

A Prehistoric Ceramic Rattle from the Southwestern Shoreline of Ancient Lake Cahuilla, Imperial County, California

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Abstract

This paper describes a ceramic rattle discovered along the extinct southwestern shoreline of Lake Cahuilla in Imperial County. It is the only complete prehistoric ceramic rattle documented in southern California. The find was made within the historic territory of the Eastern Kumeyaay, or Kamia. Ceramic rattles are unique to the Kumeyaay and their ancestors. Their presence attests to the creative capabilities of these people and adds to our understanding of the archaeological record of Lake Cahuilla.

Introduction

The rattle is a basic percussion instrument widely used by North American Indians, serving both secular and ritual purposes. Rattles were especially important to the indigenous cultures of southern California, particularly for their use in singing traditional ceremonial songs involving tribal histories and mythologies, a means by which important knowledge was transmitted across generations. Rattles were also used in ceremonial dances and rituals, for entertainment, and as children's toys (Wallace 1978; Cline 1979:58–59).

In spite of their significance in Native culture, archaeological examples of rattles are rare. One reason for this is that they often were made of perishable materials such as gourds, turtle shells, deer hooves, cocoons, or trapdoor spider nests. Archaeological examples of prehistoric rattles have been found in dry caves and

occasionally in other settings, but generally they do not survive in archaeological assemblages. In western North America north of Mexico, rattles of fired clay are unique to southern California. Although highly prone to breakage, the ceramic material preserves well in the archaeological record.

In his classic work on Yuman pottery making, Malcolm Rogers depicted a fragmentary ceramic rattle that is an archaeological specimen (Rogers 1936:51, Plate 8b; see also Wallace 1978:645, Figure 4; Van Camp 1979:Figure 7d). This artifact and just a few other documented fragments comprised the entire known sample of prehistoric ceramic rattles from the Yuman region. In an unpublished survey, Don Laylander and Ken Hedges (1992) collected data on 14 different ceramic rattles from Imperial and San Diego counties. Another possible rattle fragment is illustrated in a report on the Williams Ranch site (CA-SDI-1216), located near Wynola in the mountains of eastern San Diego County (Fritz et al. 1977). Unpublished data from archaeological surveys conducted by the Archaeological Survey Association (ASA) under the direction of Benjamin E. McCown in the Lake Cahuilla basin in the 1950s suggest that there may be several rattle fragments in those collections as well, although these are not depicted and are identifiable only from catalog descriptions (McCown 1980:F19, F34). These were not investigated

further for the present article. All these known and suspected ceramic rattles are fragmentary specimens.

The ceramic rattle described here was found where the shoreline of ancient Lake Cahuilla once met the northwestern end of the Superstition Hills in western Imperial County (Figure 1). It is complete and unbroken (Figures 2–5). It is the only known complete ceramic example, and it still contains its “rattlers.” Its discovery calls attention to these unusual musical instruments, which have been largely overlooked in regional ceramic studies. Their presence has not been considered in most discussions of the origins or

transformations of prehistoric ceramic technology in southern California.

Ceramic rattles are only documented ethnographically for the Southern Diegueño, or Kumeyaay, (Spier 1923:348–349; Rogers 1936), and the Kamia, or Eastern Kumeyaay, of the Imperial Valley (Gifford 1931:44). They have also been made historically by the neighboring Pai Pai in northern Baja California (Griset 2010) and sold on the tourist market (Figure 6). The modern community of Santa Catarina includes potters of Kumeyaay descent, and this may explain the presence of rattles in their ceramic industry. The

