
The Pectol Shields: A Repatriation Study

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2001**

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Summary

This paper is a study of the Pectol shields -- three bison hide shields -- found on Capitol Reef National Park lands in Utah. The National Park Service maintains the shields and they anticipate a request for repatriation of the shields to one or more American Indian nations. The goal of this study is to identify the cultural affiliation of the original owners of the shields by comparing them to shields in museums, photographs, other illustrations of shields and rock art depictions of shields.

Dozens of distinctly different cultural groups made large shields during the time the Pectol shields were in use, thus identifying the makers of the Pectol shields is not an easy task. It is especially complicated by the reminder that various Indian groups copied shield designs from neighbors, kept captured enemy shields, and pictured the shields of enemies, as well as their own.

The three hide shields in question were found in a small cave near Torrey, Utah. Because the discovery location is traditional Ute territory, an affiliation with the Numic-speakers is considered and rejected. Ute shield designs and colors correspond to some degree with those on the Pectol shields, but Ute rock art shield figures do not exhibit designs such as those found on the Pectol specimens. Furthermore, there are reasons to suspect the proto-historic Ute, a mountain people, did not use large shields. And like some other Numic-speakers, such as the Comanche, they did not adopt to shield use until they undertook an equestrian lifeway.

In the essay, I use the available evidence to establish the age of the shields and conclude that the shields may have been made and used at slightly different times. The shields' dates of manufacture, use and subsequent burial in the cache may all differ, but with regard to manufacture of the shields, the ages of A.D. 1550 to A.D. 1650 are within the time range.

I tentatively assign Pectol shield No. 12 (the shield with the dots) to Athapaskan speakers. This conclusion is based on:

- (1) The similarity between the Pectol Shield No. 12 dot design and the same dot design on Castle Gardens style shields, which is a rock art style in Montana and Wyoming;
- (2) The Castle Gardens rock art shields were made during the time ^{some?} the Athapaskans were living in Montana and Wyoming;
- (3) The techniques by which Castle Gardens style shields were made is replicated in shield warrior petroglyphs in the Dinetah of New Mexico; and
- (4) The dot pattern across the entire face of the shield is found on Athapaskan petroglyph and pictograph shields.

Although Pectol shield No. 11 is more problematic, I also assign it to Athapaskan speakers. This conclusion is based on:

- (1) The design on its face is duplicated on Castle Garden Style shields made while Athapaskans lived in Montana and Wyoming;
- (2) The design is also found on historic Apache shields; and

- (3) The technique of incising a design on the obverse of the shield is a Plains trait that the Athapaskans may have learned while they lived on the Plains in the century before they moved west to New Mexico.

Because the shields were found in the western range of the Athapaskans, the Navajo are the most probable nation to have made Pectol shields Nos. 11 and 12.

Pectol shield No. 191 is the most difficult of the three to assign a cultural affiliation. I tentatively believe it is Pueblo in origin and possibly Jemez. This conclusion is based on:

- (1) Its design is replicated on a Pueblo rock art shield;
- (2) The rock art example may date from ca. A.D. 1580 or perhaps later during the time that the Pectol shields were made; and
- (3) The Jemez allied with the Navajo to fight the Spanish as early A.D. 1640.

Introduction

In 1925, Ephriam Pectol was poking around in a small cave south of Torrey, Utah, when he made a remarkable discovery. Three rawhide shields, decorated with brightly colored paints, were buried beneath about eighteen inches of soil and covered with a layer of cedar bark about three or four inches thick. Cedar bark was also layered 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).

In 1928, Noel Morss, working for the Peabody Museum, visited the better-known archaeological sites in northern Arizona and southern Utah, including the small cave where Pectol found the three rawhide shields. Morss (1931:68-70) described the shields with photographs of Pectol holding two of them. Morss described the cave as:

...very small, approximately 4 feet high and 6 feet deep. The shields were nested in a bed of loose cedar bark, such as is found in abundance at most Fremont sites, and were covered by about 2 feet of sand. There were no other artifacts in the shelter so that the manner of their finding sheds no light on their age [Morss 1931:69].

Morss continues to explain that the circumstances under which the shields were found are similar to Fremont caches of artifacts. Nonetheless, he believes the shields "date from comparatively recent if not from historical times" (Morss 1931:69). He bases this conclusion on the uniqueness of the shields when compared to other artifacts from Fremont sites, the resemblance of the shields to those of the modern Apache, and on the pictographs of similar painted shields associated with horses at rock art sites in Utah. Morss identifies the rock art sites on which he based his comparison as Fish Creek Cove, Thompson Wash and Carson's Wall. The shield figures at these sites are discussed in greater detail below.

In the intervening years, various scholars have debated the cultural affiliation of the Pectol shields. Carling Malouf (1944) did not offer an opinion on who made them, but he

thought they were modern. Marie Wormington (1955) linked them with the Fremont peoples who inhabited Utah between A.D. 45 and A.D. 1350. C. Melvin Aikens (1966:11) agreed and went further, suggesting that the Fremont were Athapaskan speakers. 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 an early motif used by Fremont peoples. She disagreed with Aiken's Athapaskan origin for the shields and offered the radiocarbon date obtained by Campbell Grant as evidence the shields were made in recent times and, therefore, not associated with the Fremont.

Barton Wright (1976:7) attributes the Pectol shields to the Pueblo warriors. He considers the smaller size of historic Navajo shields when compared to Pueblo shields as an important consideration. Stuart Baldwin (1997:12) uses the A.D. 1650 to A.D. 1750 age estimate for the shields, which suggests to him they are probably Ute.

To summarize, the Pectol shields have been assigned to various groups ranging from the Fremont – an archaeological entity with an unknown cultural affiliation – to historic Pueblo groups to Athapaskans or Apacheans and to the Ute. That about runs the gamut of possibilities.

The Pectol shields

CRNP #11¹ (Fig. 1)

The shield has a roughly circular outline, although part of the perimeter has decayed away. At present the shield has a concave face, and in this respect it differs 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 into the epidermis of 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 reversed and painted with a new design at a later time. 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 present face and serve to fasten the arm 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 use. A series of 12 holes in a straight line, 30.48 cm long, angle outward from the center to the perimeter. These may have served to hold decorative objects. A tear in the hide, about 1.9-cm long, has been repaired with a hide lace.

The shield face exhibits a wing-shaped design painted red except for a perimeter of unpainted hide. A triangular fan-shaped section with green stripes radiates from the winged

¹ There is confusion as to the numbers associated with the shields. Apparently the identifying tags associated with shield # 11 and shield # 191 have been switched since 1984 when Loendorf and Conner (1993) removed the radiocarbon sample.

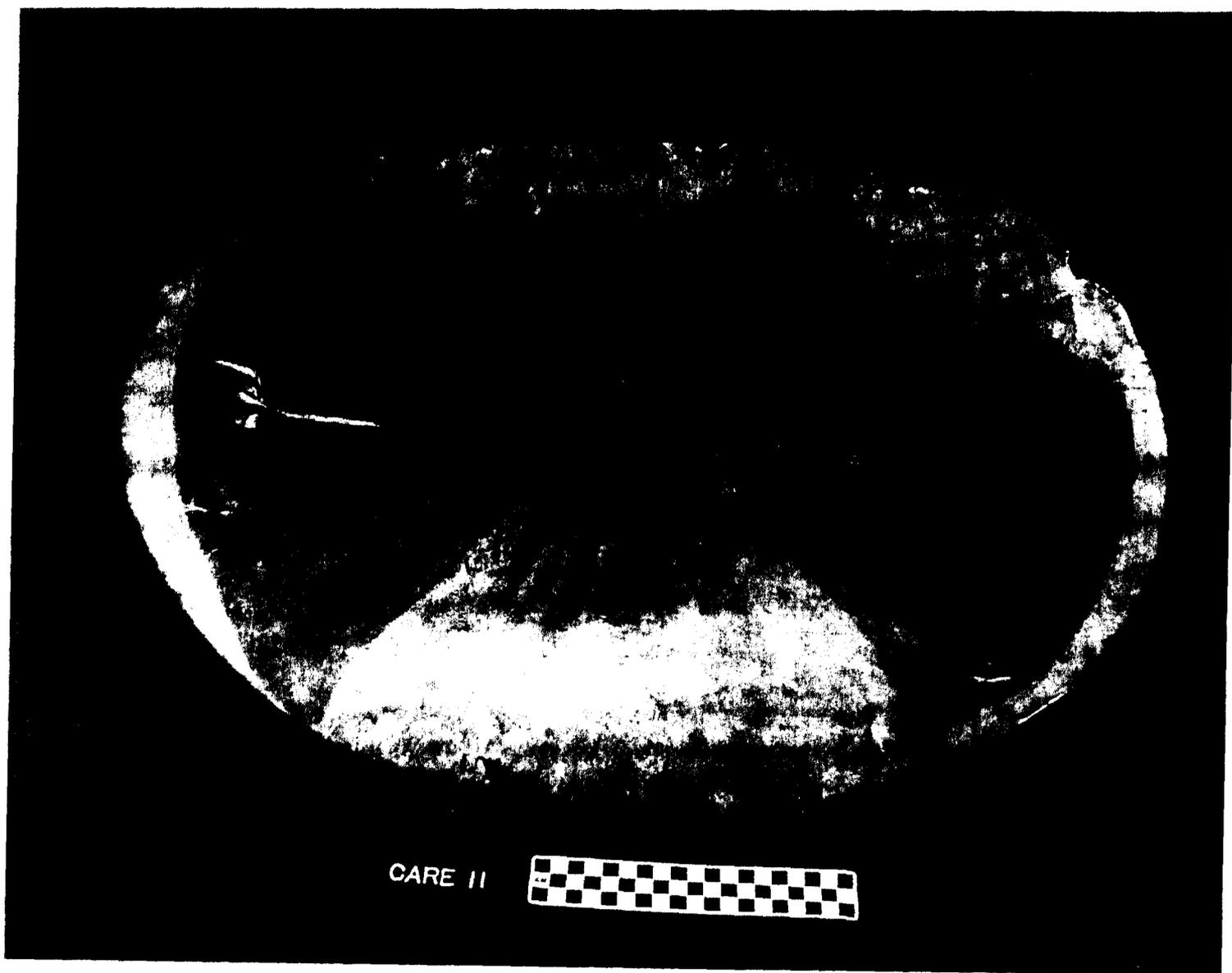


Figure 1. Pectoral shield No. 11. Note the wing pattern with fan-shaped feather design. The shield may have been oriented with the fan-shaped design upward but if it were carried with the design down, it would resemble a bird's tail feathers. The shield had a radiocarbon age of A.D. 1420 – A.D. 1640 (weighted average).

design to the perimeter. Red bands were painted between the green stripes. The design has a bird-like appearance with red wings set above a green striped fan-shaped tail.

CRNP #12 (Fig. 2)

The shield was apparently originally circular in outline and convex in cross section. Parallel rows of circles or dots cover the face of the shield. These dots, 3.8 to 4.5 cm in diameter, were apparently painted over a circular stencil object, which left the rawhide color of the shield as the dot. Black paint was used 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 painted with the rust color. A series of black dashes appear 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. The perimeter of the shield is eroded, but it appears to have had a series of edge dots (some complete and some partial) 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 wearer's arm from chafing while the shield was in position.

Shield # 12 has a cut mark on the perimeter made with scissors or a knife along a straight edge. Campbell Grant was at Capitol Reef the in May 198 when Stuart Conner and I photographed the shields. I asked him if this was the shield he sampled for the radiocarbon date, and although he could not remember for certain, he thought that it was the shield with the dots. The straight cut mark on the shield supports his memory.

