

A Charmstone Discovery in the Redwood Forests of Mendocino County, California

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Authors' note: Susan Hector was retained by CDF to serve as researcher and lead author for the development of this web article. All other authors are CDF staff archaeologists. This article was developed to inform CDF's web audience of the discovery of a unique artifact. The specific location of the site is not disclosed in this article in conformance with state law. The site location is on record at the Northwest Information Center.

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Summary

A finely finished, perforated charmstone was found embedded in a maintained dirt spur road in Jackson Demonstration State Forest (JDSF) in 1992. The dirt road runs through a large prehistoric site, CA-MEN-790, also known as Three Chop Village. This site has multiple archaeological components, including an ethnographic Pomo occupation. The charmstone may be associated with the earliest occupation of the site, around A.D. 150, or with the Pomo, who entered the area around A.D. 1400.

At the time of the discovery of the charmstone, a California Department of Forestry and Fire Protection (CDF) Archaeological Training Session was underway and the students were standing at a spur road connecting two primary forest roads. The road surface had already been graded several times when the artifact was exposed; one more pass of the grader would have destroyed this unique artifact. By sheer coincidence, because the class was present at the site and one of the students noticed it in the roadbed, the charmstone was saved. This discovery illustrates the necessity of identifying and evaluating potential impacts upon archaeological sites by road grading activities including road maintenance.

Changes in how road maintenance is conducted on JDSF since this unique artifact was discovered illustrate how the timely implementation of appropriate and effective archaeological site protection can be effective in avoiding incremental but potentially catastrophic impacts to archaeological resources bisected or exposed by roads.

Introduction

The charmstone was found on October 23, 1992 by Registered Professional Forester (RPF) William Windes. Bill was one of 39 students attending CDF Archaeological Site Recognition Training Course #27, which was held in the Ukiah area from October 21-23, 1992. The first two days of this training class were held in a classroom at Redwood Empire Fairgrounds in Ukiah. The third and final day consisted of a series of field exercises conducted at the Hopland Field Station, a housepit village site near Ukiah at a place marked on the GLO Plat Map as “Indian Huts,” and finally to Three Chop Village (CA-MEN-790) in Jackson Demonstration State Forest (JDSF).

The students parked at nearby Indian Springs Campground and were given a map and instructions to survey a mock, 15-acre project area located below the campground, which included site CA-MEN-790. Their task was to find the boundaries of the archaeological site and develop a plan for its protection. After one hour, about half the students began to walk back up to the cars to start completing their paperwork (the final exam and course evaluation questionnaire) that had to be turned in before they could leave. After another hour or so, Dan Foster, CDF Senior State Archaeologist, went to gather the remaining foresters and pull them out of the field. There was a group of about 10 foresters walking from the main housepit area up the short road segment connecting two parallel forest roads. Midway up that road segment, Bill Windes, walking as the last person in the group, called for Dan Foster to observe something he’d spotted in the middle of the dirt road.

The charmstone was deeply embedded in the road; recent grading had exposed the very top of the artifact. When Foster removed it with the aid of a trowel, it was clear this was an in-situ discovery. The road had cut through the archaeological deposit to expose this artifact. It had not tumbled down to this spot and there were no other cultural materials visible in the immediate vicinity (although this is within the site boundary). Foster recorded the discovery location by recording coordinates from a few nearby cultural and natural features, and later shared the information with John Betts so the discovery could be included in his detailed record for the entire site.



Figure 1. Location of charmstone discovery in Jackson Demonstration State Forest (photograph by Dan Foster)

Figure 1 is a photograph of the area where the charmstone was found. CDF Archaeologist Chuck Whatford is pointing to the spot in the road where the artifact was exposed.

At first, the students who gathered around did not believe that this was a genuine find. They thought Foster must have placed this artifact on the road to test them. Foster then asked them to look at the charmstone footprint exposed in the compacted clay soil. It was clear that this stone had been here a long time. One of the students in this group was RPF Wayne Knauf, who jokingly asked if this meant an automatic “A” in the course for all 10 students that were part of this discovery.

Much like most forests and parks that are accessible to the public, JDSF has a web of maintained dirt roads. The public uses the roads for recreational purposes, they are used by staff, and for fire prevention and suppression. If there is logging activity, the roads serve to provide access to timber. The roads are regularly maintained to ensure that they are safe to use and in good condition. The maintenance activities include grading the road surface to remove erosion damage and level the surface, removal of slash and debris from the road area by pushing it over to the side, creation and maintenance of erosion and water control measures to lead water away from the road surface, and curve corrections to control slope and angle of turns. All of these activities have the potential to cause significant, permanent damage to any archaeological site crossed by or adjacent to roads. Archaeological site CA-MEN-790 is an example of these conditions having resulted in serious problems, nearly causing the destruction of a unique artifact. Subsequently, having learned from this experience, the JDSF forest manager, in consultation with the CDF Regional Archaeologist in Santa Rosa, is working to change the way road maintenance is conducted in the forest to better include consideration of archaeological resources.