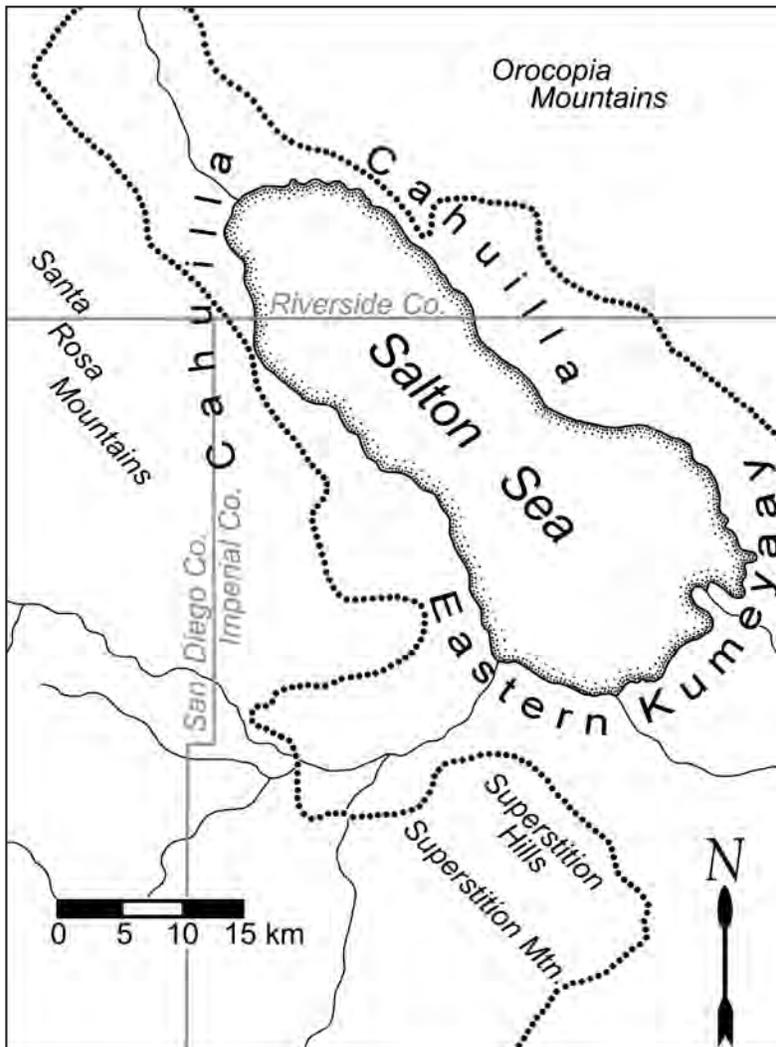


Figure 1. Location map. Dotted line indicates highstand of Lake Cahuilla.



Figure 2. Lake Cahuilla rattle.



Figure 3. Lake Cahuilla rattle.

Dillingham collection of historic Mohave pottery contains a single example of a ceramic rattle, and it is very similar to the Lake Cahuilla specimen described here (Furst 2001). However, no prehistoric examples of ceramic rattles have been found in Mohave territory nor are they described in the ethnographic literature for the Mohave or any other Colorado River tribe.

The subject of this paper, herein referred to as the “Lake Cahuilla rattle,” was found within the historic territory of the Eastern Kumeyaay, or Kamia, people (Figure 1) described by Gifford (1931). The identity of Gifford’s Kamia has been much discussed; the consensus of most linguists and ethnographers is that these people are indistinguishable from the Kumeyaay. Because their respective locations involve different adaptations, the Kamia have been referred to as the Desert Kumeyaay (Drucker 1941) and as the Eastern Kumeyaay. Attribution of the Lake Cahuilla rattle to this group would appear appropriate, although we must bear in mind that the Lake Cahuilla Kamia would have been ecologically quite different from the

historic river farming people recorded by Gifford and others in the ethnohistoric period. It also is possible that fluctuations in Lake Cahuilla may have caused shifts in ethnic territories along the southwestern shore and also within the territory of the Cocopa. Unlike the Kumeyaay, however, the Cocopa did not make rattles, at least not historically. Evidence of ceramic rattles occurs in archaeological sites in the mountains of eastern San Diego County and down into the Colorado Desert and the Salton Sink. Rattles are comparatively common in the area along the southeastern margin of extinct Lake Cahuilla. This distribution reflects strong cultural connections between these ecologically different regions of southern California and adds to the body of evidence that demonstrates cultural continuity between the historic mountain-dwelling Kumeyaay and the desert-dwelling Kamia (Eastern Kumeyaay).

Discovery

The history of archaeology is full of accounts of important discoveries made by alert school children,



Figure 4. Lake Cahuilla rattle.

ranchers, construction workers, soldiers, cave explorers, farmers, hikers, scuba divers, and people engaged in any manner of pursuits that put them face-to-face with the past. Such is the case with the discovery of the Lake Cahuilla ceramic rattle, which was made by chance during the course of a recreational visit to the desert. The find was not made while intentionally searching for Indian relics but, in fact, occurred only because one of us (BE) thought it was a “perfectly round rock” that would look nice in a rock garden.

The rattle was found by the junior authors at the northwest end of the Superstition Hills (Figure 1), where Lake Cahuilla once stood when at full capacity. They had camped in this area before, and on this May 1985 camping trip, while hiking up an eroded gully, or arroyo, dissected into a flat terrace, Barbara noticed the “round rock” mentioned above. When she extracted it from the eroded sidewall of the gully, she was amazed to see a mud-covered sphere with a handle. The rattle was located ca. 1.7 m below the surface of the terrace about halfway up the wall of the arroyo and under a bush. About three-fourths of the bulb end was visible. Nothing was observed associated with it when it was hand excavated out of the soil. There was no evidence indicating a cremation or any other archaeological feature. The rattle was caked with mud and heavy like a rock because it was filled with sediment.

