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In Search of a White Bear: An Eccentric Crescent from Sudden Ranch (CA-SBA-208), Northern Santa Barbara County, California

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Over the years, there has been considerable interest among archaeologists in the distribution, function, and chronology of chipped stone crescents in California and the western United States. Questions about their chronology and function have yet to be fully resolved, but such crescents are widely considered to be Early Holocene or terminal Pleistocene time markers. More than a thousand crescents have been identified from California archaeological sites, but a relatively small percentage have zoomorphic attributes, including a rare 'bear-shaped' specimen now listed as California's official prehistoric artifact. About 20 years ago another bear-shaped crescent in the Lompoc Museum was brought to my attention, a specimen not described in previous syntheses of crescents in California and the Far West. The location of that crescent is now uncertain, but I recently found additional data on the provenience and context of this crescent in two unpublished manuscripts by Clarence Ruth. This rare artifact has an unusual history that sheds light on the development of California archaeology.

Chipped stone crescents, one of the more enigmatic artifacts found in California and the western United States (see Beck and Jones 2007:101; Fenenga 1992; Hattori 2008; Mohr and Fenenga 2010; Smith 2008; Tadlock 1966), are often considered to be Early Holocene or terminal Pleistocene time makers. In California, several distinctive types have been defined from coastal sites distributed from Sonoma County to the Mexican border, as well as similar specimens found in the interior portions of the state (see Fenenga 1984; Jertberg 1978; Mohr and Fenenga 2010). Although it is generally agreed that crescents are closely associated with lake, marsh, estuary, and coastal habitats, the function of these distinctive chipped stone artifacts has long been

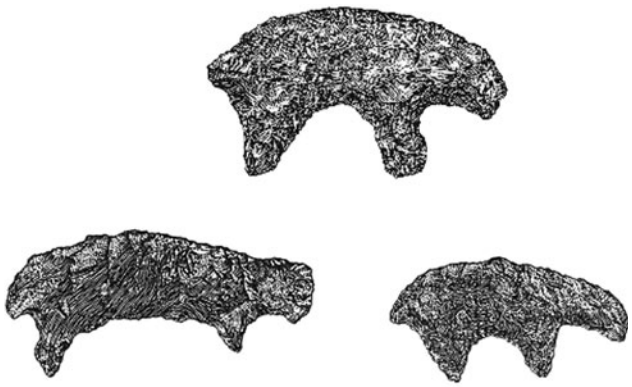

Figure 1. Zoomorphic crescents from CA-SDI-9649 (top) and Santa Rosa Island (bottom). Adapted from Koerper and Farmer (1987). The Santa Rosa Island specimens, curated at the Phoebe Hearst Museum of Anthropology at the University of California, Berkeley, are described as 'animal-form scrapers.'

debated, with interpretations ranging from the utilitarian to the symbolic (see Smith 2008). Wardle (1913) and Heye (1921:72) suggested that Channel Island specimens may have been used as surgical tools, for instance, while others have described them as specialized scraping or cutting tools (Fenenga 1984). Some California and Great Basin scholars have interpreted crescents as transverse projectile points, possibly used in bird hunting (see Erlandson and Braje 2008a). Still others, noting the zoomorphic nature of some specimens (Fig. 1), argued that they served as amulets or animal effigies used in "magico-religious activities" (see Koerper et al. 1991:58). The latter group includes a bear-shaped specimen from San Diego County that is the official prehistoric artifact of the state of California (Koerper and Farmer 1987).

