A.D. 500. . . . As increments to their northern culture of bison hunting, use of tipis, moccasins, shields, and shield pictographs, they acquired and modified Pueblo horticulture, architecture, and ceramics, which gave their culture its obtrusive Anasazi flavor.

Polly Schaafsma (1971) studied rock art in Utah and reviewed the various ideas regarding the Pectol shields and shield rock art figures. Schaafsma agreed with Wormington that the shield-warrior motif was a product of the Fremont, but as to the hypothesis offered by Aikens on the origin of the motif and the Pectol shields, she presented the first radiocarbon date on the shields, obtained by Campbell Grant, as evidence that the shields were post-Fremont in age. She wrote (1971:47) that the Pectol shields could not be the products of the Fremont unless the definition for Fremont "was applied to a period centuries later than most authorities would admit." In his study of Pueblo shields, Wright (1976:6, 7) concluded that the Pectol Shields were of historic age and were quite

similar to Pueblo shields in decoration.

In a study of the distribution of shield-bearing warrior and shield images at rock art sites in western America, Campbell Grant visited Capitol Reef National Park and obtained a fragment of one of the Pectol shields for a radiocarbon date. Grant (1967:65) discussed the shields as follows:

A solid bit of evidence was discovered near Torrey, Utah in 1925--three large buffalo hide shields decorated in abstract patterns and large enough to cover the entire torso were found in a cave shelter. These shields were radiocarbon-dated just before this book went to press. The tests indicated that they were made between 1650 and 1750 or just prior to the beginning of the horse-oriented Plains culture.

A more complete description of the date was offered by Berger and Libby (1968:149) as "UCLA-1221. Painted buffalo shields . . . tree-ring calibrated radiocarbon age is either modern, ca A.D. 1650 or 1750."

Using this date as a guide, the age could be any of the three possibilities with the same degree of probability. In other words, the shields could be 100, 200, or 300 years old. The radiocarbon date is important because it established the Pectol shields as post-Fremont in age. However, as noted below, possible contamination of the sample meant that additional radiocarbon determinations were needed in order to evaluate the actual age of the shields.

Even prior to the UCLA assay, not all researchers agreed with Aikens's hypothesis as to the origin of the shields or the shield-bearing warrior motif. For example, Gunnerson (1969:159), studying the "cultural dynamics of the northern Anasazi frontier," did not mention the Pectol shields. He did, however, describe the Fremont rock art motif of the shield-bodied figure, and in doing so suggested the shield figures had parallels in northeastern Arizona.

Schaafsma also questioned a northern origin for the shield motif. Using examples of shield-warrior paintings on kiva walls and at rock art

sites on the Rio Grande, she noted that the shield motif could have derived from a southern source as easily as a northern one. Schaafsma (1971:143) concluded that

The problem of the earliest appearance of the shield motif in the rock art of the Fremont is still open to speculation in the absence of sound dating for its prehistoric occurrences in the northern Plains. As the situation now stands, however, there is nothing to indicate an earlier Plains occurrence, and a Fremont source for the diffusion of this motif to the northern Plains seems more likely.

In sum, the Pectol shields have been the subject of debate since their discovery. Pectol thought they were 3,000-year-old objects demonstrating contact between Utah and Egypt via Peru. Beckwith thought they were ancient vestments of a high priest or medicine man. Morss and Malouf thought they were made by modern Indians, with Morss suggesting they had an affinity to Apache and Navajo. Wormington and Aikens believed they were Fremont artifacts, with Aikens suggesting they were Athapascan in origin or products of proto-Apacheans. Grant obtained a radiocarbon date that established their age within the past 300 years, and Schaafsma used this date to exclude them as products of the Fremont. Schaafsma, however, retained the belief of Wormington and Aikens that the rock art motif of the shield-bearing figure was made by the Fremont peoples, but its origin was not established.

THE PRESENT EFFORT TO RECORD AND DATE THE PECTOL SHIELDS

The Pectol shields are presently stored in the visitor center at Capitol Reef National Park (CRNP), Utah. Noting that none of the previous researchers had adequately recorded the shields, in 1984 we obtained permission from the National Park Service (NPS) to photograph and measure the Pectol shields. Below we list each shield by accession number and describe it. Each is a single layer of hide.

CRNP No. 11

The shield (Fig. 1) is convex in cross-section, and although it is partially eroded along one edge, it was probably originally circular in outline. Its present size is 95.25 by 73.66 cm. The hide from which the shield is made varies from 32 to 64 mm. in thickness. Three sets of buckskin ties, with two in each set, hang loose as fringe on the face of the shield. These ties are functional in that they hold a buckskin arm strap to the back of the shield. The arm strap is approximately 98 cm. in length.