CRNP #191 (Fig. 3)

The circular shield has an eroded edge where it was exposed in the cache. It is convex in cross section and presently measures 95.25 by 73.66-cm. The hide 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 and function to a buckskin arm strap to the back of the shield. The strap is approximately 98 cm in length.

The shield is decorated in four roughly equivalent divisions that are painted rust, red, black and one that is multicolored with 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. These resemble feathers.

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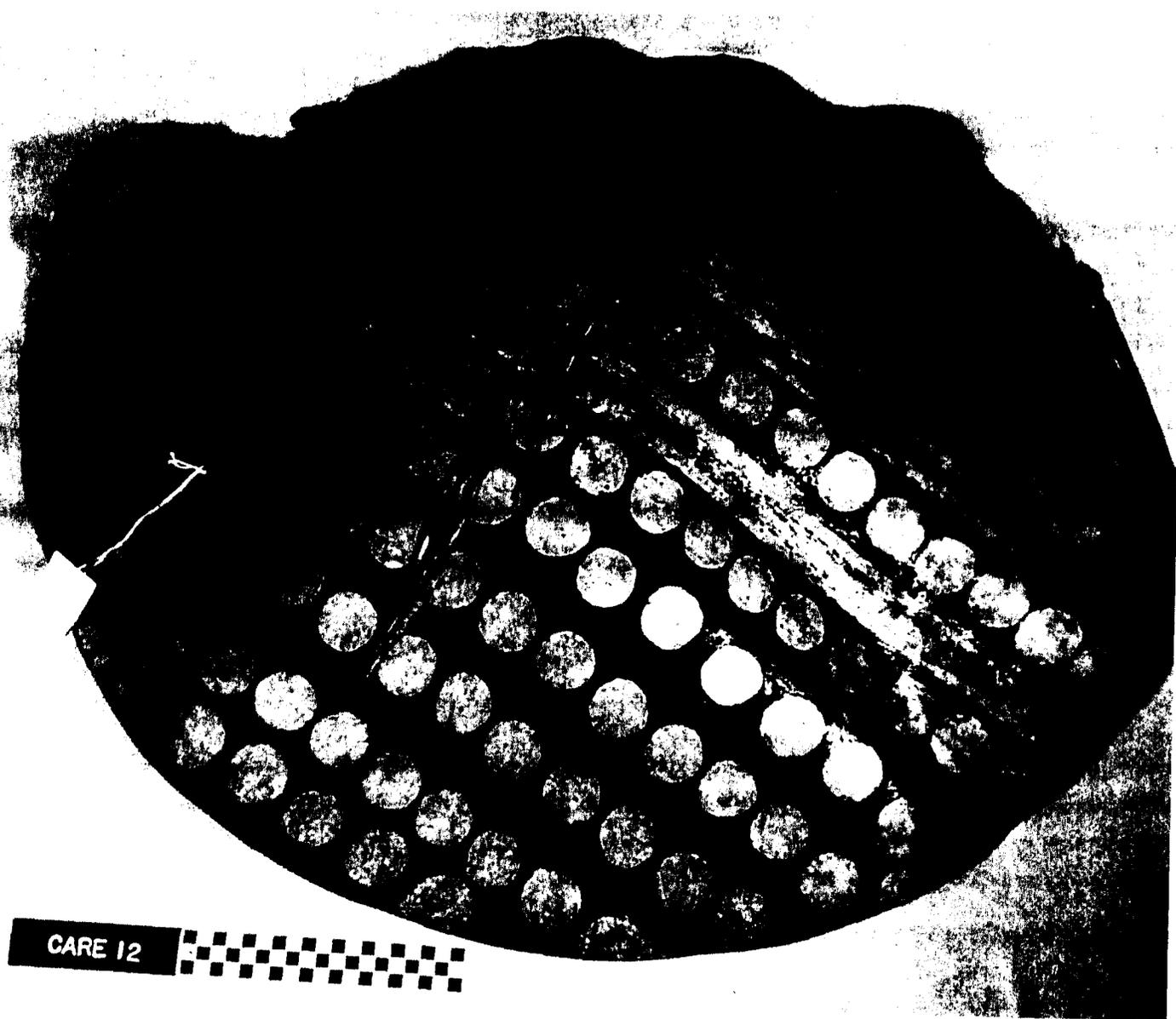


Figure 2. Pectol shield No. 12. The shield with the dots resembles a Castle Garden Style shield pictograph in Montana and an Apache shield pictograph in Arizona. The shield had a radiocarbon age of A.D. 1650 - A.D. 1750.

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The Age of the Pectol Shields

The introduction of the horse to southwestern Indians offers an historical estimate for the age of the shields. Large shields, like the Pectol shields, represent the armament of pedestrian warriors. After the introduction of the horse, Plains Indian shields reduced from 36 to 39 inches in diameter to half or a third that size (Ewers 1955:203). This change in shield size is reflected in rock art where there are scenes of pedestrian warrior hiding behind large shields while defending themselves against horse riding warriors with hand-held shields (Conner and Conner 1971; Keyser 1977; Magne and Klassen 1991). Horses were in general use by Indians in New Mexico after the Pueblo Revolt or post A.D. 1680, and for relative purposes, this date is as recent as anyone might logically predict the age of the shields.

Numerical age estimates do not differ dramatically from this relative date. Campbell Grant (1967:65) obtained the first numerical estimate for a Pectol shield, a standard radiocarbon age, from a piece of Shield # 12. Reported as UCLA sample 1221, the age had a tree-ring calibrated radiocarbon age of (1) modern; or (2) A.D. 1650; or (3) A.D. 1750 (Berger and Libby 1968:149). The three possible ages offered for the shield exemplify the vagaries of radiocarbon dating.

As noted, the shields predate horses, and this makes the modern age as the least likely of the three. The A.D. 1750 age is also after horses had been in general use for a half-century or more. While important, old large shields may have been kept for ceremonial purposes, the date is too recent for a comfortable fit with the evidence.

In a separate study, three accelerator mass spectrometry radiocarbon ages were calculated for a small piece of a strap associated with Shield # 11 (current number is 11, but when dated, it was 191 (Loendorf and Conner 1993). These ages, calculated by the New Zealand Department of Scientific and Industrial Research, are 364 ± 91 B.P., 459 ± 89 B.P., and 397 ± 83 B.P. with a weighted average of 407 ± 50 B.P. Since the original research and reporting of these dates, the radiocarbon curve, based on improved tree ring calibrations, has changed slightly. Using a 95.4% confidence level, the calibrated ages of the samples are: 364 B.P. (A.D. 1400 to A.D. 1850); 459 B.P. (A.D. 1300 to A.D. 1370) and a second intersection at (A.D. 1380 to A.D. 1640); 397 B.P. (A.D. 1400 to A.D. 1670). The weighted average 407 B.P. intersects the calibrated radiocarbon curve at A.D. 1420 to A.D. 1530 and again at A.D. 1540 to A.D. 1640 (Bronk-Ramsey 1995, 2000; Stuiver et al 1998).



Figure 3 Pectoral shield No. 191. The fan-shaped feather motif is evident on this shield. The design resembles a Pueblo petroglyph of the shield warrior.

Several points should be made regarding the radiocarbon ages. One, they are not that different. The range between the ages for Shield No. 12 of A.D. 1650 to A.D. 1750 is only a decade more recent than the most recent point in the average age of A.D. 1420 to A.D. 1640 for Shield No. 11. Furthermore, two of the ages for Shield No. 11 overlap the age of Shield No. 12. Two, we need to remember the date for Shield No. 11 is on an arm strap associated with the shield. The strap could have been made from an old buckskin item and may not reflect an absolute accurate age of the shield. Or, conversely, it could have been made from a piece of buckskin that was more recent than the shield. Three, the age of Shield No. 12 represents when the bison died (whose hide was used to make the shield) and not the age of the shield itself. While this time period was likely not too great, if the hides were traded, there could be several years of lag between when the bison died and when its hide was made into a shield. Four, Shield No. 11 has evidence that it was used on more than one side. This suggests it could have been a curated item and in use for some period of time before Shield No. 12 was made. Five (and this is an extremely important point), the ages reflect the date the shields were made and not the date they were buried in the cache.

Taking all of these factors into account and using the available dates, relative and numerical, the shields were likely made at different times. Shield No. 11 was almost certainly made between A.D. 1420 and A.D. 1640, the range of the weighted averages. Because the shield was in use at the same time as Shield No. 12, which has an age estimate of A.D. 1650 to A.D. 1750, we might guess that Shield No. 11 was made sometime toward the recent end of its date range. This suggests a likely age of A.D. 1550 to A.D. 1650 for the making of the shields. If they were in use for 50 to 75 years, they could have been buried in the cache between A.D. 1600 and A.D. 1725. They would not have been practical for horse-riding warriors at a more recent time.

Historical Evidence for the Use of Large Shields

There are several historical accounts of Indians using these large shields and a few early hide paintings that show warriors with large shields. There are also some photographs of Indians holding shields larger than normal for equestrian use.

In the winter of 1787-88, David Thompson, the trapper, explorer, and trader who established the Northwest fur company posts across Canada and along the Columbia River, recorded the account for the use of large shields most frequently presented. Thompson recorded the description of the battle between the Piegan and the Snakes (Shoshone) that took place in eastern Montana about 1723-1728 before either group had horses (Ewers 1955:15). An aged Cree Indian named Saukamappee, who was allied with the Piegan in the fight, described the battle to Thompson. The two opposing sides sat down on the ground, forming battle lines about an arrow's flight apart, and placed their large shields in front of them. The Piegan had iron arrows that penetrated the rawhide shields of the Shoshone, while the stone-tipped arrows of the Shoshone broke on impact. Although some warriors were wounded, no one was killed. Thus no scalps were taken, and the battle was terminated at nightfall (Thompson 1916:329).

This battle technique from fixed lines that shot arrows at each other represents one American Indian fighting strategy. Peter Fidler described another battle tactic for pedestrian warriors in 1793. The fight he witnessed was a sham fight between young men of the Muddy River Indians (Piegan) with whom he was travelling in Saskatchewan. As described by Fidler:

In the evening all the young men had a sham fight – with their shields on – and using only bluff-headed arrows – they formed into equal parties and with through the evolutions of the Indians arts of open attack, with the greatest dexterity, the principal point is to move the shield about, which hang by a thong on the left side – so as to oppose the flight of the arrow that is aimed directly at them – a quick eye is also another indispensable thing to mark the arrows flight when coming towards them – sometimes they stand upright – and very often on their knees –when the shield covers them entirely [Fidler Diary for 1793, Hudson’s Bay Archives].

The shields used in this battle were large enough to cover a man to parry and deflect the arrows. Presumably, the shield hung on a thong on the left side so that combatants could drop it to use their bows and retrieve it after shooting an arrow. Use of a bow and arrow requires both hands. A shield could be fastened to the arm, but shields more than 3 feet in diameter, like the Pectol shields, would be very unwieldy and difficult to manage while holding a bow. In the kneeling position, as Fidler describes, a warrior could prop the shield in front of him and have his hands free to use the bow.

Two warriors to a shield, one to hold the shield and the other to use his bow and arrows, is another fighting strategy that the Bears Arm, a Hidatsa Indian, described to Alfred Bowers. This battle between the Hidatsa and the Snakes took place in western North Dakota near Sentinel Butte at a time when “there were a few horses but no guns,” or ca. AD 1740. The Hidatsa leader Crow Bull had been instructed in a vision to meet the enemy. Bears Arm described the fighting strategy:

When the enemies saw them, they climbed on of the high buttes. The men with shields were told to go ahead and all the other would follow closely behind them in a compact group. Each man, using his bow and arrows, was supported by a shield carrier who walked in front to deflect the arrows with his shield, thus protecting the man in back of him [Bowers 1965:351].