A short distance (ca. 50–100 m) up the arroyo, Bill spotted half of a Salton Buff ware bowl of a Patayan II form lying on the surface of the terrace. This fragment measures 38 cm in diameter, has a recurved rim, and is extremely thin for its size. Its presence this close to the rattle suggests both finds were probably made within an archaeological site, likely one associated with a highstand of Lake Cahuilla and possibly one formally recorded. When the rattle was found, there were no posted signs in the immediate vicinity to indicate land ownership. This is an area with a complex mosaic of private, federal, and state lands, and without

rediscovering the site, it is presently not possible to determine if the Lake Cahuilla rattle was found on private or public property. The artifact has been in the junior authors’ possession for many years, and negotiations are under way to find it a home in a public museum setting where it can be used for educational and research purposes.

It is noteworthy that the rattle was found in a buried context, not exposed to sand blasting and other weathering processes. Its exterior surface is as fresh as when it was made. The rattle was solidly filled with fine sediment, was very heavy, and did not rattle. In fact, when it was first extracted from the ground, its exterior was entirely covered with mud, obscuring the perforations. Only after the mud coating was cleaned off the surface did a pattern of small holes become visible. Over a period of several days, Bill Erwin carefully poked out the holes with a toothpick and gently shook out the soil. Eventually, enough soil was loosened to free the rattlers inside, and today the rattle works.

The decorative perforations in the Lake Cahuilla rattle are rather small (ca. 1 mm in diameter), and it is hard to imagine how the bulb of the rattle completely filled up with sediments because these tiny openings offered the only entrances to the inside. Several of the perforations were plugged up with quartz sand grains. The infilling sediments must have been very fine. The fact that the artifact was filled with sediments suggests that it was buried for some time.

Description of the Specimen

The Lake Cahuilla specimen is a single piece ceramic rattle, complete and undamaged, and still in perfect working condition (see Figures 2–5). It is made of Lower Colorado River Buff Ware (Lowland Patayan ceramic tradition). It appears unpainted. Malcolm Rogers (1936:19) described southern Diegueño ceramic rattles as ellipsoidal in shape, averaging 3.5 in long, and furnished with wooden handles, as were gourd

rattles. Spier (1923:348–349) described clay rattles as having “a bulb as big as a man’s fist, drawn out into a handle.” The Lake Cahuilla rattle was fired as a single piece of clay.

Size and Shape

The body, or bulb, of the Lake Cahuilla rattle is round to slightly pear-shaped. Its handle is perforated at the end. The overall length of the rattle is 163 mm. The body diameter measures 81 mm to 79 mm, and the maximum circumference of the body is 255 mm. The handle is molded directly onto the body and measures approximately 80 mm in length. It is round in cross section and varies in diameter from 17 mm to 22 mm. The perforation is located 10 mm from the end of the handle and measures 3 mm in diameter on one side and 2 mm on the other. The handle broadens out slightly at the end. It is important to recognize the shape of the handle because handle fragments in archaeological collections could be mistaken for regional clay figurines. Several of the clay figurine fragments claimed to be from Mason Valley (see McKinney and Knight 1973:45, Figure 1) or those described by True (1957:291–296, Figure 2b, d, and f), for example, might be unrecognized fragments of rattle handles.

Decoration

The body of this rattle is decorated with rows of small (1–1.5 mm) perforations that run from the handle vertically up and across the end to the opposite side of the body. This pattern is repeated twice, creating four sides to the rattle and roughly dividing the bulb into longitudinal quadrants. The arrangement of lines does not form a symmetric cross shape where these lines intersect on the end of the rattle as would be expected from their symmetry where they originate at the handle’s base. Instead, the two rows on the two sides, where one can see the perforation in the handle, arch around the end of the body slightly

before they intersect the other two sets of perforations. The resulting pattern can be seen in the top-end view (Figure 5).

Ethnographic information indicates the perforations are not exclusively for decoration, but they also functioned to “get all the noise out” (Spier 1923:235). Among the Maricopa, rattles made for secular use were perforated in a pattern of longitudinal and transverse rows, while those used by a curing shaman had perforations arranged in little circles (Spier 1923:235). Gourd rattles described for the Yuma had “rows of holes punched in the surface of the gourd, forming patterns and increasing resonance. The gourd is then painted, black on the upper half and red near the handle, or red with black stripes were the more usual designs in the past” (Forde 1931:130). Regarding the decoration of Eastern Kumeyaay ceramic rattles, Rogers (1936:19) stated that “the exterior of the rattle was usually painted with vertical bands, zig-zag lines, or solid red and side perforated with vertical rows of holes to allow the sound to escape.” A ceramic rattle fragment illustrated by Treganza (1942:Figure 9d) conforms to Rogers’ description, with vertical lines of red pigment arranged between rows of vertical perforations.