The Site

The site known as Three Chop Village is located on Three Chop Ridge in JDSF, in a coastal redwood forest in western Mendocino County (Figure 2). Figure 3 shows the density of vegetation and darkness of this environment. The archaeological resources of JDSF have been inventoried and described by Betts (1999) and Levulett and Bingham (1978). An updated site record form for Three Chop Village was prepared by Betts (1998) in which he documented finding the site in relatively good condition despite the serious impacts it has obviously sustained from construction, use, and maintenance of the roads passing through it as well as from past logging operations. Betts’ site map clearly shows three dirt roads cutting through the archaeological deposit. Two of these roads were originally constructed as segments of railroad grades built as part of a logging railroad used by the Caspar Lumber Company (owner of much of the land



Figure 2. Map of Areas and Locations Discussed in the Article



Figure 3. Discovery of Site Deep within the Forest (photograph by Dan Foster)

now comprising JDSF prior to its acquisition by the State of California in 1947). A segment of one road where it bisects the southwestern portion of the site is nearly 2 meters below the natural ground contour, visibly reflecting its origins as a railroad grade constructed by cutting and filling. Figure 4 shows the roads that cross the archaeological site.



Figure 4. Roads Crossing the Site, CA-MEN-790 (photograph by Dan Foster)

Thirty-five housepits located in two cultural loci have been identified at Three Chop Village (Betts 1999: 16). The village was studied by Tom Layton in 1984 as part of a project to examine Pomo sites in three areas of the forest and learn about movements of the Pomo from the interior to the coast (Layton 1990). Over time, the Pomo population expanded north and west toward the coast from the Clear Lake area. The interior groups used the coast for special purposes and resources, retaining a cultural heartland near Clear Lake. The coast was not permanently occupied until very late in prehistory, if ever.

Layton excavated three housepits to obtain cultural materials associated with the ethnographic Pomo, who were known to have inhabited Three Chop Village in the mid-1850s. Layton then traced these artifacts back in time as markers to identify the onset of Pomo occupation. For example, before the Pomo entered the area, there was minimal obsidian use; the presence of Pomo culture in the area is characterized by a dramatic increase in the presence of obsidian flakes and finished tools.

To understand the charmstone and place it in a regional cultural setting and chronology, it is necessary to review the culture history of the Mendocino coastal forests. Much of this is based on Tom Layton's work at Three Chop Village.

Layton identified three cultural components at Three Chop Village:

Component 1	Pre-Pomo	A.D. 800-1300
Component 2	Northern Pomo	A.D. 1400-1850
Component 3	Mitom Band	A.D. 1850-1855/56

Layton also found evidence at the site for an earlier occupation, based on obsidian hydration readings of A.D. 150. Use of the site area before the first component was not confirmed, but since dating at the site was based on projectile point typologies and obsidian hydration measurements, earlier occupation pre-dating these technologies is possible (Betts 1998:4). Additional research is needed to more clearly define the earliest component, which is of particular importance for the charmstone since the artifact may date to this era.

Component 1, when the housepit depressions were first used, dates to the pre-Pomo Period. Researchers believe that Yukian people lived in this area before the Pomo began moving toward the coast. There was then a gap in occupation of the site until the Pomo

began settling in the area, around A.D. 1400 (Component 2). Three Chop Village was linked with Little Lake Valley, which was a Mitom Pomo population center. The village use linked the interior with the coast.

The third component is a known occupation of the site by an ethnographic Pomo population. In 1850, the *Frolic*, a Chinese trade ship full of goods, wrecked off the Mendocino coast. The Mitom Pomo salvaged the cargo off the ship, resulting in the deposition of historic artifacts at Three Chop Village. The Mitom Pomo used glass and ceramic materials to produce flaked artifacts and Chinese porcelain fragments were found at the site. In 1855, white settlement of Little Lake Valley drove the Indians out of the area; in 1856, they were removed to a reservation and Three Chop Village was abandoned.

For many years, Three Chop Village was thought to be the only known permanent Northern Pomo village located on a redwood forest ridge (Levulett and Bingham 1978). However, further surveys identified a second habitation site, CA-MEN-3017, is much smaller but similar in artifact diversity and density. It also contained obsidian projectile point fragments, chert tools, and at least one housepit.

The Charmstone

There is a tradition in California archaeology to refer to oblong, smooth artifacts as plummet stones, particularly if they have a perforation in the end. The term plummet refers to a heavy suspended object that is used to identify a vertical position, such as when a land surveyor uses a plumb bob to locate a transit directly over a benchmark. Since there is no evidence for prehistoric use of such a tool, this article will use the term “charmstone.”

The artifact discovered at CA-MEN-790 is made of a dark green-gray serpentine-like material with an irregular surface and was extensively shaped and heavily polished (Figures 5, 6, and 7). Polishing striations on the charmstone are numerous, very distinctive, and parallel to the long axis. The object measures 90 x 34 x 32 mm, weighs 124.6 g, and one end appears to be broken. A symmetrical hole was drilled into the artifact, giving the appearance of an “eye,” along with a groove that looks like a mouth. The eye is hourglass-shaped in profile, with the neck of the hourglass drilled virtually half way on both sides. Concentric striations are distinctive within the eyes. All of this is typical from the use of a stone drill. Extending from the back of each eye are two short lines, barely visible but obviously made intentionally.

The two sides of the perforation are joined by a well-made, deep



Figure 5. Charmstone from CA-MEN-790



Figure 6. Reverse side of Charmstone



Figure 7. Close up of "Eye" perforation and "Mouth" groove

groove. The other end of the charmstone is broken or battered, but tapered. On close inspection, and with the use of some imagination, the object gives the appearance of a fish, with the perforation forming the eye and the groove creating a mouth. The groove has been shaped to create an impression of a modeled mouth, including a slight depression to form a lower lip. Moving the object in the hand, it gives the general impression of being a fish.