This pedestrian warfare strategy may have been an effective way for advancing warriors. The man carrying the shield could also have a shock weapon like a club for close fighting or a rake to pull away on opponent’s shield. This strategy is what appears to be employed on the Segessor I hide painting that is curated at the Palace of the Governors in Santa Fe, New Mexico.

The shield warriors on this hide painting are very instructive in trying to learn the cultural affiliation of the Pectol shields. The hide painting, studied in detail by Gotfried Hotz (1970), was sent by Father Philip, a Jesuit missionary in Sonora, Mexico to his family in Switzerland in 1761. After a thorough examination of the clothing, setting, and other

aspects of the painting, Hotz concludes that Segessor I portrays a battle in which Mexican Indians, possibly Opata Indian auxiliaries, on horseback are attacking pedestrian warriors who are defending their village. Hotz believes the village under attack is Apache. The mounted warriors ride horses clad with hide armor in Spanish fashion and carry lances, bows, arrows, and swords. Each mounted warrior has a shield hung over their left sides, but none are shown using their shields.

The pedestrian warriors are depicted behind shields that cover their bodies from their necks to their knees. Two pedestrian warriors with drawn bows and arrows shown at the front of the action have no shields, suggestive of the fighting strategy described for the Hidatsa. The large shields are decorated with colorful stripes, dots, circles and triangle designs. These shield designs are described in greater detail in the comparative section of this report. The Segessor I hide painting is believed to represent a battle that took place ca. 1700.

Other descriptions of large shields that cover the body of the warrior are found in the diaries of the soldiers who accompanied Juan de Onate on his historic trek onto the southern Plains in AD 1601. Onate identified the Indians using the shields as the Escanxaque. The identity of the Escanxaque is debated but many researchers believe they are Plains Apache. The date is too early for the Kiowa or the Comanche to be on the southern Plains. However, as discussed below in greater detail, the Kiowa were known for their large shields.

Large shield warriors are also found on Mandan hide paintings. One of these is a hide collected early in 1833 by Maximilian Prince du Wied. The figures are shown as frontal view pedestrian warriors in association with mounted warriors and other animals like bears, bison and elk (Dunn 1968:154). Except for a possible fringe of feathers, decorative designs are not shown on these shields.

Polly Schaafsma (2000) has recently presented an excellent overview of shield images in the Southwestern United States. Some of the rock art examples are discussed below, but the kiva wall paintings of shields and shield warriors represent an important body of comparative material.

There are at least two dozen good examples of shields and shield warriors that have been found painted on kiva walls. The most striking examples come from Pottery Mound, a Pueblo community in the Puerco River valley south of Albuquerque, New Mexico (Hibben 1975). Schaafsma (2000:73) assigns the Pottery Mound occupation an age of AD 1325 to 1450 with a smaller population into the late 1400's. The shield designs are quite variable, but many exhibit geometric patterns with a tendency to divide the shield into halves vertically, showing different colors on either side. Another pattern includes different colored dots arranged on a circular strip of the shield face. Equilateral crosses and four-pointed star patterns are also found with dots. Several exhibit a fan-shaped pattern that appears to represent feathers. Schaafsma (2000:112) thinks that the scalloped perimeters on the shields, as though cut in patterns, indicate they represent hide shields.

The Jeddito murals at Awatovi and Kawaika-a, Arizona are mostly “plain white shields, edged with spattered red and an array of long, radiating feathers, birds and other items... (Schaafsma 2000:91)”. These kiva murals date from the late 1300’s through the 1500’s and into the early 1600’s. Helen Crotty dates the shields to the earliest layers of paintings at Awatovi, or to the late 1300’s or early 1400’s (Quoted from Schaafsma 2000:90).

Numerous petroglyph examples of shields and shield warriors, found with other warfare iconography along the Rio Grande valley are very similar to painted kiva iconography (Schaafsma 2000). Most of the shields date to Pueblo IV between AD 1300 to AD 1600, with fewer examples that are later in time. This is during the time we believe the Pectol shields were made and used. Unfortunately, because most examples are petroglyphs, they do not exhibit paint colors. However, some of the shield designs are noteworthy when considering the makers of the Pectol shields.

This examination of the literature on the use of large shields is not exhaustive, but it is sufficient to illustrate the complexity in trying to assign cultural affiliation to shields based on their size alone. Quite clearly, large rawhide shields were in use across western North America before the introduction of the horse. This is not to suggest that all tribes used the shields. The Mountain Shoshone, for example, who once inhabited the high country of Montana, Wyoming, Idaho and perhaps Colorado, did not use large shields. Likewise, the Great Basin Shoshone do not have traditions for using large shields in warfare. On the other hand, the Plains Shoshone and the Comanche (offshoots of the Shoshone) were shield users in the historic period.

Rock Art Images of Shields and Shield warriors

Pictographs and petroglyphs of shields and shield warriors represent an important component of the rock art in western North America. They are found from Alberta to Texas (Gebhardt 1966) but the number of these figures varies considerably from region to region. In south central Montana they can be the most common motif and represent more than half of the figures at a site. In other areas such as northern Utah or eastern New Mexico the figures are often prominent, but they rarely represent more than ten percent of the total number of rock art images at a site, and in southeastern Colorado, western Kansas, or Texas, only a few isolated examples are known. Shield and shield warrior pictographs and petroglyphs were made over a long period of time. One type in Montana was made about 750 years ago, while others were made in the historic period less than 150 years ago. At Fremont Culture sites in Utah, there are shield warriors that apparently date to more than 1000 years of age.

From the outset, it should be absolutely clear that the shield and shield warrior motif made across western North America over a time span of 1000 years, was the product of different cultural groups. These groups spoke several different languages. Some had a farming subsistence, others were big game hunters, and some were apparently gatherers with a greater reliance on small animals and plants than big game. Furthermore, some of these groups may have changed their means of subsistence, such as the Crow Indians of Montana during the time they made the shield and shield warrior motif. With these

cautions in mind, in this section I examine the shield warrior figures and their potential for identifying the authorship of the Pectol shields.

For considering the cultural affiliation of the Pectol shields, an important painting of a rock art shield is found in Weatherman Draw. Weatherman Draw is found in south-central Montana a few kilometers north of the Wyoming border. Although it is so badly weathered that the paint colors can no longer be identified, it was made on a smoldered surface, and the designs were incised. Stenciled dots make up the shield decoration in a pattern much like Pectol Shield No 12 (Fig. 4). Another shield design at the Valley of the Shields site, a kilometer east of Weatherman Draw is similar to a Pectol Shield. The shield is badly weathered and difficult to see, but the winged upper portion with its lower fan-shaped design is comparable to the design on Shield No. 11 (Fig. 5). The shield figure, painted in red, has an eroded red head above it and part of one leg that apparently once completed the figure as a shield warrior. Both the Weatherman Draw shield and the Valley of the Shields figure are good examples of the Castle Gardens shield style (Loendorf 1995; Francis and Loendorf 2001).

The premise is offered that if we could identify the author of these Castle Gardens style shields, we might have a clue as to the identity of the makers of the Pectol shields.

Castle Gardens Shield style

The oldest shields or shield warriors currently recognized in the Montana and Wyoming region are in the Castle Gardens Shield Style (Loendorf 1995; Francis and Loendorf 2001). In 1930 E. B. Renaud recognized and recorded shields and shield warriors at Castle Gardens, a site in central Wyoming (Renaud 1932). Since that time, Castle Gardens Style shields and shield warriors have been found at other locations in Wyoming and southern Montana. Castle Gardens Style figures are made in a unique way. Before making these pictographs, the artist prepared the rock surface by abrading it to remove undulations or protuberances and produce a flat, smooth palette. This surface preparation removed the less-consolidated outer layer of surface sandstone to reveal a harder, inner layer for the painting. The abrasion was accomplished with fist-sized angular blocks of sandstone (Loendorf 1990).

Once smoothed, the artist incised a pattern of the shield or shield warrior on the rock palette. Shield designs include pie-shaped wedges that divide the circle, and each of these wedges receives additional decoration, often in different colors. Circles, half/circles, triangles and other geometric forms are used in the designs and apparently stenciling, or placing an object on the wall to protect it from paint, was practiced in making the paintings. Common stenciled forms are circular outlines that leave the color of the rock surface inside the circle. In addition to the circle designs, there are geometric forms and animals made by the stenciling technique. Other animals are painted on the shields. The animals include several turtles with one that is decorated with a diamond shaped pattern painted in four different colors (Renaud 1932; Loendorf 1995). Birds, bears, bear tracks and quadrupeds that may represent bison and others that may be otters are also found on the shields.



Figure 4. Castle Gardens Style shield with dot pattern that is similar to Pectol shield No. 12. The faded shield is found in Weatherman Draw, Montana.

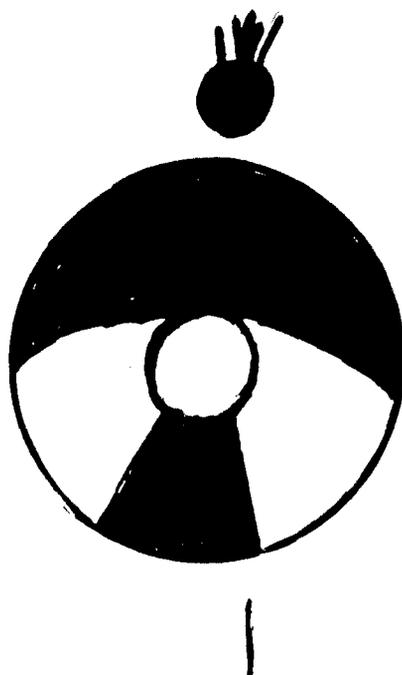


Figure 5. Castle Gardens Style shield with wing pattern and fan-shaped tail. Design is similar to Pectol shield No. 11. The figure is found at the Valley of the Shields site, Montana.

Paint colors include two shades of red (one more purple than the other), two shades of orange (one more yellow than the other), black, white, and green. Polychrome paintings are rare in Wyoming and Montana, and this is one of the criteria by which the Castle Gardens Style shields and shield warriors can be identified. Use of green paint is also an important criterion because it is rare in the region.

In an excavation in the Valley of the Shields in southern Montana, two sandstone-abrading tools were recovered at the base of a panel of Castle Gardens Shield pictographs. These were used to smooth the surface in preparation for the paintings (Loendorf 1990; 1991). One of these had paint adhering to it, as though the artist picked it up to do some additional smoothing while in the process of applying paint. The tools were found in direct association with the remains of a hearth, and it was possible to obtain standard radiocarbon dates on the charcoal. Two dates with overlapping sigma were obtained; using the correction tables, it is clear the Castle Gardens shield style pictographs were made at Valley of the Shields ca. AD 1100 (Loendorf 1990:49).

The species of wood for the charcoal dated at Valley of the Shields was not identified. Larger woody species growing at Valley of the Shields today are Limber Pine (*Pinus flexilis*) and Rocky Mountain Juniper (*Juniperus scopulorum*) with the latter as the most abundant woody plant in the site area. Tree ring studies in the Pryor Mountains, a few kilometers east of Valley of the Shields, have shown that the local juniper can be hundreds of years of age. Portions of these upright shrubs die at different times and it is not uncommon to have part of a plant dead while another part is alive. This tends to allow the dead branches the opportunity to continue standing for another fifty years or so. In the dry environment, juniper also tends to survive on the ground as deadfall for another fifty years or so. And it is this deadfall that was collected for firewood. The radiocarbon process, of course, generates an age estimate for the time the tree died and not the time it was used as firewood. Furthermore, as a juniper log burns and dies out, the inner core of the tree is what remains as the charcoal lump that is collected and used for the radiocarbon date.