The ceramic rattle in the Dillingham collection of historic Mohave pottery that is nearly identical in form to the Lake Cahuilla specimen is painted with red and white stripes that go around the handle and vertically up and across the sides of the body. A second red line encircles the body, dividing it into quadrants that are decorated with a pattern of red dots (Furst 2001:186–187, Plate 50). Many of the ethnographic accounts of gourd rattles indicate these were often painted, as are historic gourd rattles made by modern Kumeyaay and others.

These descriptions suggest that the Lake Cahuilla rattle was originally painted, and so we carefully inspected its surfaces. Mottled discolorations (i.e.,

fire clouds) on the Lake Cahuilla rattle resulted from differential oxidation during firing. Some patterns on the rattle do resemble paint, especially the dark ring shape on one side and some of the redder areas on the handle and the body. The application of DStretch computer enhancement technology that is used for painted art revealed no clear evidence that the rattle was ever painted, but that possibility cannot be ruled out. Perhaps the rattle was painted with highly fugitive paints that simply weathered away over the years in the harsh environment of the Salton Sink. Evidence of sandblasting or other surface weathering is absent from the specimen, and there are indications that the surfaces are fresh and unweathered. The artifact was buried and caked with mud when found and may have never been exposed prior to discovery. It may have been intentionally buried, but then again it may have been an accidental loss subsequently covered by alluvium washing downslope from the Superstition Hills or dropped into the water at the edge of Lake Cahuilla and settling into the soft mud.

Contents of the Rattle

The Lake Cahuilla rattle is sealed shut, so we do not know what type of percussors helped produce its resonance. Leslie Spier's Southern Diegueño informants explained that "little clay balls are placed inside at the time the rattle is molded. They are rolled about to smooth them before the rattle is baked" (Spier 1923:348–349). In describing Southern Diegueño ceramic rattles, Rogers (1936:19) indicated that "inside were either seeds or small pebbles, or sometimes fired clay pellets, to produce the rattle noise." A clay pellet recovered from Indian Hill Rockshelter in Anza-Borrego Desert State Park was possibly from a rattle; a fragment of a ceramic rattle was also found there (Griset 1986:95–97). Gifford's Kamia informant, Charles Bea, stated that seeds were placed inside a rattle before firing (Gifford 1931:44). Drucker (1941:188) provided Southern Diegueño information that "gourd rattles, with palm seed sounders, were introduced in relatively recent times." Leslie Spier



Figure 5. Lake Cahuilla rattle, top-end view.

(1923:349) also identified palm seeds (*emu'i*), as the rattle “sounders.” Presumably, these were from the California fan palm (*Washingtonia filifera*).

It seems as though there might be seeds inside the Lake Cahuilla rattle judging from the soft “swishing” sound it produces, but we cannot know without opening it or by using some form of modern technology to look inside. A number of nondestructive methods are available, such as x-ray examination or neutron radiography (Rant et al. 2005:187, Figure 5). Such nondestructive methods have not been applied to the rattle. If it contains seeds, they could be used to radiocarbon date the rattle, thus offering a potential avenue for clarifying some of problems in the dating of regional prehistoric ceramics, including those involving ceramic rattle production.

Construction

Ethnographic Yuman ceramic technology and its prehistoric antecedent, the Lowland Patayan ceramic tradition, are both characterized by the use of paddle-and-anvil technology, which produces thin, evenly walled vessels. This area also witnessed prehistoric production of small, hand-molded ceramic pipes and figurines.

Without x-ray or other sophisticated examination, it is not possible to measure the rattle’s body wall thickness or to examine the nature of its interior surface. The handle of the rattle appears to have been hand-molded, like the figurines. It is not presently known whether the body was shaped and thinned by the paddle-and-anvil technique or was hand molded. Because of its hollow structure, one would expect the rattle to have been constructed like a pottery vessel. However, its small size would have precluded the use of the standard anvil, which was too large.

It would be of interest to determine exactly how contemporary Pai Pai potters make their hollow-bodied

ceramic rattles. Hedges (1973:18–20, Figure 8) described some hollow-body figurines formed from small, asymmetrical ollas. He did not indicate how these unusual artifacts were made, but they are similar in size and shape to the Lake Cahuilla rattle and were discovered not far from it. Based on most treatments of this subject, all small and miniature clay objects made in the Lowland Patayan ceramic tradition were hand molded (Waters 1982; Griset 1990:180), so it is probable that this is the case for the Lake Cahuilla rattle.

Surface Treatment

The exterior surface of the Lake Cahuilla rattle provides some clues to its manufacture and to its prehistoric age. The rattle is an example of plain earthenware pottery. It bears no slip, glaze, or other surface treatment. The colorful fire clouds indicate production in an open pit kiln with differential exposure to oxygen during firing. Darker areas are locations that were deprived of oxygen, while the more reddish-colored areas were exposed to air during firing. There is a dark, almost black, ring-shaped pattern on one area of the rattle which looks as though it might be painted on, but this sort of configuration is commonly seen with plain ware pottery fire clouds.