The shield is decorated in four roughly equivalent triangular quadrants: an all rust-colored one, a red one, a black one, and a multicolored one that includes green bands that fan out toward the perimeter of the shield. These green bands are separated by undecorated stripes of hide, and each is outlined with black dashed lines. The perimeter end of the green bands is painted in a red and black scallop design.

CRNP No. 12

This shield (Fig. 2) was apparently originally circular in outline and convex in cross-section. Parallel rows of circles or dots make up most of the design on the face of the shield. These dots are 3.8 to 4.5 cm. in diameter and were created by painting over a circular stencil object, which left the rawhide color of the shield as the dot. Black was used as overpaint on about two-thirds of the shield and rust on the other one-third. Green lines separate the rows of dots in the middle of the shield and on the portion that is mostly over-painted with the rust color. A series of black dashes appears to have been put on the surface initially, to serve as a grid work. The painter followed these in laying out the rows of stenciled dots.

A portion of the perimeter of the shield is eroded, but it appears to have had a series of edge dots (some complete and some partial)

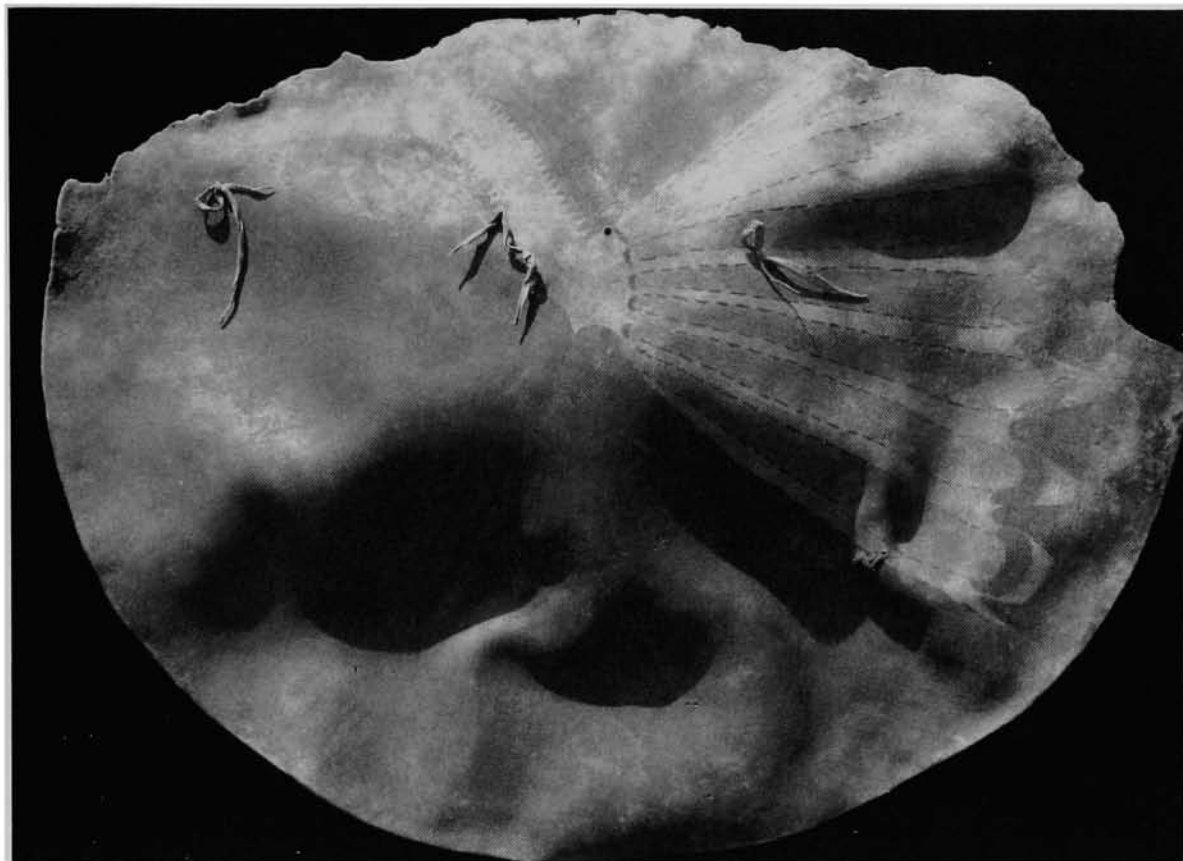


Fig. 1. Shield (CRNP No. 11) with multicolored triangular quadrants.

placed around it. These dots do not always conform to the grid-like pattern of the interior dots.