These factors suggest the age of the Castle Gardens Style shield paintings may be falsely old by 100 or so years. More dates are needed, and the species of wood needs to be identified before we can be certain as to the age of the style. Nonetheless, excavations at the Castle Gardens site have also produced radiocarbon dates (Walker and Todd 1984). The stratified deposits of a site on an access road to Castle Gardens contained two primary cultural levels with burned bone remains intermixed with hearths, chipped stone, and ground stone tools (Walker and Todd 1984). The age of the lower level was established by three radiocarbon dates at AD 1200. These dated samples come from deposits more than 500 meters from the shield paintings and there is no direct relationship to the paintings. Nonetheless, the fact that there were people at Castle Gardens at the time the Castle Gardens Shield Style was being made in Montana serves as secondary support for the age of the rock art style. The dates offer confidence in the estimated age of the Castle Gardens Style shields and shield warriors between AD 1100 and AD 1200.

The largest number of Castle Gardens Style figures is found at the Castle Gardens site and the Valley of the Shields site. Sites with fewer of the figures include the Medicine Lodge Creek site in Wyoming and half-dozen sites in Montana (Francis and Loendorf 2001). Because the style was only identified less than a decade ago, the distribution will undoubtedly grow through new discoveries.

Cultural Affiliation of the Castle Gardens Shield Style

Because there is such similarity in the design on a Castle Gardens shield and a Pectol shield, and for other reasons outlined below, establishing the cultural affiliation of the Castle Gardens Shield style is important in trying to learn the makers of the Pectol shields. Current wisdom suggests that some of the possible makers of the Castle Gardens shields, such as the Crow, the Cheyenne, the Sioux and the Arapaho, did not reach the Wyoming and Montana region until several centuries after the manufacture of Castle Gardens shields. All of these groups may have made rock art shield figures, but they made them in different styles and at times later in Montana and Wyoming than the Castle Gardens shields.

Other groups who have lived in the region long enough to be the painters of Castle Gardens shields include the Salish-speaking Flathead and Pend de Orielle and perhaps the Algonkian-speaking Blackfoot. But these groups can be eliminated because there are no samples of the shields in the primary territories of the tribes. Surely, if the Blackfoot made the shields, we would expect to find examples in their main territory of northern Montana. Likewise, if the Flathead made the shields, there should be examples in western and central Montana in their traditional homeland.

The Plains Shoshone are recent arrivals to Wyoming, perhaps following the Lamb hypothesis for the spread of Numic-speakers out of the Great Basin sometime after A.D. 1000. Using the distribution and age of flat-bottomed ceramics in archaeological sites, these Numic-speakers are thought to reach Wyoming between A.D. 1300 to A.D. 1500 (Madsen 1975; Wright 1978, 1984). Jim Keyser (1975) offers the hypothesis that these groups may have learned the shield warrior image from the Fremont and introduced it to their new northern homeland. If this is the case, they arrived at least a century and perhaps four centuries too late to make the Castle Gardens shields.

The best candidates of the makers of the Castle Gardens shields are the groups who lived in the region (or may have visited it) circa AD 1200 where the Castle Gardens style shields are found in Montana and Wyoming. Four possible groups emerge as candidates - the Mountain Shoshone and the Ute (both Numic-speakers), the Kiowa (Tanoan-speakers) and the Navajo and/or Apache (Athapaskan-speakers).

Numic-Speaking Mountain Shoshone

The current belief is that the Mountain Shoshone have lived in their northern home for millennia (Nabokov and Loendorf 2001). Sites like Wahmuza in north-central Idaho (Holmer 1994) and Mummy Cave in northern Wyoming (Husted and Edgar nd) contain

*Observations
Castle Gardens
sites as a set
of intrusive units!
How realistic is it
to assume that
a group of people
will move into an
area, keep themselves
from some group at
times, and paint
them all their own
kind of material
Numerous resistances
remained a mixed
group that
did not
at various times
+ some of these
described a
into northern
communities
would
happen in
style. Would
a style in
add are a
find that
ceremonial
practice +
changed +*

*Language
can spread
w/o corresponding
pop. spread;
lang + mfg. cult.
distributions
are not correlated*

stratified layers of features and artifacts that are assigned to the Shoshone. The 5000 to 6000 year sequence of traditional Shoshone house pits with interior storage pits (house types that are strikingly similar to those of the Shoshone in the Great Basin) is another of the indicators of a long-term Shoshone occupation of Wyoming.

Another indicator of long-term Shoshone use of Wyoming, one of the most convincing, is the 5000- to 6000-year-old tradition of Dinwoody petroglyphs (Francis et al 1993; Francis and Loendorf 2001). These elaborate petroglyphs, made by pecking large figures with interior designs, are unquestionably the products of the Mountain Shoshone. It is possible to identify characters in the petroglyphs, such as water ghosts, through the use of Shoshone ethnography. Furthermore, the Shoshone continue to tell us today that Dinwoody petroglyphs are related to their culture.

Importantly for this discussion, Dinwoody Tradition petroglyphs do not contain many shields or shield warriors. The one or two examples that are known are believed to be of recent origin. They are pecked circles with little interior design. There are no painted examples. The absence of shield-bearing warrior rock art motifs in Dinwoody Tradition petroglyphs suggests that the Mountain Shoshone did not make or use large shields in pre-horse times.

Numic-Speaking Ute

In much the same manner as the Mountain Shoshone, there is increasing evidence that the Ute lived in Colorado and Utah for millennia rather than centuries (Goss 2000:29-30). While archaeologists have not jumped on this bandwagon, the link between Uncompahgre Brown ware ceramics and the Ute is quite strong, and there are several radiocarbon dates that indicate Brown ware ceramics were in use in western Colorado and eastern Utah by AD 1000 (Reed 1994:193-194). Thus there is ample time for the Ute to be associated with the Castle Gardens Style shields. The current distribution of Castle Gardens Style shields in Wyoming and Montana does not conform well to established Ute territory, but Ute warriors could have made long treks to the north.

The more compelling evidence that the Ute are not the authors of Castle Gardens style shields is the absence of the motif in their traditional territory. Somewhat surprisingly, in a literature review I found very few examples of pedestrian shield-bearer petroglyphs or pictographs that are assigned to the Ute. Sally Cole (1990:216) assigns the few non-Fremont shield-warrior figures to the Eastern Shoshone. A few possible Ute figures exhibit simple outlines of the shields with a stick-body human form showing through the shield. This lack of Ute rock art shield warriors may be indicative of the absence of large shields in pre-horse times among the Ute. They were mountain-oriented people, much like the Mountain Shoshone, and possibly they did not use large shields in pedestrian times.

There are several examples of probable Ute rock art shields made after they had horses. An important Ute pictograph panel that is found in Canyon de Muerto is believed to chronicle a battle between the Ute and the Navajo in 1858. About half of the horse-riding

*Shields
could have been
a "cult" thing
to remember
they were
secured, dated*

Ute have shields attached to their horses, and seven of the Navajo defenders are shown as pedestrian shield-bearing warriors (Grant 1979:223-224). Although the shield decorations are faded, they are evident on two of three of the horse riding figures and described below. Another set of possible Ute pictograph shields is found at Thompson Wash in northeastern Utah. These pictograph shields were among those that Noel Morss used to assign the Pectol shields to Apacheans. But because they are found with horses in the same paint colors, the Thompson's Wash shields are undoubtedly historic in age. Sally Cole (1990:240) thinks the Ute made them. This attribution is partly because Thompson Wash is near the center of historic Ute territory and partly on the similarity of the horses and human figures to other Ute rock art sites. As noted below, there are reasons to think that Cole is correct.

Ute Shield designs

One of the Ute pictograph shields at the Ute Raid site in the Canyon del Muerto is divided into eight pie-shaped segments with no other interior designs. Another has dividing lines that are faded, but they appear to represent four pie wedges centered on a disc. The third has a crescent-shaped design across its face. A parallel wedge is nested with the crescent on one side, and although faded, there may have been a similar one on the other side as well (Fig. 6).

Shields at Thompson's Wash include a white painted shield with fringe around most of its outer perimeter and a propeller-shaped interior design. Red and white are used in the shield. Another shield is painted in white with two crescent shaped interior segments in red. The similarity of the crescent shaped designs on the Canyon del Muerto shield, almost certainly representative of a Ute shield and the one in Thompson's Wash, suggest the latter site is of Ute origin as well (Fig. 7).

Pie-shaped wedges and central discs appear to be common Ute shield designs (Wroth 2000:123-124). Yellow, red, black, green and white are paint colors and the central discs are a solid color with a concentric perimeter rim in another color. A Ute shield collected in Colorado by John Wesley Powell in 1868-1869 has a red central disc and a small portion of the shield perimeter in the same red. Green covers the remainder of the shield, and a darker shade of the green runs in a line across the shield face and around one side of the red central disc. This same dark green is shown as a dot and as part of another segmented design on the shield. Feathers and beads add to the shield decoration.

Ute pictographs and petroglyphs of shields and actual Ute shields bear little resemblance to the Pectol shields. They have some dots or discs but they are filled in with paint and not left as stencils like those on the Pectol shield No. 12. Nor are any of the dots in patterns. Both use green and that is an unusual color for pictographs, especially in northern locations, but as rare for painted hide materials.

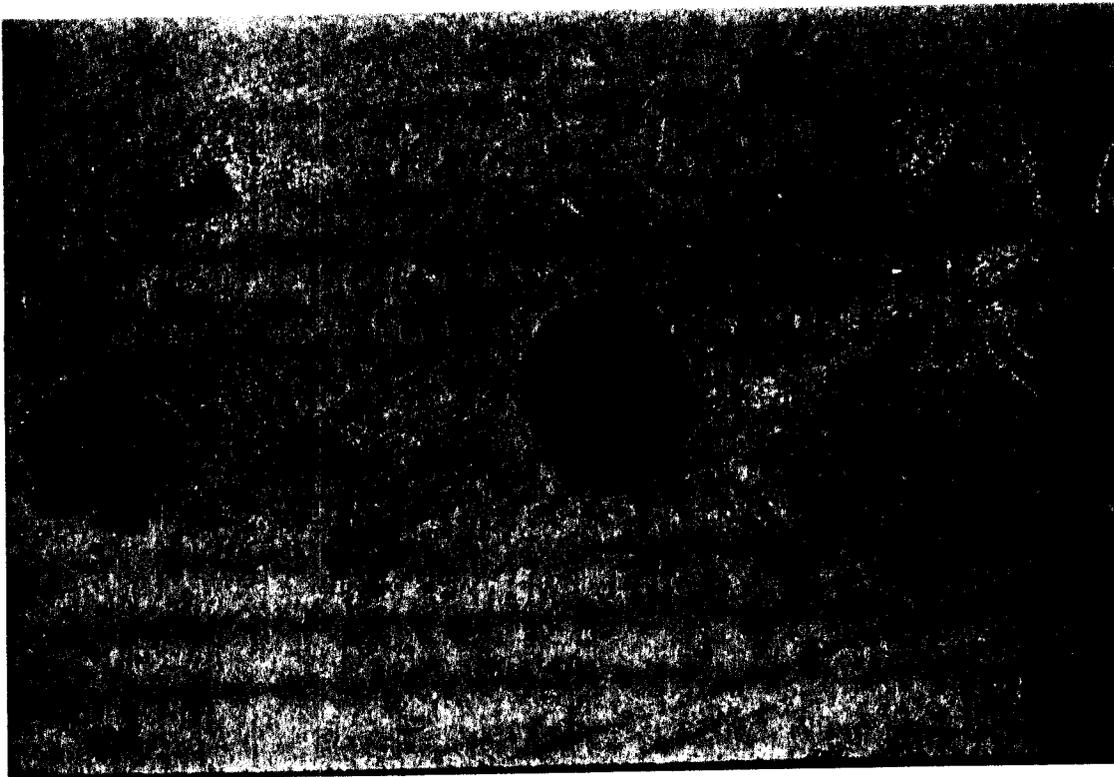


Figure 6 Two Ute horse riders with their shields as shown on the Ute Raid pictograph, Canyon del Muerto, Arizona. Note the crescent-shaped design on the left figure.