Prior to firing, the rattle’s surface was smoothed by scraping and wiping but does not appear to have been polished. There are minute striations over most of the surface from wiping the wet clay. The rattle was likely hand molded, accounting for some degree of surface irregularity. It is much more delicately made than the historic Pai Pai rattles produced today (see Figure 6). The more refined quality of the prehistoric rattle recalls the pattern described by Griset (1990:196) for the historic transformation in southern California of Tizon Brown Ware, the kind of pottery produced by Kumeyaay living in the Peninsular Range to the west of Lake Cahuilla. It is another of the regional ceramics included in the

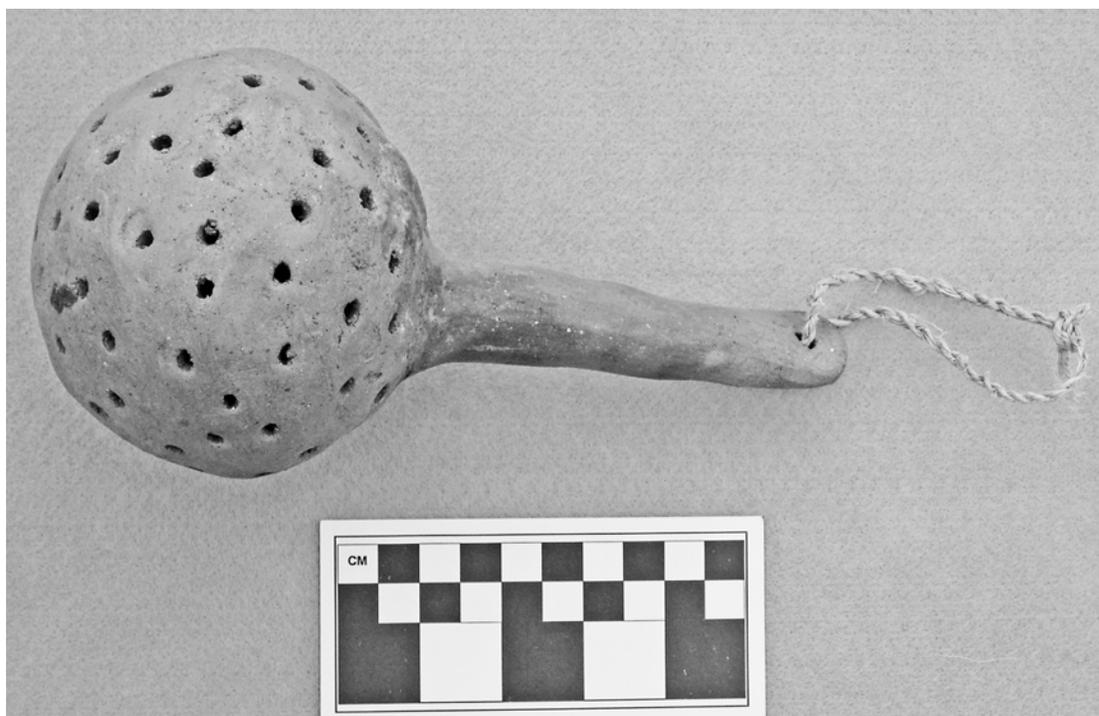


Figure 6. Modern Pai Pai rattle.

Lowland Patayan ceramic tradition and is closely related to the ceramic industry that produced the Lake Cahuilla rattle. The finely made quality of the rattle is one of the clues to its identity as a prehistoric rather than a historic artifact. Another clue is the lack of surface polishing, which is a trait associated with the appearance of early historic ceramics in this area (Griset 1990:191).

The striations that cover the surface of the Lake Cahuilla rattle not only attest to the fact it was not polished but also provide evidence that the rattle had not been exposed to very much surface weathering especially because they are clearly pronounced and have sharp margins at their edges. There also is no evidence of differential surface weathering that might indicate one side was exposed to different weathering processes than the other, as would happen if it lay on the surface for any period of time.

Taxonomic Classification of the Rattle

Since the Lake Cahuilla rattle is pottery, its place with regard to the regional ceramic classificatory schemes is important. There is evidence for temporal change in ceramic technology in this area, which could be used for roughly estimating the age of the artifact and perhaps determining its location of manufacture. Regional history of ceramic classification is well covered and need not be reviewed here (see Rogers 1945; May 1978; Waters 1982; Shackley 2004; Schaefer and Laylander 2007). In contemporary archaeological terms, the rattle would be classified as Lower Colorado Buff Ware or attributed to the Lowland Patayan ceramic tradition. More specifically, it would be identified as Salton Buff (Rogers 1945; May 1978:37–38; Waters 1982:564–565), dating to Patayan II times (ca. AD 950–1700) or perhaps a little earlier. It is the most common pottery found along the extinct shoreline of

ancient Lake Cahuilla and was produced during periods when the lake was full and the shoreline occupied.