The charmstone is made from a relatively soft metamorphic stone similar to serpentine. It is highly polished, and the color in bright light is a deep, jade-like green. Small vesicles and inclusions give the artifact a rich texture. The source of the stone is not known at the present time.

What is the function of a charmstone?

Is it a sacred object used in religious observances and ceremonies, or just a weight to hold down a net or fishing line? Or are these objects slings, or throwing stones? If asked, many archaeologists would find it difficult to define a charmstone, but they “know one when they see one.” Also referred to as plummets, doughnut stones, and cogstones, artifacts of unusual shape are generally grouped into the category of “charmstone.”

Table 1 (after Peabody 1901: 126) presents a summary of possible uses proposed for charmstones. They vary from strictly practical to ceremonial or religious. There is ethnographic evidence for all of these uses, on a worldwide scale.

Archaeological interest in charmstones dates to the 19th century, when antiquarians discovered them throughout the New World. Many thought that they had a utilitarian function, as net or line weights, levels (plummets), pestles, spinning weights, or ornaments. Because many charmstones are perforated or grooved, they are often identified as possible fishing net or line weights.

The use and function of a charmstone, and the variety of shapes taken by these artifacts, deserves discussion. The earliest comprehensive study of charmstones was undertaken by Yates (1889).

Yates reviewed the thoughts of several people to that time on the use of these artifacts. Several different uses were proposed for plummet stones by archaeologists. One previous researcher, J.G. Henderson, felt they were plummets or levels used in construction. Another, F.W. Putnam, proposed their use as pestles, sinkers, spinning weights, or ornaments. Another proposal was their possible use as war clubs, when attached to a handle. Some of these stones had been found with asphaltum and twine still attached around each end of the stone, indicating they had been suspended.

To identify the purpose of the charmstones, Yates showed specimens to various Indian groups in California. The collection used by Yates in his research (1889: Plate 1, figures 5 and 100) contained an example that is similar to the Three Chop Village charmstone, except that it has no groove on the end.

Table 1. Possible uses for proposed charmstones.

Function	Artifact Type
Fishing technology	Drag line sinkers
	Fishing line sinkers above the hook
	Fishing line sinkers below the hook
	Net sinkers
	Bait and hook combined
Used with chasing or warfare	Sling stone
	Black-jack
	Bola
Textile production	Twine or sinew twisters
	Spinning weights
	Netting weights
	Weaving weights
Used for hitting or grinding	Hand pestle
	Hanging pestle
	Paint stone
	Rubbing stone
	Hammer
Ornamentation	Ear ornament
	Simple pendant
Religious or ritual use	Amulet
	Charmstone
	Lucky stone
	Phallic representation
Drum rattle	
True plummet	
Game stones	

Yates discussed the use of charmstones with natives of the Ventura region. At San Buenaventura, a central stone was placed in the arrangement, with 12 other stones arranged around it. Chia meal and white goose down were spread over the stones, then red ochre was spread over everything. Dancing and singing were part of a ceremony used to cure the sick, bring rain, put out wildfires, call fish from streams, or when war was proposed. Yates included a Ventureño song about charmstones in his article. Another Ventura-area Indian said that the charmstones were idols. Feathers were tied to them and offerings were made.

When Yates showed his collection of charmstones to the Indians of Santa Barbara, he was told they were medicine stones. The medicine men would arrange a number of the stones, manipulate them, and sprinkle them with water. He also consulted with an Indian from the Santa Ynez area in Santa Barbara County who, when shown a perforated charmstone, said it was worn hanging around the neck for defense, and made the wearer

invulnerable to arrows. If you bit the object, it would make you invisible to enemies, and enabled you to travel safely. Yates stated that the medicine men would drink toloache before using the charmstones.

Another Santa Barbara Indian said the charmstones were placed in various locations. The perforated charm stones would elevate themselves on one end, to be grasped by lucky individuals during the ceremonial dances. Yates was also shown natural stones that had power. He was shown shaped stones 4 inches long, encircled with several incised rings. Special powers were ascribed to these stones.

Of more relevance to the study of the Mendocino charmstone, Yates interviewed a Napa Indian. He was told these stones were suspended by a cord from a pole, which was stuck in the creek bank so that the stone was hanging over the water where fish were sought (Yates 1889: 303-304). The stones were also suspended where hunting was planned. This accounted for the asphaltum and string found attached to the stones. The Napa Indians also said they were placed on ledges of rocks on high peaks; they were believed to travel through the water or air to drive fish or game into the Indian's hunting lands. Their shape allowed them to move through the air and water easily.

Yates did not believe the charmstones he saw in northern and central California were sinkers or plummetts. He believed they were used as sacred implements during a religious ceremony. Yates concluded that the charmstones were highly prized and venerated, and were not to be confused with fishing weights or other shaped stone implements. He observed that local lithic material was not used as charmstones, in contrast to weights, which were common pebbles. Special materials were traded into an area for use as charmstones (1889: 300).