Because most crescents in California and the Great Basin have come from surface contexts, or from bioturbated sites that often contain multiple components, their chronology and possible typological changes through time are poorly understood. Nonetheless, for those specimens that have come from stratified contexts or multi-component sites that are well dated, there is a strong correlation between crescents and evidence for early human occupations (i.e., San Dieguito, Western Pluvial Lakes Tradition, Paleocoastal, and Early Milling Stone components) dating between about 12,000 and 7,000 cal B.P, plus or minus a millennium (Davis et al. 2010; Erlandson 1994; Erlandson and Braje 2008b; Fenenga 1984; Jertberg 1978). This includes a specimen

found *in situ* at Daisy Cave in a stratum securely dated between about 11,500 and 8,600 cal B.P. (Erlandson 2005). More recently, crescents have been found on the surface in or near several low-density shell middens on eastern San Miguel Island dated to the terminal Pleistocene, between about 12,000 and 11,400 cal B.P. (Erlandson and Braje 2008b; Erlandson et al. 2008, 2011).

Variation in the shape of California's chipped stone crescents, their persistence for several thousand years, and their distribution over a broad area encompassing both coastal and interior regions, suggests that their function may have varied through space and time. Interpreting their function is also complicated by the fact that some specimens appear to be unfinished preforms or fragments broken during manufacture, while others were finished artifacts broken during use. In some cases, after such whole or broken crescents and preforms were discarded, they appear to have been reused for new purposes by early or much later peoples.

Until recently, the most complete synthesis of chipped stone crescents in California was Gerrit Fenenga's (1984) unpublished study of 85 crescents from California. Mohr and Fenenga (2010) recently presented data on over 400 California crescents, and Hopkins (2008, 2010) described another 434 chipped stone crescents from the Tulare Lake area. No precise figures are available, but roughly 2,000 crescents are now known from California archaeological sites (Mohr and Fenenga 2010). Several have been reported from the northern Santa Barbara County coast, including one found in a Milling Stone site near Point Conception (Erlandson 1994:176), another reported by Dillon (1984) from CA-SBA-246 on Vandenberg Air Force Base, and others reported from the Point Sal area (Bertrando 2004:101; Justice 2002:116). In the last 20 years, two crescents have been reported from sites on the western Santa Barbara coast (Erlandson 1994:176; Erlandson et al. 2008:39) and several more from San Miguel and Santa Rosa islands (Braje and Erlandson 2008; Erlandson 2005, 2010; Erlandson and Braje 2008a, 2008b; Rick 2008). Along the Orange County coast, Macko (1998:104–105) reported three crescents from CA-ORA-64 and three more from other sites. Along the San Diego coast, crescents were reported by Koerper et al. (1991:53, 58) and Gallegos and Carrico (1984, 1985), and more recent discoveries have undoubtedly been made.

Many more crescents—especially fragmentary specimens or crescent preforms—recovered from sites along the California coast may have gone unrecognized or undocumented, including numerous specimens located in small local or regional museums. In 1987, Roger Colten, who then directed the Lompoc Museum in northern Santa Barbara County, brought two complete crescents displayed in artifact frames in his museum to my attention. At the time, no provenience information was available for these crescents, one of which could not be located during a 2007 visit to the Lompoc Museum. I still have a photo of this missing crescent, however, which I recently matched with a "bear emblem" of white chert described in two unpublished reports on the archaeology of northern Santa Barbara County written by Clarence 'Pop' Ruth (1936, 1937), whose collections make up the bulk of the Chumash cultural materials housed at the museum. This specimen is of considerable historical interest as the first 'bear-shaped' crescent described from California and one of the few bear-like crescents documented in the Far West.

In this paper, I describe Ruth's 'white bear,' reportedly recovered from the surface of the Sudden Site #2 (CA-SBA-208), a large and possibly multi-component shell midden located on the southern Vandenberg coast not far from Jalama Beach and Point Conception. While describing my search for the white bear, I also explore some of the changes in American archaeology over the decades.