Placement in the Lowland Patayan ceramic series is primarily based on characteristics of the clay. Ceramic taxonomists dealing with the local plain ware pottery generally rely on either vessel and rim form or the nature of the paste and temper. Ceramic identification of the rattle is problematic because it has no “rim” to type using Waters’ (1982) taxonomy for classifying Lowland Patayan tradition ceramics. The rattle was not broken to produce a fresh edge, nor was a thin section cut for microscopic examination. This limits the precision with which the clay may be specifically identified using criteria described by May (1978) and other taxonomists who emphasize material composition over artifact style.

The discovery location and ceramic descriptions in the regional archaeological literature allows for the identification as probably Salton Buff (Rogers 1945; May 1978; Waters 1982:564–565). Salton Buff was manufactured from lacustrine sedimentary clay containing fragments of freshwater mussel shell and was tempered with fine, well-rounded beach sand composed of 90 percent quartz and feldspar (Waters 1982:565). The color range varies from buff to red, and most specimens are well oxidized. The low iron content of the sedimentary clay used in the manufacture of buff wares typically produces pottery that has oxidized into a pink to buff color or to a beige to gray color (Griset 1990:180).

Waters (1982:565) described Salton Buff pottery as easily distinguished by its hardness and tempering characteristics, noting that sherds from the west side of the lake were generally tempered with fine-grained sand, while those from the eastern shoreline were tempered with medium-grained to coarse-grained sand (Waters 1982:565). The Lake Cahuilla rattle was tempered with very fine, well-rounded sand and is very hard and well fired. Since it does not appear to

contain any shell fragments, the clay more closely fits the description of Carrizo Buff identified by Malcolm Rogers (1936) and described by Ron May (1978:41–42). Michael Waters’ taxonomy has become the standard reference, and based on the alternative choices in the literature (and in the absence of actual comparative ceramic material), we identify the composition of the rattle as Salton Buff.

Dating the Lake Cahuilla Rattle

The Lake Cahuilla rattle represents an unassociated find with only a very general provenance, and thus temporal assessment of this artifact is tenuous. However, there are several clues to suggest the antiquity of the Lake Cahuilla rattle. These include the temporal placement of Salton Buff ceramics in the archaeological record, the association of the specimen with the 13 m asl shoreline of ancient Lake Cahuilla, and some hints provided in the ethnographic record.

Michael Waters (1982:565) originally assigned Salton Buff ceramics to the period from late Patayan I to possibly very early Patayan III times, or roughly AD 950–1500. However, more recent study of the latest stands of Lake Cahuilla indicate the end of this era was more likely around AD 1700 (Laylander 1995). If these age estimates are correct and we are correct in identifying the rattle as an example of Salton Buff pottery, then it must have been manufactured sometime within that 750-year time span. Because of certain anomalous discoveries, some scholars have expressed doubts about the chronological sensitivity of these ceramic types for making fine temporal distinctions (Laylander 1995:75). Their use for making a general statement about the probable age of the rattle is reasonable, however, especially because the suggested ceramic age is in line with other evidence.

Another approach to dating the rattle is to consider the history of ancient Lake Cahuilla and the rattle’s association with its relict shorelines. This subject is a

topic of considerable interest in southern California archaeology because of the consequences to human populations that are believed to have been produced by periodic fluctuations in the lake, which episodically filled and dried out in relation to flood cycles of the Colorado River (Wilke 1978; Waters 1983; Laylander 1995). When the lake was full of water, its surface stood at approximately 13 m asl. Human occupation sites associated with highstands of the lake, as well as occupation sites on lower recessional beach lines, have been radiocarbon dated.

These data document a minimum of three periods in the last 1,000 years when Lake Cahuilla was full, as well as three major recessions. The final stand is represented by the archaeological deposit at the Elmore Ranch site (CA-IMP-6427), a small habitation site located along a recessional shoreline at 55 m below mean sea level and dated to ca. AD 1669 (Laylander 1995:70). This recession followed the final filling of the lake basin, which occurred early in the seventeenth century. The lake was also full in the late fourteenth or early fifteenth centuries, and it was full during the thirteenth century (Laylander 1995:70, Figure 1). There was at least one stand during the late tenth and early eleventh centuries (Waters 1983). These records constitute the latest history of lake stands, the past 1,000 years or so. There is also evidence of a complex history of earlier lake stands (Waters 1983). The described lake history covers Patayan II times and is the probable period to which the rattle dates. Since it was found above the 13 m asl shoreline, the rattle most likely was deposited during one of these highstands.