We can look at the question of charmstone function in relation to the CA-MEN-790 specimen by examining the context of similar charmstone discoveries in the North Coast Ranges, the San Francisco Bay Region, and the Central Valley. While acknowledging the ethnographic evidence for charmstone function provided by Henshaw, Yates, Schoolcraft, and others, Peabody addressed the archaeological evidence presented by the discovery of literally hundreds of charmstones in an old lake bed in Sonoma County. This site was initially described by Meredith (1900:280) and Peabody (1901:139) and many years later, rediscovered and investigated by Elsasser (1955). The context of their discovery and condition of the numerous charmstones both have lead researchers to conclude these artifacts probably served as net weights or sling stones at this location. Many hundreds of charmstones and charmstone fragments have been found in archaeological sites in central California. The great preponderance of these have not been found with burials, or in any other obvious ritual context, but instead are found scattered through the other midden debris of the village, especially in the Bay Region (Wallace and Lathrop 1975:26). In some cases, such as at the Peterson Mound which was completely excavated, none of the charmstones occurred in graves (Treganza and Cook 1948:295). At other sites, they have been found associated with burials, as well as loose in the midden, such as at Emeryville (CA-ALA-309) and the Patterson Mound (CA-ALA-328) (Davis and Treganza 1959; Schenck 1926:258).

The charmstone from CA-MEN-790 was found without apparent association, loose in the site deposit. A nearly identical charmstone (see Wallace and Lathrop 1975:Plate 4b) was recovered from the lower component of the West Berkeley Shell Mound (CA-ALA-309), and also was found in the general refuse. The specimens from Hultman Aspect components in Lake County were apparently also found disassociated in the middens (White et al. 2002:360-361), as was one recovered at CA-MRN-357 (King, Upson, and Milner 1966:66 and 68). Other evidence for the utilitarian use of charmstones comes from the observation that they appear to replace edge-notched and grooved stone netsinkers at Ellis Landing and at West Berkeley (CA-ALA-307), and the latter occur in much lower frequencies in Middle and Late Period assemblages from central California (Gerow 1968:80). Figure 8 shows charmstones found at CA-ALA-307; note the object labeled (b), which is similar to the CA-MEN-790 charmstone.

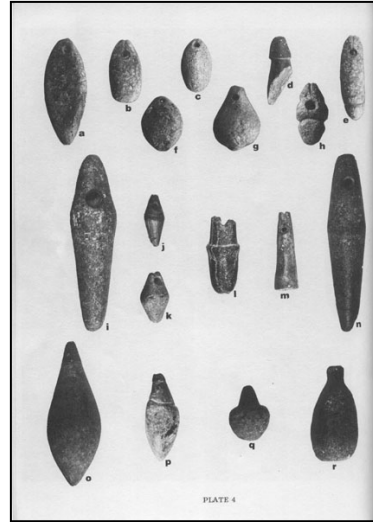


Figure 8. Charmstones from CA-ALA-307 (Gerow 1968); note artifact (b)

There is a considerable body of evidence that suggests no ritual significance was attached to many so-called “charmstones” and that these functioned in some way that resulted in a considerable amount of battering and breakage and casual disposal in the village refuse. Barrett and Gifford (1933:186, Figure 25) provided an illustration of how shaped rocks functioned as simple weights hung on a Sierra Miwok duck net (Figure 9).

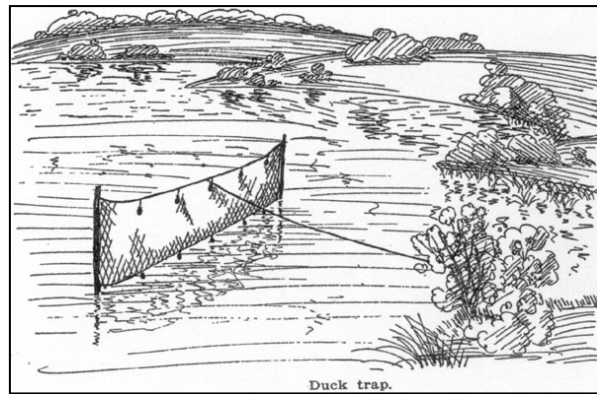


Figure 9. Duck net with suspended stones (Barrett and Gifford 1933)

On the other hand, specimens similar to that found during studies at CA-MEN-790, University Village (CA-SMA-77) and the lower Patterson Mound (CA-ALA-328) were associated with human burials. In the case of the specimen from CA-ALA-328, it is apparent from other associated grave objects (bird bone whistles, abalone shield ornaments, bird talons, and other bones, other charmstones and odd pebbles, etc.), that this individual was likely a shaman or other ritual manager of some sort. Incidentally, this burial has been identified as a female, aged between 36 and 45 years old at time of death (Bickel 1976:399). There are, of course, a number of ethnographic references from various areas of the state that allude to the use of charmstones, and these occur in several known ethnohistoric shaman’s bundles from central California. The material chosen for their manufacture may also have symbolic significance, since chlorite schist outcrops that contain evidence of quarrying for charmstone material were also favored for petroglyphs.

From the studies discussed above, it is clear that the major factors used when identifying the potential function of a charmstone are 1) the type of stone used; 2) how finely

worked, finished, and shaped it is; 3) whether it is battered or abraded, indicating use; and 4) relevant ethnographic references. The ethnographic literature for the Pomo provides clear descriptions of the differences between weights and charmstones.