Measured across the back, the shield is 87.63 by 69.85 cm. There are five buckskin ties that hang from the face as fringe; some are functional, attaching the arm sling to the back of the shield. The arm sling has a padded piece of hide that appears to have protected the arm of the wearer from chafing while the shield was in position. This shield has a cut-mark with a straight edge, which is thought to be where the sample was taken by Campbell Grant for radiocarbon dating.

CRNP No. 191

The third shield (Fig. 3) has a roughly circular outline, although part of the perimeter has decayed away. At present, the shield has a

concave face, differing from the other two, which have convex faces. The back of the shield has some red paint stain and two opposing triangular insets that appear to have been made by scratching or incising the hide. This is the only shield that is painted on both sides, and it may be that the present back was once the front. The shield may have been later reversed and painted with a new design. The maximum diameter of the shield is 78.74 cm., and it measures 66 cm. across the face between its eroded margin and the opposite edge.

Three sets of buckskin ties end in fringe on the face and serve to fasten the holding strap on the back. A looping piece of buckskin is tied to two holes about 20 cm. apart on the perimeter of the shield. This probably served as a hanging device to hold the shield when not in



Fig. 2. Shield (CRNP No. 12) with the multicolored dot pattern.

use. A series of 12 holes in a straight line, 30.48 cm. long, angles downward from the center to the perimeter and may have served to hold decorative objects. A tear in the hide, about 1.9 cm. long, was repaired with a hide lace.

The shield face is painted totally red except for a perimeter of unpainted hide and a triangular, fan-shaped section that includes about one-eighth of the circle. This fan-shaped segment has four green bands of paint that radiate from the center to the perimeter. These green bands are separated by bands with some reddish paint in them.

This shield, like the other two, has a shiny finish over its entire surface, both face and back, but not on the straps, sling, or hide arm guard. This finish may be aboriginal, but possi-

bly represents a preservative applied by someone after the shields were discovered.

SAMPLE FOR ACCELERATOR MASS SPECTROMETRY (AMS) RADIOCARBON ASSAY

Because we suspected the shiny substance on the surface of the shields might be a preservative added by someone after their discovery, we wondered how it might have affected the radiocarbon dating process. If the substance were modern and this was not compensated for in the dating process, the date would be skewed. On the other hand, we recognized the possibility that the shiny substance might be part of the original surface, added when the shields were made or during their use. Various sticky substances can be applied to hides in the process of