One of Spier's Diegueño consultants believed that all rattles originally were made of clay, because gourds were a recent acquisition (Spier 1923:348–349). The implications of this observation are that ceramic rattles should be found in archaeological contexts in this region and that their presence demonstrates the use of dance rattles in the prehistoric record.

Discussion

The use of rattles has been documented for some 305 ethnic entities in North America (Driver and Riesen-berg 1950:1). However, prehistoric ceramic dance rattles are known only from the Yuman area of southern California, from a few occurrences in eastern North America, and from Mesoamerica. Almost certainly, Yuman rattles are a case of independent invention rather than diffusion. Within Yuman groups ceramic rattles are ethnographically cited for the Kumeyaay (Southern Diegueño, or Tipai) and the Kamia (Eastern Kumeyaay, or Desert Kumeyaay). In more recent historical contexts they have been made by the Pai Pai (Griset 2010) and the Mohave (Furst 2001). In the case of the Mohave and the Pai Pai, ceramic rattles were not documented in earlier ethnographic studies (Kroeber and Harner 1955; Hohenthal 2001) and are not known archaeologically. We do not know why modern examples have been produced by contemporary potters; perhaps they were traditional to their ancestors, or perhaps they learned about them through cultural exchange.

Ceramic rattles are not reported for the neighboring Luiseño, Cupeño, or Cahuilla (Rogers 1936:16–23), and they are not associated with the late prehistoric San Luis Rey complex (True 1970:52). They also are not known among the Kiliwa (Meigs 1939), the Cocopa (Kelly 1977), the Seri (Kroeber 1931; Bowen 1976), the Yuma (Forde 1931), or any of the other lesser-known tribes of the lower Colorado River. They are not found in the ethnographic records of the easternmost Yuman tribes, including the Maricopa (Spier 1923), the Yavapai (Gifford 1932), and the Walapai (Kniffen et al. 1935). Ceramic rattles are also absent from tribes located further to the north along the coast, the Gabrielino and Chumash, or those tribes which inhabited the San Bernardino Mountains and Mojave Desert, the Serrano and the Chemehuevi. Review of the ethnographic data clearly shows that ceramic rattles were made only by the Kumeyaay and their predecessors.

We infer that the ancestors of the historic Kumeyaay probably invented these rattles because they occur in the appropriate archaeological contexts in this region and they are unknown to any other neighboring pre-historic cultural traditions. Since pottery making was almost always done by women, it is probable that the ceramic rattle was a female invention. Adaptation of rattles to ceremonial and other contexts would have hastened the dispersal of this novel technology, which would have been easy for potters to replicate.

Archaeological examples of ceramic rattles are quite scarce, but the limited data do mirror their ethnographic distribution. Malcolm Rogers depicted the perforated body of a broken ceramic rattle in his classic study on Yuman pottery making (Rogers 1936:51, Plate b). This archaeological specimen was collected by Malcolm Rogers in 1923 from CA-SDM-C-123, not far from where our specimen was discovered. It was identified by Rogers as a Kamia rattle. Laylander and Hedges (1992:1) mistakenly identified this rattle as being from the ethnohistoric village site of San Sebastian (CA-SDM-C-124), located a short distance to the northwest on San Felipe Creek. Rogers' field notes from SDM-C-124 do not mention any rattle, while field notes from SDM-C-123 clearly describe a ceramic rattle found associated with "Cremation #1," one of three such features eroding out of the surface (Rogers 1980:E41). Laylander and Hedges (1992:1–2) indicated that this rattle was skillfully reconstructed from fragments and that it may have originally had a wooden handle.

There are a few other examples of broken rattles in the collections of the San Diego Museum of Man, several of which were depicted by True (1970:91, Plate 5, items 4 and 5). These were recovered from CA-SDM-W-211 in Cuyamaca Rancho State Park and from CA-SDM-C-144 in Mason Valley. Treganza (1942:152) described three different ceramic rattle fragments collected during his early archaeological surveys in southern California and northeastern Baja

California. Two of these were found in Imperial County a short distance to the southwest of San Sebastian, and the provenience of the other is uncertain. Laylander and Hedges (1992:1–2) reasoned that it was from the "mountains" based on their interpretation of Treganza's description which states that these rattles are found "in both mountain and desert areas" (Treganza 1942:152).