The Northern and Eastern Pomo used unworked stone net sinkers; the Eastern Pomo also used grooved net sinkers (from Gifford and Kroeber 1937; Kroeber and Barrett 1960: 55). These groups used grooved sinkers, sinkers with natural perforations, and finely formed, perforated sinkers. Grooved sinkers were usually flat natural pebbles pecked around the middle to hold the cord. Natural depressions and shapes were taken advantage of, including natural perforations, some of which look like finely shaped rings (Kroeber and Barrett 1960:Plate 6). The Southwestern Pomo used grooved or notched stone sinkers on fishing lines, not on nets (Gifford 1967:39). Gifford (1967:24) referenced Kroeber (1970:86, Figure 7D) to illustrate the type of sinkers used by the Pomo. This illustration shows a stone with a deep groove cut around its circumference.

In summary, there are no ethnographic references for shaped stones being used as weights by the Pomo. However, oblong-shaped charmstones were identified as present among the Northern Pomo (Gifford and Kroeber 1937:145). Informants stated that these charmstones were found, and not manufactured; one with a perforation was considered lucky. It should be noted that shamans and others often claimed to have “found” a variety of artifacts made and used for ritual purposes; the apparent luck of the user in finding these items made them more powerful. This concept can be compared with statements by sculptors that they “found” the figures inside the blocks of marble, and chipped away everything else.

The inland Northern Pomo shamans used grape vine to tie plummet-shaped charmstones over openings in a deer fence to attract game (Gifford and Kroeber 1937: 185-186). Other northern California groups hung perforated charmstones over water to attract fish. Typically, charmstones were used in the north as hunting or fishing charms, while in the south charmstone were used to attract rain (Sharp 2000:236-238). The Sierra Miwok duck net mentioned above (Barrett and Gifford 1933:186, figure 25) was festooned with shaped stones that may have had a combined use as weights and as charms or blessings. Tuohy (1968) described a “stone fish effigy sinker” that could have combined practical application with a charm function. Perhaps these examples come the closest to explaining the actual function of a charmstone as a combination of practical and spiritual purposes. It may not be possible to separate these aspects of the artifact type—no more than a traditional basketweaver can separate the design woven into the basket from the shape of the basket, since the maker believes that the design and form combine to make the basket function.

Charmstone Chronology

Historically, charmstones have been relatively dated according to the following criteria, and in the following priority: (1) presence or absence of a perforation; (2) presence or absence of shaped ends; (3) shape; (4) differences between the modification or shape at the ends; and (5) material type (for example, in Davis 1960; Davis and Treganza

1959:10; Gifford and Schenck 1926; Schenck 1926: 254). Researchers have proposed that perforated charmstones generally date to the Early Period, while unperforated charmstones date to the Middle or Late Periods, and furthermore, that the presence of a perforation correlates significantly with material type (Davis 1960:20; Gerow 1968:79; Lilliard, et al. 1939; Schenck 1926). Perforated (Early) charmstones found in the Bay Region are invariably made of softer stone: chlorite schist, glaucophane schist, amphibole, or serpentinite. Non-perforated charmstones are predominately made of sandstones and greywacke (Bickel 1976:272). It is worth noting that evidence of possible “quarrying” has been observed at several chlorite schist petroglyph boulders in Mendocino, Sonoma, and Marin Counties. This quarrying might be attributed to charmstone manufacture. The centers of Pecked Curvilinear Nucleate petroglyphs often appear to have been removed. Likewise, some of the large concentric-circle motifs found on petroglyph boulders in Mendocino County such as Keystone (CA-MEN-2200) and Spyrock Road (CA-MEN-1912) (Foster 1981: Figure 4) also display evidence of quarrying. The blanks removed from these schist boulders might well have been used for the production of charmstones and other artifacts made from this material.

The Three Chop Village charmstone most resembles in material and in form charmstones associated with the Early Bay Culture (Early Berkeley Pattern) dating to roughly 5000 B.P. to 2000 B.P. (Elsasser 1978: 38, Figure 2). This style is also consistent with the Stultman Aspect of the Mendocino Pattern, which dates between 5000 and 3500 B.P. (Bennyhoff 1994a), and between 3500 and 1900 B.P. in the Lower Clear Lake area (White et al. 2002: 474, Figure 205). Interestingly, the CA-MEN-790 charmstone was discovered somewhat to the north of the presently known range for the Hultman Aspect, to which it should be assigned (see White et al. 2002: 548, Figure 244). Figure 10 shows a Hultman Aspect assemblage; note objects labeled (j). Figure 11 shows the northern extent of the Hultman aspect. This may have implications for linguistic prehistory as discussed by Layton (1990), Basgall (1982), White et al. (2002) and others. Perhaps, however, the artifact represents what Frederickson (2003:86) has referred to as 9,000 years of a regional “Traveler Adaptation.” As an object of special interest, it could have been introduced into the site at any time by prehistoric travel, trade, or because of its function.

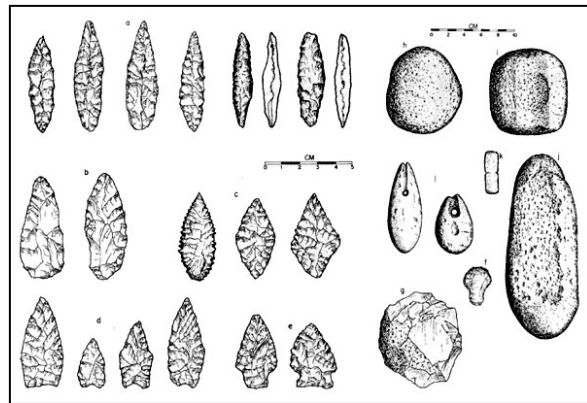


Figure 10. Hultman Aspect assemblage (White et al. 2002); note artifacts (j)