Figure 7 Human figures, horses and shields at Thompson's Wash, Utah. The shield to the left exhibits a crescent-shaped design similar to the Ute Raid shields in Figure 6

Tanoan-speaking Kiowa

James Mooney, in his probe into early Kiowa history, interviewed elderly tribal members in the 1890s and learned that their traditions located them "in or beyond the mountains at the extreme western sources of the Yellowstone and the Missouri" (Mooney 1979[1898]: 153). Perhaps the most compelling connection between the Kiowa and their northern homeland comes from Hugh Scott, a 7th Cavalryman who was stationed at Fort Sill, Oklahoma in 1889. Scott met many of the old Kiowa warriors who remembered a homeland in what they call Gá'i K'op, or the Kiowa Mountains, at the extreme sources of the Missouri and Yellowstone rivers. The exact identity of the Kiowa Mountains is no longer known, but thanks to Scott, we know they were near Yellowstone National Park. The Kiowa came from:

The headwaters of the Missouri and Yellowstone Rivers near where the Kiowa Mountains are and the geysers of the Yellowstone Park which they describe as shooting hot water high in the air - and which no Kiowa has seen for some generations - and probably has heard little of from white people but he describes that country in a way it can be recognized {Scott nd. no pagination}.

This means the Kiowa must have lived near Yellowstone Park, and the Kiowa Mountains are probably the Gallatin Mountains or Madison Mountains of southern Montana. It was while these early Kiowa were living at this location that two rival chiefs got into an argument and the tribe split up. The followers of the one moved to the east, setting up residence near the Crow along the Yellowstone, while the other group remained in the mountains. This must have taken place after A.D. 1500, when the Crow moved into Montana.

Because the Crow and the Kiowa maintained a long-term friendship, anthropologists have always accepted a northern sojourn for the Kiowa. However, because they speak a Tanoan language – the main language of the Rio Grande Pueblos – anthropologists have only accepted a short length of time, perhaps after the A.D. 1680 Pueblo Revolt, for the Kiowa to have been in the north. Linguists now recognize the division between Kiowa and the other Tanoan-speakers to be in the thousands of years (Hale and Harris 1979:171), or ample time for them to have been in the north during the manufacture of Castle Gardens shields. Indeed, Schlesier (1994) links the emerging Kiowa with the Pelican Lake – a 3000-year-old archaeological tradition on the Northwestern Plains.

The Kiowa are an important group to consider when studying cultural affiliation of shields, because one of the major socio-political divisions of the Kiowa, a band that held a place in the camp circle, was identified as the Kinep, or Big Shields (Mooney 1898:228). Catlin (1973:75) writes that the Kiowa: "Kots-a-to-ah (the smoked shield) is another of the extraordinary men of this tribe, near seven feet in stature, and distinguished not only as one of the greatest warriors, but the swiftest on foot, in the nation." The accompanying portrait shows Kots-a-to-ah with his shield resting on the ground, and if he is nearly seven feet tall, the shield is about 40 inches in diameter. It is decorated with a

central circle and quarter moon in a pattern similar to shield designs collected by Mooney in the late 1800's (Merrill et al 1997:97).

Mooney (1898:231) notes that Kiowa shield designs were part of a heraldic system and that there were about fifty shield patterns. Warriors carrying shields of the same pattern were part of a close brotherhood with similar war cries, body paint and ceremonial regulations. A Kiowa warrior's shield was buried with him at death, but the shield designs would have survived on his companions' shields.

Kiowa Shield designs

As the Kiowa may be the producers of the Castle Gardens shield pictographs, a comparison between the designs on their hide shields with those on Castle Gardens shields might be useful. Fortunately, because Mooney was so interested in heraldry, there are many examples of Kiowa hide shield designs. And because the designs were passed on, they may be very ancient.

As with many Plains groups, designs usually differ from the outer shield cover to the actual inner hide shield. Many Kiowa shields have painted circles or concentric circles in the center (Merrill et al 1997:95-97, 213-215). There is a general tendency to use a horizontal line to divide the shield into halves or another portion of the circle (Merrill et al 1997:215). The different segments are then painted with different colors and scenes. Animals, including bison, can stand on the dividing line, or the Maltese cross representing the morning star might be depicted. Bears and bear paws are featured on the shields. An important series of Kiowa shields show depictions of the "man who lives on the sun" and an opposing figure of the "woman who lives on the moon" (Merrill 1997:34 showing a page of Mooney's notes). These figures are shown upside down and linked to the Kiowa Sun Dance.

Kiowa shield designs exhibit more differences than similarities with Castle Gardens shields. There are no turtles, and turtle imagery is rare in all of Kiowa art. There are few, if any, examples of negative or stenciled figures on Kiowa shields and no dot pattern on shields. On the other hand, the Kiowa had a painted tipi pattern that was negative dots that represented stars (Ewers 1978:39). This pattern had several variants. It was said to be very old and the Kinop or Big Shields band used it when Mooney recorded it.

As to the upside down human form on the shields, these are known in the rock art of the northern Plains (Sundstrom et al in press). They are found at a site near Devil's Tower, a place the Kiowa remember on their migration from Montana to Oklahoma. The two figures at the site are shown upside down, but not on shields and not associated with shields.

Athapaskan-speaking Apache and Navajo

For more than a century, it has been recognized that Athapaskan-speaking groups were originally from a homeland in northwestern Canada, and at some time in the prehistoric past they moved to the American Southwest. The timing and location of this movement

has been (and continues to be) debated by scholars (Towner 1996). Many researchers agree, however, that the Athapaskan movement took place in stages along the Rocky Mountains and that during the migration the tribes took up residence in Montana and Wyoming.

Kehoe (1968) originally linked the archaeological unit known as Avonlea with the southward-moving Athapaskans. Wilcox (1988) has further developed this hypothesis, suggesting that the archaeological complex known as Beehive Benson's Butte, thought by some to be an Avonlea variant, may represent the southward-moving Athapaskans. Beehive Benson's Butte Complex sites are found in south-central Montana and to the south across Wyoming into Utah, where they are dated between A.D. 650 and A.D. 1200.

Davis et al (1994) recommend the taxonomic unit Beehive Technocomplex instead of the Beehive-Benson's Butte Complex originally suggested by Fredlund (1988) for the remains in these sites. Coyote House (24PR601), located on the top of a freestanding remnant of sandstone in southeastern Montana, contains a rich assemblage of Beehive Technocomplex artifacts. The site exhibits a sandstone slab wall house with deadfall timber for its superstructure. The structure was apparently rebuilt on the same foundation for several hundred years between A.D. 575 and A.D. 1600.

Greiser (1994) believes the remains at Coyote House may be associated with the Kiowa Apache, a group of Athapaskans who remained in Montana and moved east and south with the Kiowa to become one of the bands in their camp circle. Schlesier (1994) agrees with this assignment. At present, there are no Castle Gardens shields associated with the Beehive Technocomplex. This, of course, does not negate the assignment of Castle Gardens Style shields to other divisions of the southward-moving Athapaskans.

The movement of the Athapaskans from Montana and Wyoming to the Southwest is the most debated aspect of the migration. Movements through the Rocky Mountains and into the Southwest by as early as A.D. 1400 are suggested in one hypothesis (Opler 1983; Perry 1991). And movements down the western Plains to positions in eastern Colorado, before moving into the southwest, are suggested in another hypothesis (Gunnerson 1979; and see Towner 1996 for supporting arguments). In either hypothesis, the Athapaskans were living in Montana and Wyoming during the time the Castle Gardens shield was made.

Navajo Shield Designs

The turtle shield figures at Castle Gardens are of interest in trying to establish the cultural affiliation of the Castle Gardens shield style. The Great Turtle is on a shield that measures 42 cm. in diameter, with short fringe lines around its perimeter. As described by Renaud, the segmented pattern on the back of turtle:

...is very neatly engraved and carefully colored in three shades, the same as the other drawings, green, orange-yellow, and purplish-red. No instance was observed of the pigment ever running over the line from the division that it was intended to

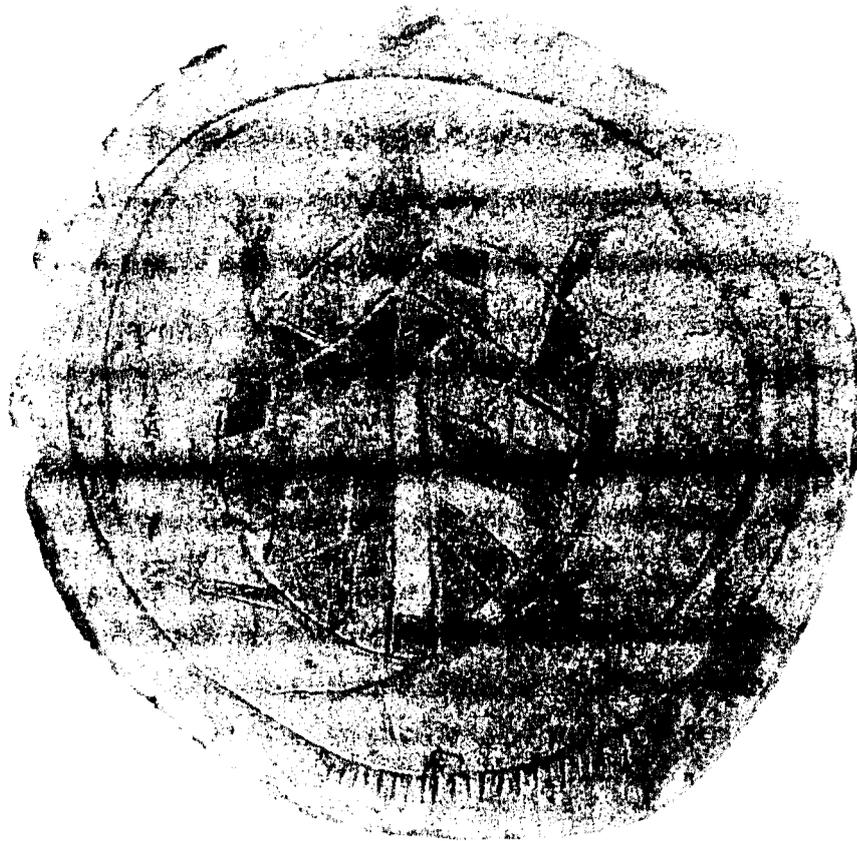


Figure 8. Great turtle shield. Castle Gardens site, Wyoming. The shield was illegally removed from the rock and it now resides in the Wyoming State Museum in Cheyenne. The shield is 42-cm in diameter.

cover. There are 60 such sections, 46 on the elliptical carapace, 13 for the legs and one for the triangular head. The ensemble forms a very attractive polychrome mosaic, with four legs similarly colored but not rigidly symmetrical in design. The tail in characteristic position and an isolated curve on either side of the turtle complete the design and fill up the open space together with two zig-zag lines, lightning-like, connecting the animal with the upper part of the framing circle [Renaud 1936:12-13].