LOCATION AND CONTEXT OF CA-SMI-208

The Sudden Ranch was located along the northern Santa Barbara coast, along a southwest-facing stretch of coast between Point Arguello and Point Conception (Fig. 2). The Sudden Ranch area is now owned by the American people, and is located near the southwest corner of Vandenberg Air Force Base. What Ruth (1936, 1937) called the Sudden Site #2 is located on the west bank of Canada de Jollaru about a kilometer from the coast. Ruth described the site as covering an area approximately 540 feet (ca. 165 m.) long and 300 feet (91.5 m.) wide. His initial account described a large site under active cultivation, where numerous surface finds of "arrow points, knife blades and spear points made from chert show this site to have been of the late culture of

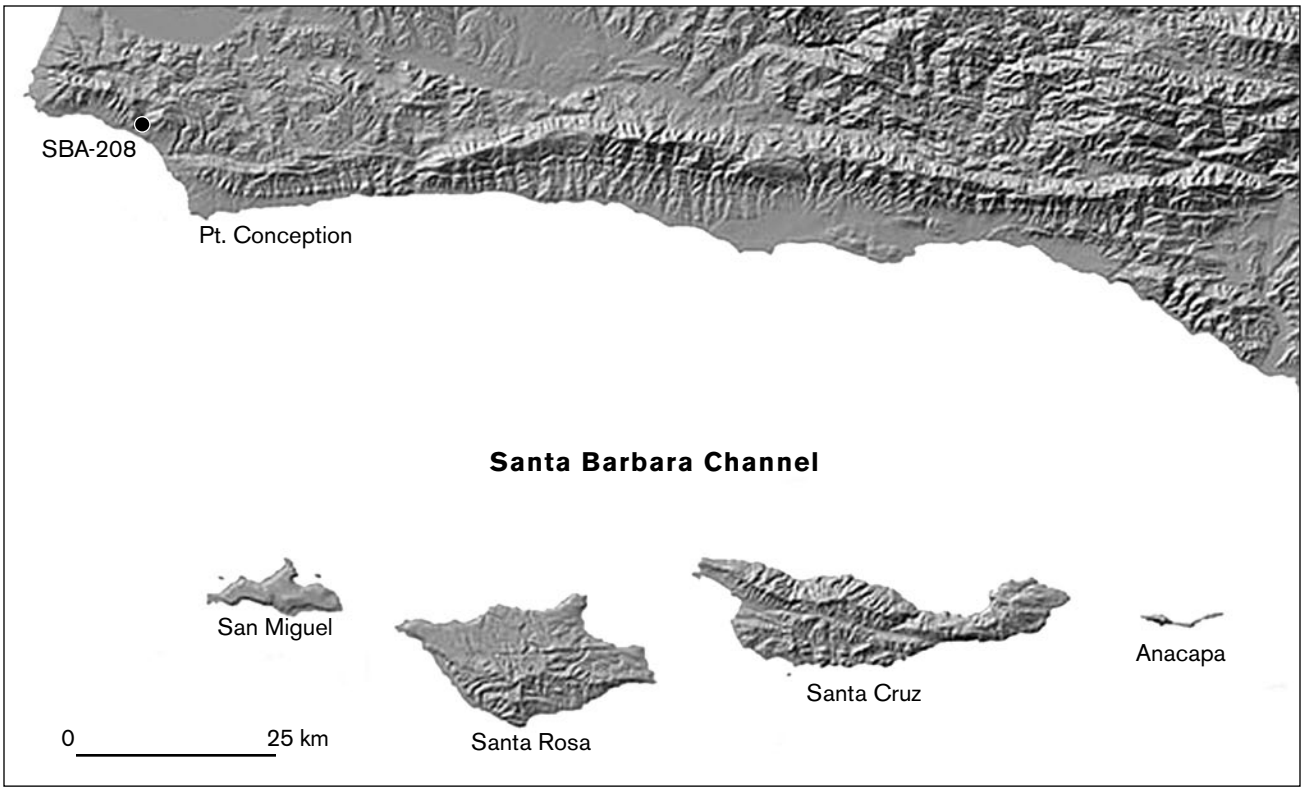

Figure 2. General location of CA-SBA-208.

the Chumash Indians" (Ruth 1936:23). At the time, he noted that no excavations had been done at the site, but illustrated a bear-shaped artifact that presumably came from the site surface. A year later, Ruth (1937) reported on excavations at the site—including his identification and excavation of a Chumash cemetery—and concluded that midden deposits at the site reached a depth of six feet (nearly 2 meters).