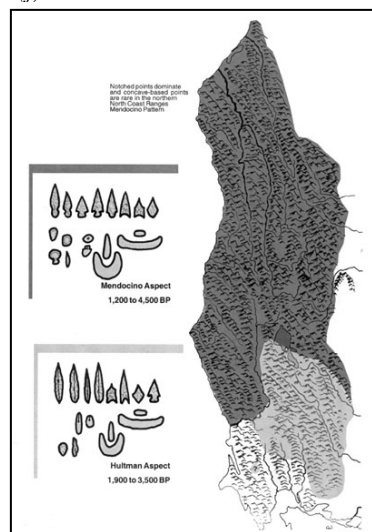


Figure 11. Map of Hultman Aspect (White et al. 2002); CA-MEN-790 is north of its limits

In contrast, charmstones have been associated with later sites in Mendocino County. In the Mendocino National

Forest, they are typically found at sites occupied after A.D. 1600 by the ethnographic Pomo (McCarthy et al. 1982: 97). Three charmstones were found at CA-MEN-2547, the Thornton Site (Foster and Gary 1991). This site was an ethnographic Pomo village located in Potter Valley, perhaps the village of *Nobado* (Foster and Gary 1991: 6). The landowner collected three charmstones from the site as the land was leveled for use as an orchard. Photographs of the objects by Foster indicate that all three are oval or plummet-shaped, and have a perforation in one end. All three also have a groove running over the end from “eye” to “eye;” none have the fishtail feature, but are blunt on the far end. Figures 12, 13, and 14 show close up photographs of the charmstones, which are kept by the owner in a glass exhibit case. The authors would like to thank Joyce Thornton for the photographs of these artifacts.

Stylistically, the CA-MEN-790 artifact appears to be an early charmstone. The question at Three Chop Village is: why is it here? Does it represent a remnant trace of an early occupation, an heirloom object retained by Pomo descendants from earlier ancestors, or a “recycled” artifact, collected elsewhere and brought here at some late date by one of the inhabitants of the site? Each of these questions has implications for Layton’s research into Pomo origins. Ultimately, archaeologists may be able to use charmstones to identify cultural sequences and culture histories (Elsasser and Rhode 1996: 44).

Charmstone Typology

Over the years, a number of typologies have been devised to discriminate between formal “styles” recognized within this artifact class (Beardsley 1954; Bickel 1976 and 1981; Davis and Treganza 1959; Elsasser and Rhode 1996; Gifford and Schenck 1926; Lilliard et al. 1939; and Ragir 1972). Typological studies have a long history in archaeology, with the goal of these being to objectively distinguish between artifacts of different morphological forms within a single artifact class. A good typology is one which can readily classify related artifacts into mutually-exclusive categories based on specific empirical criteria. Unfortunately, no existing typology of charmstones is yet equal to this task, a point illustrated by the CA-MEN-790 specimen.



Figure 12. Thornton Site charmstone (Photograph courtesy of Joyce Thornton; Foster and Gary 1991)



Figure 13. Thornton Site charmstone (Photograph courtesy of Joyce Thornton; Foster and Gary 1991)



Figure 14. Thornton Site charmstone (Photograph courtesy of Joyce Thornton; Foster and Garv 1991)

Following the most recent and comprehensive analysis (Elsasser and Rhode 1996), the CA-MEN-790 charmstone might be classified into either of two of their “Principal Types”. Charmstones similar in form can be found within their “Type O: Oval/Eggshaped” category (Elsasser and Rhode 1996: 65-67), or in their “Type V: Fishform” category (Elsasser and Rhode 1996: 110-111). Similarly, in Ragir’s study, this charmstone might be placed into her “A”, “B”, or “C” series of types, depending on how one interprets her defining criteria (1972: 166-177, 288-290, Figures 16, 17, and 18). Ragir (1972: 55-56, 226, Table 38) makes a good case that typological placement of charmstones may have chronological implications and therefore that precise classification may be an important exercise. We view the CA-MEN-790 specimen as most like her Type C3, “perforated, bipointed with a grooved tip” (Ragir 1972: 173). This form of charmstone is considered to be one of the earlier forms represented in the Windmill Culture sequence of the Sacramento-San Joaquin Delta (Ragir 1972: 55-56, 95, 226, Table 38).

Beardsley (1954: 114, Figure 5) created a charmstone type he referred to as the “fishtail” type. Elsasser and Rhode (1996: 13, Table 13, 110-111, Figure 13) defined an entirely new type which they term the “fishform” type of charmstone. Unfortunately, neither of these forms or types of charmstones are the same. There is potential for considerable confusion in comparing or discussing charmstone discoveries with the use of such conflicting terminology. This becomes even more complicated when this use is extended beyond California, as in the case of Tuohy (1968) who describes a “fish shaped” fishing net weight from Nevada that is unrelated to any of these other occurrences.

The “fishtail” type of charmstone referred to by Beardsley has a flattened end that gives the type its name, since it resembles a fishes tail. The Three Chop Village artifact is broken or battered at its distal end, so it is not possible to tell if it once had a flattened fishtail-like end. The examples of fishform charmstones presented by Elsasser and Rhode (1996:110-111) are from northern California: Sonoma, Napa, and San Mateo counties. Fishform charmstones were found at CA-SMA-77 and CA-SON-371, in Early (5000 B.P. – 2800 B.P.) components (Elsasser and Rhode 1996:27). Figure 15 shows charmstones from the Napa region; note the object labeled (l). Fishform charmstones from San Francisco Bay sites are derived from the lower levels of the sites (Rhode 1996:229).