Turtles are relatively common rock art figures in Montana and Wyoming (Conner and Conner 1971:26; Loendorf 1995:15-22), but they are very rare (if not nonexistent, except at Castle Gardens) as shield designs and not associated with shields in an obvious way. I do not know of any turtles that are not found on shield warrior petroglyphs of the southern territory of the Navajo and Apache in New Mexico or Arizona (Fig. 8). At the same time, shield figures in the Dinetah region – the traditional homeland of the Navajo to the east of Farmington, New Mexico – are of particular interest for identifying the makers of Castle Gardens shields.

Polly Schaafsma, a recognized authority on Southwestern United States rock art and Navajo rock art in particular, identifies several shield warrior figures in the Dinetah as examples of the Navajo (Schaafsma 1963:56)). A shield warrior in Blanco Canyon, between three and four feet tall, is a petroglyph that was made on a prepared and deeply abraded surface (Schaafsma 1980:256 and Plate 30). The maker then incised the outline of the shield figure and its shield design into the abraded surface. This technique is very similar to that used to make a Castle Gardens Style shield.

9
The shield design is a series of triangles. A set of 13 triangles point inward from the outer edge of the shield (Fig. 9). These are opposed by a complimentary set of triangles. Five parallel lines divide the interior of the shield, and opposing sets of triangles in zigzag fashion are set between the lines. There is a similarity between this design and a pattern used for protection by Navajo warriors (Hill 1936:16).

The figure has upraised arms with hands and legs with feet. The round head with eyes and a mouth is set atop a well-defined neck. Horns, presumably bison horns, protrude from either side of the head. Very similar horn headdresses are found on Castle Gardens shield warriors.

Close-up photographs of the Dinetah figure suggest that some of the interior of the shield may have been painted. The colors are so faded that they are no longer recognizable. Even without the paint, there is a definite similarity between the design on the Dinetah shield figure and the Great Turtle shield at Castle Gardens. When the techniques used to make the two figures are considered, the correlation between the two is even more obvious.

In an important rock art study in the Dinetah, Copeland and Rogers (1996:227) point out that the making of petroglyphs by smoothing the surface, incising the figure and then painting it is analogous to sand painting. Schaafsma (1980) and Copeland and Rogers

identify several figures (yeis) that are made as petroglyphs and also as sand paintings. To my knowledge, there are no sand paintings of shield warriors, but there are sand paintings of turtles (Fig. 10). Importantly, the turtle and the frog are associated with war. The turtle, because he protects the frog on several occasions, is ceremonially linked through his tough shell with shields (Clark 1983:97). The frog, on the other hand, uses a magic war stone and holds sufficient power to put out fires that enemies set to kill the pair. War songs to the turtle and frog were especially popular with the Navajo who lived to the west of the Chuska Mountains, and the pair was celebrated in the Mountain Way and the Beauty Way (Wheelwright 1951:2, 17). The association of the turtle with Navajo shields offers support that the Castle Gardens Style shields are Athapaskan.

Other Possible Navajo Pictograph and Petroglyph Shields

Noel Morss (1931) concluded that the Pectol shields were of Athapaskan origin based in part on their similarity to rock art shields at Fish Creek Cove, Thompson's Wash and Carson's Wall. Thompson's Wash has already been described in the section on the Ute. Fish Creek Cove is near Torrey, Utah where the Pectol shields were found. There is only one shield pictograph at Fish Creek Cove. It is a headless figure with a large body shield divided vertically into halves. One is painted white; the other red. Two straight legs protrude down from the bottom perimeter of the shield. It has no feet.

The Fish Creek Cove does not look like other Fremont shield warriors. The paint appears fresher than other painted Fremont figures at the site. The shield might be Athapaskan in origin, but it might also be Puebloan. Curiously, the shield design with vertical divisions painted in different colors is somewhat similar to the shields at Courthouse Wash, near Moab. The shields at Courthouse Wash are associated with a group of Barrier Canyon figures, but in a conservation treatment of the panel, Constance Silver learned that the shields had less silica covering and were added to the scene at a later date.

Carson's Wall is a recognized Navajo site in northern Arizona, near Rock Point to the north of Canyon de Chelly (Gilpin 2001). The site, which is more than a kilometer long, exhibits at least two distinct petroglyph traditions. One appears to be early to middle age Pueblo petroglyphs of humans and animals that tend to be higher on the sandstone wall. The other is an ongoing series of Navajo figures that include yeis, horses, cows, chickens, pickup trucks and many other figures.

Three shields are depicted near the north end of the site. Two figures are pecked and the third is incised or scratched into the sandstone. One pecked figure is a profile view of a human (79 cm tall) with a lance (67 cm long) standing to the right of a large circular shield (67 cm by 61 cm). The shield is solid pecked except over its bottom two thirds while the upper third has pecked lines that divide it into geometric patterns (Fig. 11). The shield is not fringed but has pendant feathers from its base. The well-made human figure appears to be engaged in a battle with a smaller opposing figure (ca. 42 cm tall) that is apparently kneeling and shooting a bow and arrow toward the shield. The bow form is double curve, suggesting it likely is a sinew back. A figure wearing a skirt, likely a female, is between the combatants.

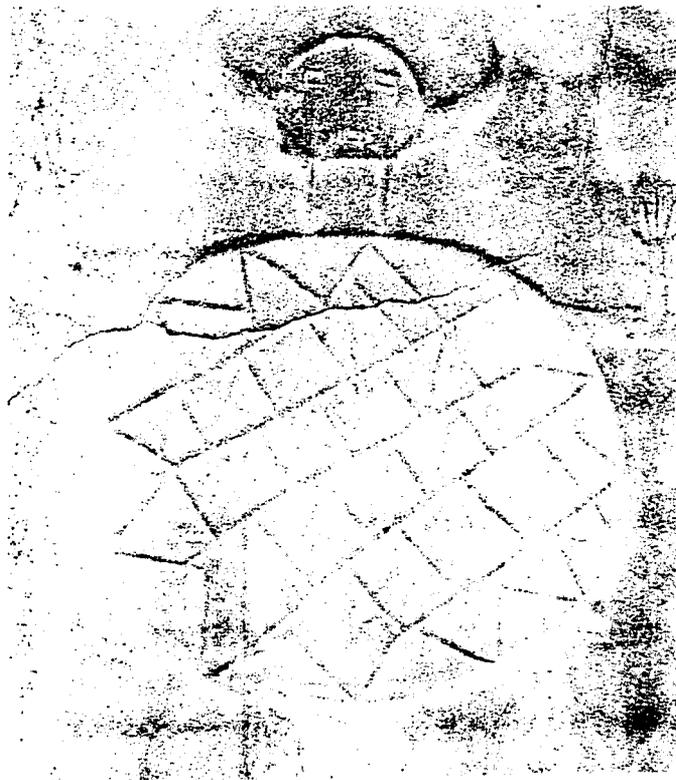


Figure 9. Navajo petroglyph of a shield warrior in Blanco Canyon, New Mexico. Note the surface preparation and incised design. Paint in the figure may have eroded away.

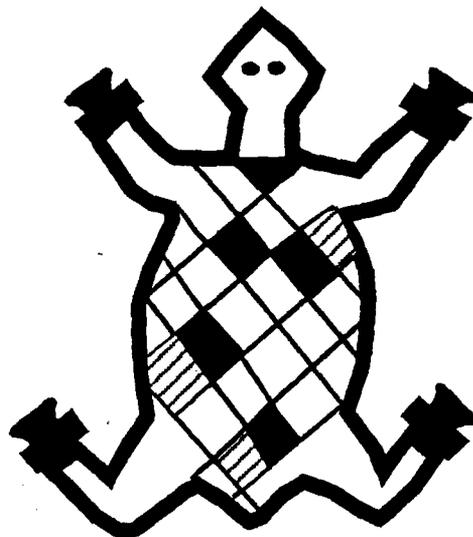


Figure 10. Sand painting of a turtle. The colors are not known. From Newcomb (1956).

A full-scale shield-bearing warrior (160 cm tall) is found a few meters to the north. This figure, which appears to have been made at the same time, has a pecked outline shield (93 cm across) covering its upper body (Fig. 12). Like its standing partner, the figure is shown in profile view. The head, atop an extended neck, has a pointed forehead and a three-feathered crown. The eye, nose, and mouth are shown on the figure's flat face. Legs protrude from beneath the shield.

A line divides the shield vertically. The right half is divided into four roughly equal pie segments, while the left half, divided into two segments, is further decorated with a winged insect looking figure. The latter may have been added, as it crosses the horizontal dividing bar in the shield. Fringe lines decorate the outer perimeter of the shield.

The third shield was incised or scratched into a circular pattern about 64 cm across. Incised triangular-shaped designs attached around its perimeter, presumably representing feathers, make the entire petroglyph about 85 cm in diameter. A small scratched human figure standing in profile-view is found to the right side of the shield. The figure, about 50-cm tall, has a re-curved bow in one hand and a lance in the other. The proximity of the figure to the shield, and the fact that they are both done in the same style of scratching or incising, suggests they are contemporary. Re-curved bows are rock art symbols of the Athapaskan, and this shield, more so than the others, is likely of Navajo origin.

The other two shields are more likely of Pueblo origin. The distinctive profile head with its jutting chin on the larger figure is common to kiva paintings and Pueblo shield warrior petroglyphs. Schaafsma (2000:51) labels it the "Dick Tracy" look. The smaller figure standing next to his shield is done in the same style, and it has similar weathering as its neighbor.

Carson's Wall is a good example of a site where both Pueblo and Navajo shields are found at the same location. Because the two types are often found together, it is difficult to assign rock art shields to the either the Navajo or the Pueblo. If the rock surface was prepared before the shield was made, as at the Blanco Canyon site in the Dinétah, it adds confidence to the Athapaskan affiliation. As with the scratched shield at Carson's Wall, not all Navajo rock art shields are made on prepared surfaces.

Three good examples of Navajo shields are found at the Alcove site on the west side of the Chuska Mountains in Arizona. All three shields, painted in red, white and black, have wheel-like forms (Fig. 13). Using photographs as a guide the largest two appear to about a meter in diameter. The interiors are painted in concentric black, white, red and black patterns (Fig. 14). White makes up the largest areas, but the perimeters of red and black are very distinctive. Four red lines on opposing sides radiate from the central shields. Between these red lines on one shield there are 16 strips of white, looking like spokes. The other has white feather-like figures that make up the outer part of the shield.

The smaller shield, about 30-cm in diameter, is painted in white with strips of the wall left open for added effect. It also has a central disc with radiating feather-like appendages.