Most of the artifacts Ruth (1937) reported from CA-SBA-208 seem consistent with a Late Holocene occupation, but several large sites located along the southern Vandenberg coast contain multiple components, including Early Holocene shell midden deposits (see Erlandson 1994; Glassow 1996). As far as I could determine, no scientific excavations of CA-SBA-208 have occurred since Ruth's work in the 1930s and no radiocarbon dates appear to exist for the site. It is conceivable, therefore, that the chipped stone crescent from CA-SBA-208 is associated with an early occupation of the site, although it could also be a curio or talisman collected elsewhere and used by later Chumash occupants of the site.

DESCRIPTION OF THE SUDDEN RANCH CRESCENT

Among the bifaces Ruth collected from the surface of CA-SBA-208 was one complete crescent made from a "milky white chert," probably a local Monterey chert, which is abundant in the area in both bedrock outcrops or in cobbles on modern beaches or raised marine terraces. Ruth (1936:24) described the crescent as a "Bear Emblem" and listed its dimensions as 2.75 inches (~7.0 cm.) long, 7/8ths of an inch (~2.2 cm.) wide, and a maximum of 3/8ths of an inch (~0.9 cm.) thick (see Fig. 3).

As Fenenga (1992:230) noted for some crescents, the Sudden Ranch crescent when rotated ninety degrees could easily be seen as a small leaf-shaped (foliate) biface modified on one edge through the removal of five notches. These notches create a series of projections or protuberances that resemble 'legs' and provide a characteristic quadripedal zoomorphic form that may look like a bear to some viewers. Whether this shape was intentionally created to resemble a bear cannot be known for certain, especially without a detailed study of

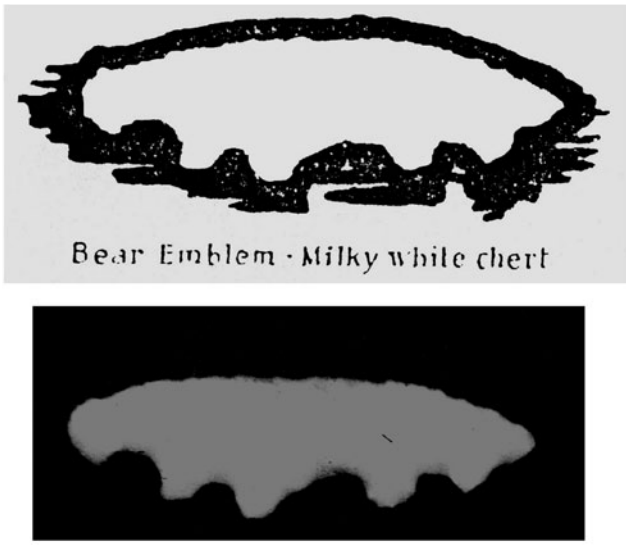

Figure 3. Ruth's (1936) depiction of the 'bear emblem' from CA-SBA-208 (top) and a reversed photographic image of the 'white bear' as displayed in the Lompoc Museum in the 1980s (scale in inches).

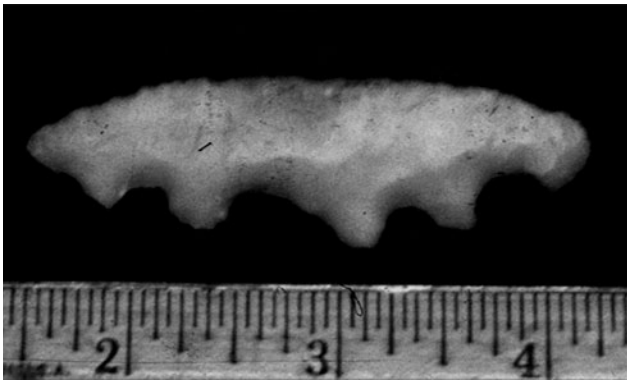

Figure 4. The 'white bear' crescent in a 1987 photo of the specimen in a Lompoc Museum artifact mount (scanned from a color slide by Roger Colten; scale in inches).

its manufacturing sequence or the presence or absence of use wear, hafting residues, etc.