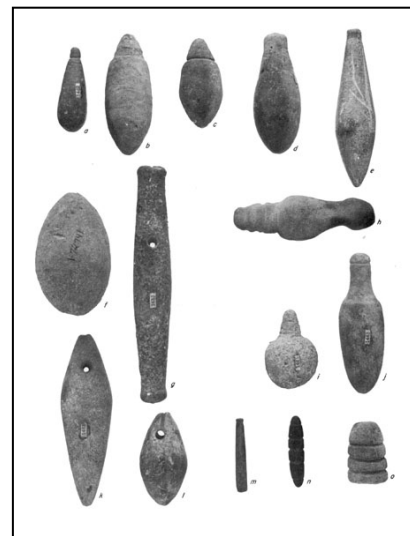


Figure 15. Charmstones from the Napa Region (Heizer 1953); note artifact (l).

The identification of the artifact as a fishform charmstone is problematic, however, as it also bears some stylistic resemblance to oval and phallic forms. Some authorities (White et al. 2002: 360), believe the CA-MEN-790 artifact type evolved from phallic forms of charmstones. The specimen from Three Chop Village is better described as “oval” or

“sub-cylindrical,” like the charmstones from CA-ALA-307 (Wallace and Lathrop 1975) or CA-ALA-328 (Davis and Treganza 1959). The fact that the CA-MEN-790 specimen, and certain other specimens, looks more “fish-like,” while others look more “phallic” may have functional significance. For example, the “fish-like” forms (fish tail and fish head) may have been used as fishing charms, while “phallic” forms would be related to fertility or related rituals. The CA-MEN-790 specimen calls attention to the range of variation expressed in the “fish-like” variant, particularly in the distance from the perforation to the end, which dictates the length of the longitudinal groove across the proximal end (the “mouth”) that characterizes this charmstone type. The length of this groove is noticeably shorter on the later specimens from the Patterson Mound (CA-ALA-328), Emeryville Shellmound (CA-ALA-309), and the Stege Mound (CA-CCO-300) than it is on certain specimens from the earlier sites of West Berkeley (CA-ALA-307) and University Village (CA-SMA-77). One specimen from CA-ALA-307 as noted previously is almost identical to the CA-MEN-790 charmstone.

It is interesting to speculate that this pattern may reflect stylistic change over time. Certain charmstone stylistic traits are known to persist in use later in some areas after they have been abandoned elsewhere. This is true for the persistence of perforated phallic forms identified with the Late Middle “Meganos Aspect” (Bennyhoff 1994a, 1994b; Wiberg 1988) for example. Perforated phallic and other forms of charmstones have also been found in Marin and Sonoma County sites, implying a possible late persistence (King, Ward, and Upson 1966: 65-69; Novato Senior High Archaeology Club 1967:28, Figure 14).

Conclusions

Beginning in the Lower Archaic, California’s prehistoric ceremonialism appears to have centered around a series of regional charmstone belief systems. For example, the Windmill Pattern charmstones of the Sacramento San Joaquin Delta were associated with a very particular mortuary religious pattern. The cogstones of the southern California coast represent an entirely different kind of charmstone belief, about which we know very little. Similar belief systems seem to have been in operation throughout a good part of California, and for a considerable amount of time.

A recent overview of California’s charmstones traced the diffusion of these artifacts throughout California, and proposed that this artifact type was introduced into the region as part of a general movement of Penutian-speaking people approximately 4,000 years ago (Elsasser and Rhode 1996). Charmstones are found in greatest number in the Central Valley, for example around Tulare Lake (Wallace 1993:41). Regional and local variations developed, perhaps for different purposes and uses. The artifact type then could have spread beyond Penutian people to neighboring groups.

There is no doubt that some Penutian-speaking groups did use charmstones in an apparently highly adaptive manner, judging from the quantities of charmstones found. But the Penutian groups may not have been the source of charmstone manufacture and use. First, many examples have been recovered from Early Millingstone or other early

archaeological cultural contexts that are completely unrelated to the Penutian groups; most date to periods of antiquity that pre-date any Penutian presence in California. Second, many charmstones have been found in regions never thought to have been occupied by Penutians or their ancestors. The CA-MEN-790 charmstone is just such an example. It was discovered in ethnohistoric Pomo territory, Hokan speakers believed to have displaced earlier Yukian-speaking groups. Third, we have yet be sure about assigning linguistic affiliation to the sequence of cultural change that exists in the area where charmstones are found. For instance, some would identify Windmiller as Penutian (cf. Moratto 1984: 261), while others believe the Penutians arrived with the following Consumnes Pattern cultures. In the Bay and Central Coast regions, it is widely held that the Early Bay sites were occupied by pre-Penutian, presumably Hokan-speaking residents (Breschini and Haversat 1980: 14-15).

Cultural chronologies for California are not complete, by any means. Charmstones, however, may provide one of the best means of sorting this out. Much like rock art, charmstones (or at least some of them) probably functioned in a symbolic context that likely was relatively conservative and relatively group-specific. Ritual objects can provide clues about human behavior that cannot be addressed with other classes of artifacts--such as projectile points. Ancient ritual objects continue to have significance and ideological meaning. An example is shown in Figure 16, a modern sculpture of a charmstone made by Michael Heizer, son of Robert Heizer.