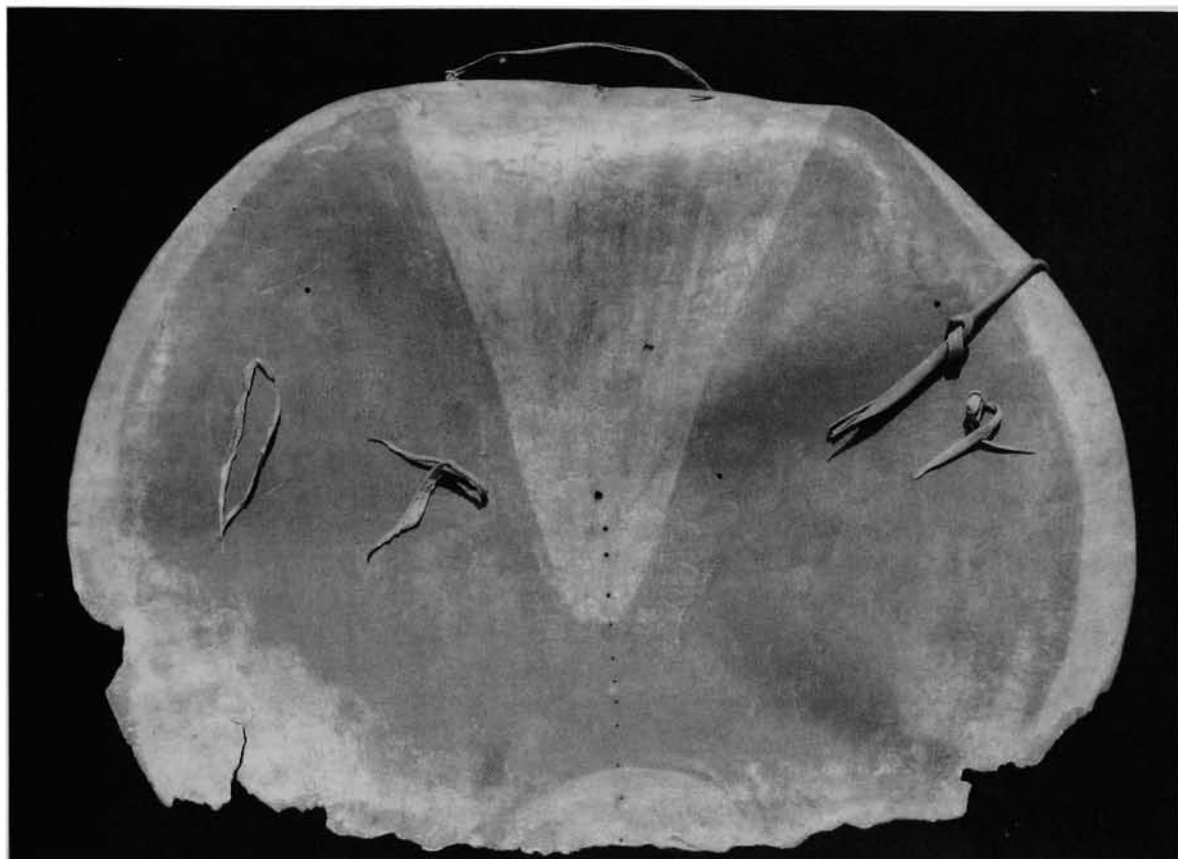


Fig. 3. Shield (CRNP No. 191) painted in red with a fan-shaped quadrant decorated in green bands of paint.

painting them. The Blackfoot, for example, made a glue by boiling beaver tails or the clean, second scrapings from hides, and applied this to a hide painting to protect it (Ewers 1945:17). A different process involving the application of glue to a shield was described by Catlin during his visit to the Dakota in 1832. Explaining how a shield was made, Catlin noted that a fire was built in a hole in the ground and the hide from which the shield was to be made was staked over this fire. While singing and dancing takes place around the drying shield, the maker "spreads over it the glue, which is rubbed and dried in, as the skin is heated. . . . the skin is kept tight whilst it contracts to one-half of its size, taking up the glue and increasing in thickness" (Catlin 1973:241). Although a complete review of hide preparation has not been made,

it is clear that the use of glue as a covering on hide paintings was widespread on the Plains.

To eliminate possible contamination by the shiny substance and learn the radiocarbon age, we obtained permission from the NPS to remove a small sample for AMS radiocarbon dating from a buckskin strap on CRNP shield No. 191 lacking the shiny substance. The leather collagen was extracted by the New Zealand Department of Scientific and Industrial Research, treated with a dilute-acid wash, dilute alkali wash bleaching in 4 percent H_2O_2 at pH 11.10, and a final dilute-acid wash. Three separate dates were obtained for the sample: 364 ± 91 radiocarbon years B.P. (RCYBP) (NZA-1980), 459 ± 89 RCYBP (NZA-2280), and 397 ± 83 RCYBP (NZA-2280b). Although the dates can be manipulated in several ways, it

is noteworthy that all three have overlapping correction factors, lending credibility to the dating process. The mean age of the three dates is 407 ± 45 years B.P. Using the one-sigma confidence level, these dates intersect the calibrated radiocarbon curve at several locations with median ages of cal A.D. 1473, cal A.D. 1536, and cal A.D. 1531 (Stuiver and Pearson 1986). It is clear that the shields were made sometime ca. A.D. 1500.

CONCLUSIONS AND COMPARISONS

The Pectol shields, made of rawhide and decorated with painted designs, are much like the shields of historic Plains Indians and some southwestern tribes. The major difference is their size; the Pectol shields are more than twice the diameter of most historic Indian shields. The reduction in the size of shields is associated with the acquisition of the horse where large shields would have hindered the maneuvers of the rider (Ewers 1955:203). In addition, rawhide shields became less functional as guns were used in battle. Historic Indian shields were increasingly more important for power or medicine than as objects for protection from missiles.

Early Spanish explorers described the shields of the native tribes they encountered on expeditions to the Plains. In 1601, for example, Baltasar Martinez recorded in his diary that the Plains Indians had "large buffalo shields to cover the entire body" (Hammond and Rey 1953:841). Other accounts differ slightly but all describe large shields of sufficient size to cover the bodies of their users. These large shields must have looked much like the Pectol shields.