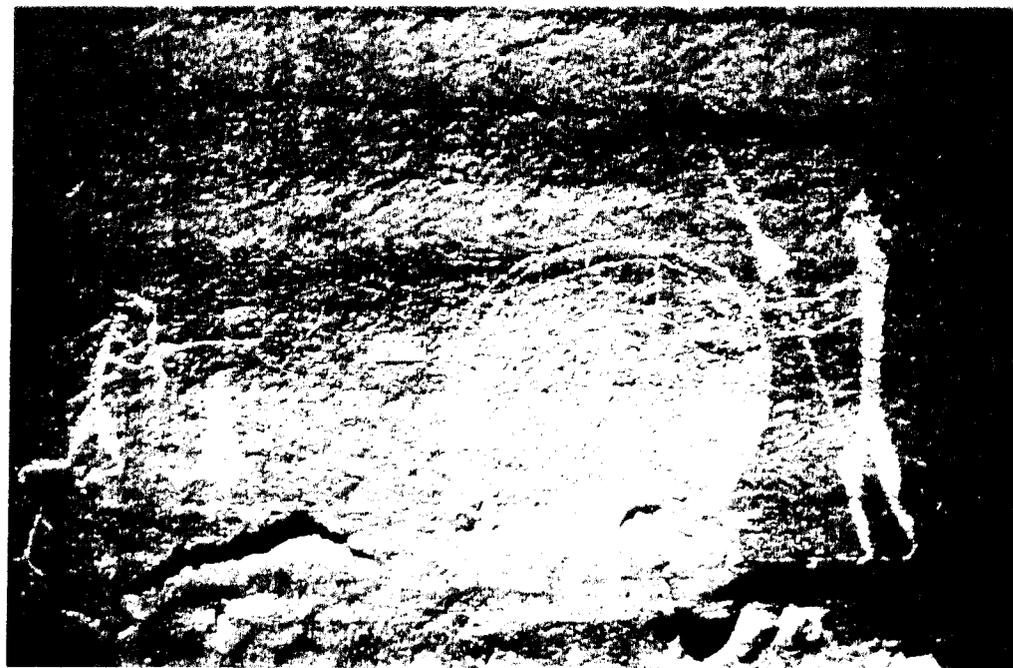


Figure 11 Carson's Wall, Arizona Standing warrior with a shield in a battle scene Robert Mark photograph

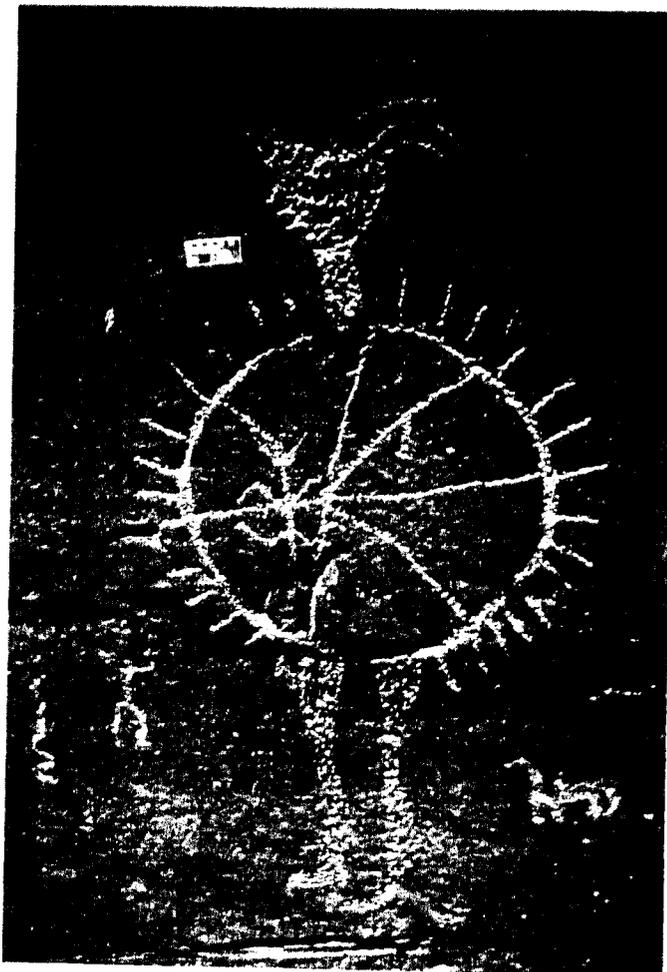


Figure 12 Carson's Wall, Arizona Tall shield warrior The profile view is typical of Pueblo shield warrior figures Robert Mark photograph

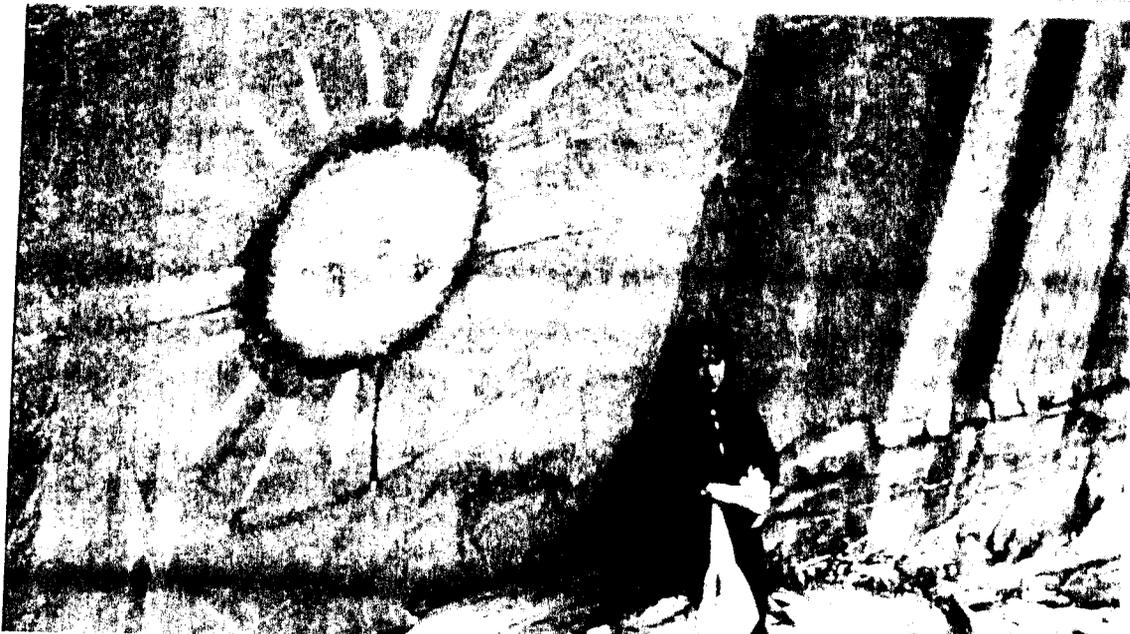


Figure 13 Alcove site, western Chuska Mountains, Arizona. Large wheel-shaped shield and Navajo horses. Donna Yoder photograph.



Figure 14 Alcove site, western Chuska Mountains, Arizona. Large shield with feather-like exterior design. Donna Yoder photograph.

Other possible Navajo figures include the pedestrian shield warriors on the Ute raid panel in Canyon del Muerto. Unfortunately, they are too faded to recognize shield designs.

Apache Shield Petroglyphs and Pictographs

Apache rock art shields are an interesting addition to the repertoire. Schaafsma (1980:337-339) describes a site in the Circle I Hills near Wilcox, Arizona that has several shields. The two most evident are fringed circles with interior designs. One has two parallel rows of vertical outline circles on its face and the other has an outline circle and dot pattern across its entire face (Fig. 15). The colors are black and white. The shield with the dots is very reminiscent to Pectol shield No. 12. Two petroglyph shields at El Paso Pulpito, Sonora, Mexico are possibly Apache in origin (Goodwin and Goodwin 2000:108). One has a bisected interior circle and spokes and the other has an open circular interior and a segmented perimeter. The rock art shield designs are similar to those found on the shields of the Mescalero Apache who attended a celebration in Santa Fe in 1883 (Opler 1983:379). One shield appears to have a four-pointed star on it, but dots, outline circles, and pie-shaped wedges in several patterns are the dominant motifs on the shields.

The four-pointed star is a recognized motif on Apache shields and Athapaskans may have introduced it to the southwest (Baldwin 1997:15-18). Stuart Baldwin, the main proponent of this idea, uses several shield pictographs in Montana for support of this idea. However, the sites -- Kobold and Langstaff -- are probably not as old as he suggests. The shields and shield warriors at the sites are not part of the Castle Gardens shield style. Although their age is not known, the figures at Langstaff, in particular, are probably dated to the 1600's.

The defenders on the Segessor I hide painting, thought to be Plains Apache protecting their village in ca. AD 1700, carry large shields with decorations (Hotz 1970). Several shields have painted discs and outline painted dots on them. One has equilateral triangles around the perimeter, another is divided by a horizontal, and another has a pattern of central concentric circles. One especially noteworthy example has a central disc that is flanked above and on its left and right with similar size dots. A fan-shaped design of five feather-like figures hangs downward from the central disc (Fig. 16). This fan-shaped design is quite similar to the feather-like figures on Pectol shields No. 11 and No. 191.

Conclusion

Three single-thickness buffalo hide shields, known today after their discovery as the Pectol shields, were originally made by an unknown native nation between A.D. 1550 and A.D. 1650. They were used and subsequently buried in inter-layered sand and cedar bark, as though in a cache, in a small cave in central Utah. The placement date of the shields in the cave is more problematic, but likely in the time of the general use of horses in the region.

cf. 
at Pectol
Nav. Mon.
& (Gardner)
(A. O. ...)
(Gardner's) (Pectol)
... and ...



Figure 15 Apache shield at Circle I Hills site, Arizona. Outlined circles adorn the shield face.

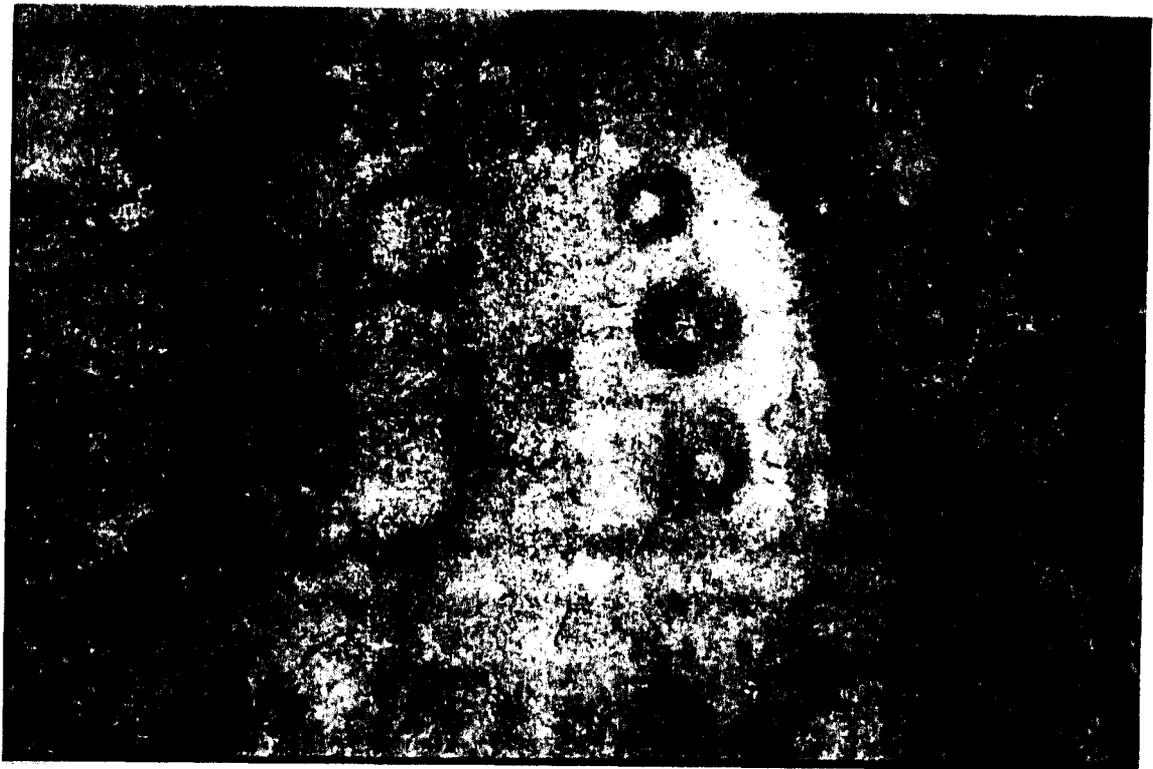


Figure 16. Apache shield at Circle I Hills site, Arizona. Outline circles are depicted in rows

Rock art depictions of shield-bearing warriors are found throughout the American west, and they were popular motifs between A.D. 1550 and A.D. 1650. The origin of the motif is unknown, but examples are found at McConkie Ranch, a Fremont site near Vernal, Utah where they are dated ca. A.D. 750. The shield warrior rock art motif was widespread across the Southwest by Pueblo III times – A.D. 1100 to A.D. 1300. These figures most likely represent warriors using basketry shields, such as those found at Aztec Ruin, New Mexico and Mummy Cave in Canyon del Muerto, Arizona (Morris 1924; Morris and Burgh 1941; Baldwin 1997).