The disadvantage to using charmstones as chronological markers or as ethnic markers is that many of them appear to have been preserved through time as heirlooms, presumably in the possession of hereditary ritual specialists. We also know very little about how prehistoric ritual systems may have moved or been transmitted between groups. In spite of these problems, this class of artifact (which is surprisingly understudied) is among the most useful for recognizing prehistoric cultural identities, especially in the dim reaches of the Middle and Lower Archaic of California.

Layton did not find any charmstones during his excavations at Three Chop Village. He did find three net weights at nearby Albion Head, at CA-MEN-1844, a coastal site (Layton 1990: 110). None were perforated. All have a deeply pecked groove around their circumference to allow a line to be tied to them. Two have another groove at one pole end. They were made of graywacke sandstone, and were unmodified beach pebbles (Layton 1990: 23). The fact that the Three Chop Village charmstone is made of a special stone type and is finely finished and shaped into a fishform, along with the ethnographic evidence that the Pomo used these types of artifacts, supports the conclusion that the object was not used as a weight.



Figure 16. Charmstone sculpture by Michael Heizer (photograph by Gerrit Fenenga)

Is the Three Chop Village charmstone associated with the pre-Pomo occupation, or with the Pomo? Although there is general agreement that perforated fishform charmstones are early, ethnographic evidence suggests that the Three Chop Village object may have been associated with the Pomo rather than the earlier Yukian occupation. However, charmstones from ethnographic Yuki territory are also very similar to types from the charmstone heartland (Elsasser and Rhode 1996: 20).

The most significant region for charmstone discoveries has been the central California area between Buena Vista Lake and Clear Lake, and extending east nearly to Lake Tahoe, an area occupied largely by Penutian language speakers (Elsasser and Rhode 1996: 18-20). It is possible that, over a period of at least 2,000 years, the tradition of charmstones spread from their heartland to surrounding areas. It is also possible that as the Pomo expanded their territory toward the coast, they brought the charmstone tradition with them. Or, the charmstone may represent the earliest, 2,000-year-old occupation of the area. Rhode (1996: 228) suggested that similarities in charmstone styles could represent cultural similarities and diffusion. Using this artifact as a chronological marker may be an exciting topic for future research.

If the Three Chop Village charmstone had been found as part of an archaeological excavation, within a stratigraphic context, it might have been possible to date the object or associate it with diagnostic artifacts. However, it is not possible to determine the exact provenience of the artifact because it was found as a result of recent road grading. In fact, most charmstones do not have provenience; many were picked up by collectors.

Luckily, the presence of the CDF class at the site that particular day resulted in the recovery of the charmstone from CA-MEN-790. Had they not been present, the artifact would be lost forever. The discovery of this charmstone by RPF Bill Windes in 1992 is just one of many spectacular discoveries made by RPFs since CDF's archaeological training program began in 1979 and provides the readers with a glimpse of the valuable contribution to the state's archaeological record that has been made by this group of highly-skilled resource professionals working within California timber and range wildlands.

Betts (1999:23) identified the regular maintenance of the road network at JDSF as an ongoing project, which has caused a significant impact on the archaeological sites in the forest. He also noted that recreational use and artifact collecting are damaging cultural resources. Even if there has been damage to the sites, there is still much to be learned from them and it is important to save what is left. Betts (1999: 25) recommended the creation of a road maintenance and archaeological site protection plan for those resources that are most threatened, specifically sites like Three Chop Village where maintained roads bisect the cultural deposit. Betts recommended that this plan be developed by the Forest Manager in consultation with the Regional Archaeologist. Based on Betts' recommendations, a more active road management plan is being implemented on the Forest. The plan includes procedures for identifying sites that could be impacted during road maintenance activities and stipulates that impacts to sites be evaluated on a case-by-

case basis while attempting to recognize the operational limitations and individual circumstances in which specific maintenance activities are carried out. Although not yet fully operational, this more aggressive plan requires more intensive investigation of archaeological sites that are crossed by roads prior to conducting road maintenance activities in the vicinity of such sites. Using CA-MEN-790 as an example, the feasibility of re-routing the existing roads through the site is being considered. If the roads cannot be re-routed to avoid the site, then likely recommendations will be made to protect the site by placing surfacing on the road and engineering the flow of surface runoff so that it will not need to be graded to ensure safe use.

Over the past two decades the identification and protection of cultural resources have become important components of forestry in California. As its road maintenance and archaeological site protection plan is implemented, JDSF is continuing its role as a demonstration state forest by serving as a proving ground for the development and implementation of effective cultural resource management strategies and techniques.

The case of the charmstone discovered at Three Chop Village, and impacts to archaeological sites and similar artifacts has broader implications outside JDSF. Routine maintenance of roads that disturb archaeological sites in forests and parks is resulting in the cumulative effect of destroying these resources over time. As long as roads not widened or routes altered, the general practice has been to maintain them without oversight by cultural resource specialists. The discovery of the Mendocino charmstone in a graded dirt road is a call for road management plans to include archaeological review of routine maintenance methods and schedules. Without such plans, the archaeological resources located in our forests and parks will continue to be incrementally lost because of the erroneous assumption that routine road maintenance does not cause additional damage to archaeological sites.

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would like dedicate this paper to Mark's memory. Any errors and omissions are solely the responsibility of the authors.

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