There are also a few descriptions of the use of these large shields in battle. In a battle on the northern Plains between the Shoshone and the Blackfoot, warriors lined up opposite each other, stationed their shields on the ground, and shot arrows back and forth across the skirmish line (Thompson 1916:329-332). In a separate description of a battle between the Hidatsa and

the Snake Indians (it is not clear if the Snake referred to are the Shoshone or the Sioux), two Hidatsa warriors used a single shield for protection. One warrior carried the shield and a club while a companion used the shield for protection to shoot a bow and arrow (Bowers 1965:351).

The Segesser I hide painting, acquired a few years ago by the state of New Mexico, depicts a battle scene with pedestrian warriors whose torsos are hidden behind their shields. The hide painting, and a companion painting, were originally obtained in 1761 by Father Phillip, a Jesuit missionary in the Spanish province of Sonora. Gotfried Hotz (1970) believed the pedestrian warriors in the Segesser I painting were Plains Apache and that the painting depicts a battle that took place somewhere on the southern Plains ca. A.D. 1700. If this is true, it suggests that large hide shields were used by some groups after the acquisition of horses in the region. There are several reasons why this might be the case, but the object of this article is to simply report the ages of large hide shields or replicas of pedestrians using such shields.

Pictographs and petroglyphs of shield-bearing warriors are found from Alberta to Texas (Gebhard 1966). Relative age estimates for this rock art motif vary from region to region. In the Rio Grande region of New Mexico, for example, there are shield-bearing warriors on painted kiva walls that are comparable to nearby rock art examples and thought to date to the fourteenth and fifteenth centuries. Schaafsma (1980:298) suggested these shield figures may be related to the symbolism associated with *Huitzilpochtli*, the Aztec tribal god of the sun, war, and hunting. Because the spread of this god did not take place until the Aztecs were in power after A.D. 1428, the shield-bearing warrior motif may not have been widespread in New Mexico or elsewhere in the southwest until after this date.

A shield-bearing warrior petroglyph at the Sue site, 5LA5255, in southeastern Colorado,

has been dated by numerical age estimates on adjacent petroglyph figures at ca. A.D. 1600 (Loendorf 1989:341-343; Loendorf and Kuehn 1991:267). Only a single shield-bearing warrior figure is found at the site in association with petroglyphs of bison and other horned human figures, but the A.D. 1600 date matches well with the historical accounts of large shield users, and it serves as a good indicator that the shield-bearing warrior motif is in fact a representation of large shield users.

To the north in south-central Montana, a panel of shield-bearing warrior pictographs was estimated to date to A.D. 1100, based on three radiocarbon dates from charcoal associated with two sandstone abrading stones found in the excavation at the base of the rock art panel (Loendorf 1990). The abrading stones had pigment adhering to them and they appear to have been used to smooth the rock face to create a flat and compact surface for the pictographs. The pigment adhering to these stones suggests the artist was smoothing at the same time the paint was being applied.

Pedestrian shield petroglyphs, some with paint added to them, are recognized as an important component of Fremont rock art. In Utah, they are most common at sites in the Ashley-Dry Fork region to the north of Vernal. But even here, they constitute less than seven percent of the total number of anthropomorphic figures (Schaafsma 1971). To the east, in Colorado, there are numerous examples of the triangular or trapezoid-torso anthropomorphs assigned to the Fremont, and although there are examples of shield-bearing warriors, they are not abundant at any location. For instance, the Fremont trapezoid-torso figures are well-executed at McKee Springs and at several other sites in the Jones Hole region of Utah, but there are no shield anthropomorphs at these sites.

Stylistically, the shield-bodied figures, with their bucket-shaped heads and feet with toes, are similar to the trapezoid-torso anthropomorphic

figures. The latter figures are so similar to clay figurines recovered in excavations of Fremont sites that almost all researchers agree they are products of the same peoples. These trapezoid-torso figures sometimes hold large shields that exhibit decorative motifs like those of the shield anthropomorphs. The stylistic similarity is so striking that there is little question as to the assignment of the shield anthropomorphs to the Fremont Culture, but the placement of shield-bodied anthropomorphs within the Fremont rock art tradition has not been established.

Research is underway to date Fremont rock art shield figures by AMS and cation-ratio methods, but at this point it is not possible to offer a more accurate estimate than to suggest they fit within the Fremont time period—some time between A.D. 500 and 1350 (Madsen 1989). There is debate as to the ending date for the Fremont, with some authors contending that it might be as recent as A.D. 1500 (Liestman 1985; Creasman and Scott 1987). The Pectol shields, dated at A.D. 1500, are at the age of the most recent estimates for the termination of the Fremont. Until the debate as to the ending date of the Fremont Culture is resolved, it is not possible to suggest an association between the Pectol shields and the Fremont.

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