In various typologies developed to classify California crescents, Ruth's 'white bear' falls within Fenenga's (1984) Type 1B, Jertberg's (1986) Type III, and Type 12 in a classification system Albert Mohr developed in the early 1950s (see Mohr and Fenenga 2010). It is at least roughly symmetrical bilaterally, with an arcuate and convex axial blade, and a 'base' containing five notches that define four protuberances or 'legs.' The widest of the notches, a roughly central axial notch, is flanked by two smaller lateral notches on either side of the base. On one side the most lateral protuberance is relatively pointed, while on the other end it is more rounded, creating a partial asymmetry which contributes to the zoomorphic character of the crescent.

Surviving photos or illustrations of the 'white bear' are not of high enough quality to describe the manufacturing techniques involved in its production. Ruth's illustrations show only the outline of the artifact, with none of the flake scars depicted. Only one side of the artifact is visible in the only surviving photo I have found (Fig. 4). Although this entire surface appears to be flaked, with no cortex visible, I cannot be certain that the crescent was bifacially flaked. Several large and relatively steep-sided notching flakes are visible on one side of the artifact, forming the legs, axial notch, and lateral notches. The central or axial notch is not exactly centered or symmetrical, raising the possibility that this could be an unfinished crescent preform. This notion could be supported by the maximum thickness of the artifact as well as other minor asymmetries, including variation in the depths of the lateral notches and the relatively rounded vs. pointed ends of the crescent.

DISCUSSION AND CONCLUSIONS

When Clarence Ruth wrote about a white chipped-stone 'bear emblem' from Sudden Ranch in the 1930s, he was working on his master's degree in archaeology and may have been unaware that similar artifacts had been reported from the Chumash area by Wardle (1913), Heye (1921), and Harrington (1928:101). Alternatively, he may have believed that the Sudden Ranch specimen was unique and different from those previously described from the Santa Barbara Channel area. All of these early researchers worked before the advent of radiocarbon dating or a broad comparative framework that allowed archaeologists to recognize their antiquity or that similar crescentic artifacts were distributed over a broad expanse of California and western North America. Instead, most descriptions of crescents from this time period saw them as unique or rare formal artifacts that merited special consideration or comment.

Even after such comparative frameworks emerged, crescents in California were relatively unusual discoveries, which delayed a widespread understanding of their

chronology or cultural significance. Even today, despite pioneering typological studies by Mohr in the 1950s (Mohr and Fenenga 2010), Tadlock (1966), Jertberg (1986), Fenenga (1984), and others, few California archaeologists have found a crescent, are familiar with the various forms they take, or would readily recognize a crescent preform or small fragment. In part this is due to the scarcity of crescents, but it also stems from the continued dearth of more systematic searches for crescents in old or recent collections and the lack of published descriptions and illustrations for many of the crescents that have been found. A recent publication by Fenenga and Hopkins (2010) helps to fill these gaps, but many crescents remain undescribed or unavailable to most scholars, buried in collections or in the gray literature that now dominates California archaeology.

Ironically, on a 2007 visit to the Lompoc Museum that failed to produce Ruth's white bear, I found seven other crescents during a quick search of other museum collections—only one of which I was previously aware of. Two of these crescents were simple lunate forms that reportedly came from somewhere in northern California, but four others were found in containers full of projectile points from northern Santa Barbara County that had not been previously described or displayed. How many more whole or fragmentary crescents from California now reside undescribed in museum or private collections within the state and around the world is anyone's guess. Until these are recognized and described, however, we will not fully understand the distribution, chronology, variability, function, or meaning of crescents in California and the rest of the Far West.