During this same time (A.D. 1100 to A.D. 1300), the shield-bearing warrior rock art motif was made in Montana and Wyoming in a recognizable and unique way that is identified as the Castle Garden shield style. Archaeological and linguistic studies indicate that the Athapaskan-speakers, known today as the Navajo and Apache, were living in Montana and Wyoming at the time the Castle Garden shield style was made. The Castle Garden Style shield figures likely represent Athapaskan warriors using large bison hide shields.

As the Athapaskans migrated to their southern homelands, they introduced bison hide shields to the Southwest (Baldwin 1997:13) and continued to make the shield-bearing warrior motif, leaving examples of “Castle Garden style shield warriors” in the Dinetah of New Mexico (Loendorf 1994a, 1994b). By Pueblo IV times (A.D. 1300 to A.D. 1600), bison hide shields were in use throughout the Southwest, and warriors were leaving shield-bearing warrior petroglyphs at many locations (Schaafsma 2000). The scalloped and fringed perimeters on these shields and those in kiva wall paintings suggest they were cut from bison hides (Schaafsma 2000:76).

suggest to some scholars (Maybe instead a regional term) shields that some Athapaskan people used these non-Athapaskan perhaps not confined to a particular group) but (perhaps) learned + used by some Athapaskans?

The Pectol shields were at the end of Pueblo IV times or slightly later. The Pectol shields have geometric patterns of painted circle outlines and fan-shaped designs painted in bright colors on them. The pattern on Pectol shield No. 12 includes circles or dots made by painting the outline of the circles and leaving the underlying hide of the shield unpainted. The entire face of the shield is covered with these unpainted dots. A very similar pattern is found on Castle Garden Style rock art shields, which suggests it is an Athapaskan pattern. Additional evidence for this idea is found on Apache rock art shields in Arizona with the painted circle pattern. Using these data for support, I believe that Pectol shield No. 12 is of Athapaskan origin, and because the shields were found in the western range of the Athapaskans after they reached their southern homeland, it is likely of Navajo origin.

Shield No. 11 is more problematic. The fan-shaped feather design on its front is duplicated on Castle Gardens style shields. This suggests the same group that made Shield No. 12 also made Shield No. 11, and that it is Athapaskan in origin. The fan-shaped feather design is also found on a Plains Apache warrior's shield, dated ca. A.D. 1700 (Fig. 17 + 18).

However, the same fan-shaped designs are also found on Pueblo petroglyph shields. The red-winged image on Pectol shield No. 11, with its fan-shaped tail, is reminiscent of the



Figure 17. Segessor I hide painting of Apache defending their village. Hide was cut to fit a frame and part of the shield figure at the lower right was cut off. The remaining portion of his shield has a three-dot pattern with a fan-shaped tail. The shield design is enlarged below on the left.

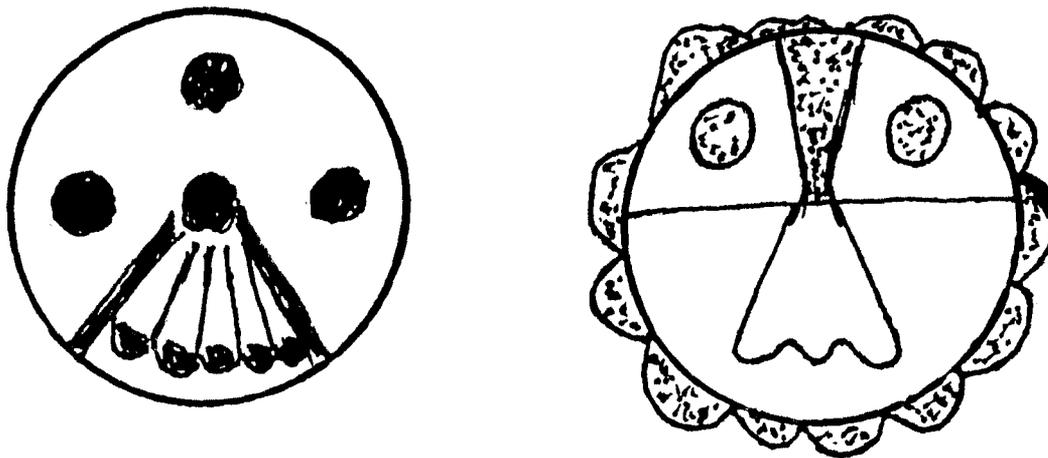


Figure 18. Pueblo shield from Petroglyph National Monument, Albuquerque (on right). Note the dot pattern, the fan-shaped tail and how similar it is to the Segessor I shield enlarged in the drawing on the left.

bird imagery on Pueblo petroglyph shields. If the warrior using this shield were wearing a feathered cap, he would look like a bird (Fig. 18).

Thus the fan-shaped design is found on both Pueblo and Athapaskan shields and is not much help in trying to learn who made Pectol shield No. 11. Another characteristic on the shield is more instructive. The design on the obverse of Shield No. 11 is made by cutting away portions of the epidermis, and this is a common Plains characteristic (Lanford and Miller 2000:41). This suggests that there is a relationship between Pectol shield No. 11 and the Plains. There is considerable debate as to the route and time the Navajo entered the Dinétah region of New Mexico. One popular hypothesis is that they moved west from the Plains of eastern New Mexico or Colorado about A.D. 1450 (see C. Schaafsma 1996 for a summary of evidence supporting this hypothesis). If the Navajo moved from the Plains, they would have had ample opportunity to learn and use a Plains Indian custom in the manufacture of their shields. Using this line of evidence, I believe Pectol shield No. 11 is of Navajo origin.

Assigning Pectol Shield No. 191 to an ethnic group is a very difficult problem. There are no similar Castle Garden Style shield designs, nor could I find any historic Navajo or Apache shield designs that resemble that of shield No 191. As discussed above, the fan-shaped feather portion of the design is duplicated on both Athapaskan and Pueblo shields. The fan-shaped feather design is actually quite common on Pueblo shields and depicted on both rock art and kiva wall examples (Schaafsma 2000). One example has a shield design that is a close match with Pectol shield No. 191 (Fig.19). Polly Schaafsma describes the figure as:

A singular individual with a flute from the Piro district has a large nose and other prominent features. This petroglyph may date from the early historic period, as several nearby villages were occupied into the 1580's [Schaafsma 2000:51].

The suggested date for the petroglyph places it within the age that the Pectol shields were made, and the similarity between the two shield designs is unmistakable. The evidence suggests that Pectol shield No. 191 is of Pueblo origin.

If this is correct, how did a Pueblo shield get buried in a cache with two Navajo shields? One possibility is that the petroglyph actually shows an Athapaskan or an enemy shield. Schaafsma (2000:111) describes this practice for the Hopi. The human figure associated with the Piro shield is shown in the characteristic Pueblo profile, and he has a flute – two characteristics that suggest he is Pueblo rather than Athapaskan.

Another possibility is that Pectol shield No. 191 is a shield captured in a battle by the Apache or Navajo. There is historical evidence for Apache and Navajo raids on Pueblo villages in the 1600s, including villages along the Rio Grande below Socorro in the Piro district (Wilson 1985:116). Perhaps the Athapaskans captured the shield and kept it as a trophy of war or converted it for their own use.

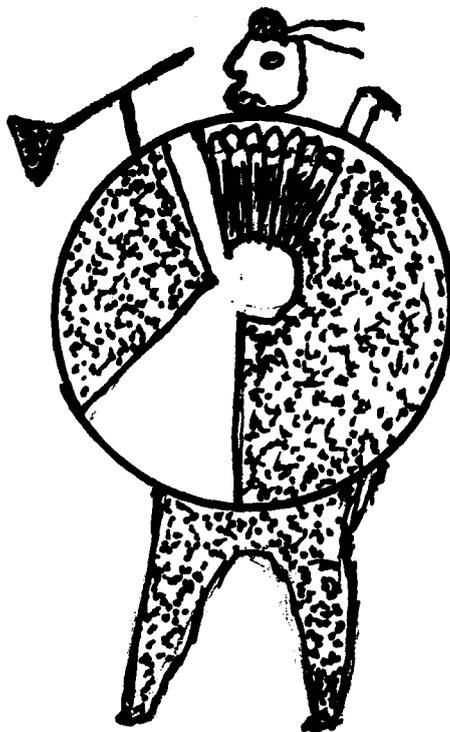


Figure 19. Pueblo shield warrior from the Piro District, New Mexico. The shield design is remarkably similar to the painting on Pectol shield No. 191.

Other explanations are equally tenable, if not more so. Historical records indicate that various Pueblo groups allied with the Navajo for protection from the Spanish, both before and after the Pueblo Revolt of A.D. 1680. In particular, the Jemez, Tanoan-speakers who were noted for their shields, rejected the Spanish attempt to convert them to Catholicism and allied with the Navajo as early as AD. 1644 (Sando 1979:419). This opens a very real possibility that Pectol shield No. 191 reached Navajo country via the Jemez peoples.

An alliance between the Navajo and the Jemez is very logical from a historical perspective. Remember that in Montana, the Athapaskans were neighbors to the Kiowa who, like the Jemez, speak a Tanoan language. In fact, some of the Athapaskan shield designs may have come from the Kiowa. As noted above, the band of Kiowa known as the Big Shields used the outlined circle in their designs, and this may be the source of the design on Pectol shield No. 12. This relationship may also account for the Plains-like characteristic of an incised design on the obverse side of Pectol shield No. 11. The southward-moving Athapaskans, however, would have had contact with other Plains tribes.

In summary, the assignment of a cultural affiliation to the Pectol shields is an extremely difficult task. They were buried in a cache in traditional Ute territory. But the absence of pre-horse examples of rock art shield-bearing warriors that can be assigned to the Ute suggests they did not use large shields between A.D. 1550 and A.D. 1650, when the Pectol shields were made.

The evidence does suggest that the Athapaskan-speaking Navajo had a long tradition of making rock art shield-bearing warriors that began when they lived in Montana and Wyoming, and they continued to make the figures after reaching New Mexico. The evidence also suggests that the Athapaskans introduced the concept of buffalo hide shields to the Southwest. Designs on two of the Pectol shields are duplicated on these Athapaskan shields. The design on the third shield (Pectol No. 191) is most like Pueblo shield designs. The shield may be Athapaskan and simply not replicated in historical examples, or it may be from a time when the Pueblo were allied with the Navajo.

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