The Sudden Ranch crescent—which escaped the notice of several syntheses of California crescents and early projectile point technologies (e.g., Erlandson 1994; Fenenga 1992; Jertberg 1986; Justice 2002; Tadlock 1966)—also illustrates the difficulties inherent in searching the vast published and unpublished literature available for the archaeology of California. By publishing the information available for the CA-SBA-208 crescent, I bring it to the attention of a broader community of scholars interested in the history of California archaeology, the culture history and early cultural connections of California, the Great Basin, and the broader Far West, and the nature of Paleoindian or 'Early Archaic' technologies.

For now, the 'white bear' from CA-SBA-208 adds to a growing inventory of chipped stone crescents from California and the Far West. Although not wildly eccentric, it clearly deviates enough from the lunate crescents of California and the Great Basin to be classified as an 'eccentric crescent.' Although the Sudden Ranch specimen differs significantly from most Great Basin forms depicted by Tadlock (1966), the basic form differs only slightly from some specimens with slightly concave bases punctuated by smaller lateral notches. As one of the earliest examples of a bear-shaped or zoomorphic crescent in coastal California, it has special historical significance and adds to the relatively small percentage of crescents that may have served a symbolic or ritual function.

On the other hand, preliminary analyses of crescents, crescent fragments, and crescent performs found recently on San Miguel Island also suggest that finished crescents tend to be relatively flat, thin, and symmetrical. The thickness of the Sudden Ranch specimen suggests the possibility that it may have been a preform discarded before it was completed. Thus, its present form may not reflect the symmetry and shape originally intended by the maker. Yet another possibility, especially given the predominantly Late Holocene occupation of CA-SBA-208, is that the Sudden Ranch crescent may have been an ancient artifact picked up and possibly modified for use by later Chumash people as a curio or talisman. If this is the case, it may have been collected because of its zoomorphic shape and possibly modified to further resemble a bear. Without being able to examine the actual CA-SBA-208 crescent, however, such inferences remain largely speculative.

Previously, I have suggested that the similarities of many crescents from the Channel Islands and California's mainland coast—especially lunate forms that cannot truly be described as eccentric—to those from the broader Great Basin and Far West appear to be more important than the differences (Erlandson and Braje 2008b:43). The similarities suggest that some of the major types of crescents from the Channel Islands and the broader Santa Barbara Channel area share close technological, functional, typological, and possibly cultural affinities with crescents found in coastal and lacustrine settings across a large expanse of the western United States—not unlike some of the early projectile points (i.e., stemmed

'Lake Mojave' type points) common to early peoples who lived in the same region (see Beck and Jones 2007; Fenenga 1992). From a technological and cultural historical perspective, therefore, crescents may be nearly as important as Clovis and other fluted points that have garnered much more attention from Paleoindian scholars.

Although some of the more 'eccentric' or zoomorphic crescents from the California coast may have had ritual functions, the context of most crescents associated with known sites suggests that they had a more utilitarian function. The close association of crescents with lakes, marshes, estuaries, and other aquatic habitats suggests that they may have played some role in hunting aquatic animals, potentially including waterfowl and seabirds. Ethnographically, many bird arrows are characterized by broad and blunt tips designed to stun, disable, and knock down birds rather than pierce their bodies. For the California coast, the idea that crescents served as transverse projectile points seems consistent with the relatively large number reported from the Northern Channel Islands, which supported a wealth of sea birds, shore birds, and waterfowl whose bones were used by early maritime peoples for making bone gorges and other artifacts (Erlandson 1994; Rick et al. 2001). Having argued for a primarily utilitarian function for many crescents, however, it would not surprise me if such artifacts were used for multiple purposes in California and the broader western United States. In the case of the CA-SBA-208 crescent, for instance, it is conceivable that it was made by Paleocoastal people to serve as a transverse projectile point, then discarded or reused when its thickness could not be reduced. It could then have been collected and curated by Chumash people who occupied the area millennia later, possibly because they recognized its resemblance to a bear—just as Clarence Ruth (1936, 1937) did centuries later. Hopefully, Ruth's 'white bear emblem' will be found so that a more detailed analysis of the artifact may address some of these issues.

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