More recent archaeological studies in this region have produced small fragments of ceramic rattles at Indian Hill Rockshelter (CA-SDI-2537) in Anza-Borrego Desert State Park (Griset 1986), at an archaeological site located near Superstition Mountain in western Imperial County reported by Schaefer (1988), and from the San Anselmo site (CA-IMP-6422/6423) a few miles east of San Sebastian (Laylander 1991; Laylander and Hedges 1992:3). Several fragmentary rattles known from private collections were documented by Laylander and Hedges (1992), including one in the Alta DuVall collection that is the smallest known example, its body diameter only 4.0 cm. Another in the McCain collection is similar to Rogers' specimen from San Sebastian, and it also may have had a wooden handle. The Alta DuVall rattle was reportedly found in the southern Anza-Borrego Desert, western Imperial County, and the McCain specimen is from McCain Valley.

A second McCain collection artifact, reportedly from north of Jacumba, is a clay effigy fragment that is perforated and possibly served as the handle of a rattle (Hedges 1973:26, Figure 12B). Luomala (1978:602, Figure 8) depicted a ceramic doll with a hollow, bulbous body that contains two pebbles and that rattles when shaken; it was collected in 1875. The McCain effigy handle closely resembles this specimen. If this is indeed a rattle handle in effigy form, it and the Luomala specimen are notable distinct from other known ceramic rattles. These then represent another subtype of ceramic rattle and another novel expression of Kumeyaay ceramic technology.

A fragmentary ceramic object described and illustrated from the Williams Ranch site (SDI-1216) near Wynola may be a broken rattle rather than a “vessel with an unknown number of feet” as Fritz et al. (1977:44; Figure 17e) suggested. They compared it to the unique tripod ceramic pot reported from the site of Molpa (True et al. 1974:67, Plate 11g), but in their description they noted that “the foot appears to have been pulled out from the vessel mass rather than added on to it, in contrast to the tripod pot from Molpa.” This type of construction conforms to both ethnographic descriptions and archaeological examples of Kumeyaay ceramic rattles, including the Lake Cahuilla rattle.

Finally, there are two entries in Ben McCown’s catalogue of artifacts collected from Lake Cahuilla sites during the ASA surveys in the mid-1950s that perhaps describe ceramic rattle fragments (McCown 1980:F19, F34). These include a possible body of a rattle described as “2/3 of a container shaped like an olla, 5 cm. high” from a location identified as the “Agua Dulce” beachline. This is site #67 on McCown’s (1980:F19) map, which is identified at latitude 116-10.4 and longitude 33-17.4. Another possible example is listed as “1 piece of pottery with a handle or leg.” The location of this discovery is not clear in the records, which identify it as from “Box 337” pottery collected from “Structure 13 to Structure 14 on bar.” This location is not shown on the accompanying map, but the “structures” referred to are siphon numbers on the canal at the northeastern side of the Salton Sea (McCown 1980:F38). If these artifacts are indeed rattle fragments, they appear to have been collected from archaeological sites within the ethnographic territory of the Cahuilla.

In sum, there are 15 documented and three possible examples of ceramic rattles identified in our study. All but the Lake Cahuilla rattle are fragments. Data on these are summarized in Table 1. We did not have an opportunity to directly examine any of these

rattle fragments to compare them with the specimen described here. As far as we are aware, all extant examples of prehistoric ceramic rattles are from Eastern Kumeyaay, or Kamia, territory, although two possible specimens were found in neighboring Cahuilla territory. All were discovered in the mountains of eastern San Diego County and in the low desert region of western Imperial County. They appear to be relatively common in the area around San Sebastian and Harpers Well and along the margin of Lake Cahuilla that bordered the Superstition Hills. The San Sebastian and San Anselmo rattles were found below the high levels of Lake Cahuilla, suggesting they were deposited after its last stand, which occurred in the seventeenth century (Laylander and Hedges 1992:3; Laylander 1995:75). These rattles are protohistoric in age, that is, after European contact in this area. The small rattle fragment that Schaffer (1988) described from the south side of Superstition Mountain was identified as manufactured from Colorado Red Ware, which is a Patayan I ceramic type that possibly dates to as early as around AD 700 (Waters 1982:562). Although there are questions about the reliability of precise ceramic dating in this area (Laylander 1995:75), that fragment and other specimens, including the one described here assigned to Patayan II times, indicate ceramic rattles originated in prehistoric times.

Our review of published archaeological literature located no other described occurrences; clearly, these are uncommon artifacts. After analyzing approximately 33,000 pieces of pottery from the excavations at CA-SDI-860, the type site for the late period Cuyamaca complex, True (1970:42) discussed the apparent absence of ceramic rattle fragments, mentioning that they are known elsewhere in the Cuyamaca Mountains and should be considered part of the Cuyamaca complex. True’s (1970:52) assessment that this artifact is rare was based on his excavations at Cuyamaca and his perusal of the San Diego Museum of Man collections. Ceramic pipes are another minor, hand-molded

Table 1. Ceramic Rattles from Southern California Archaeological Sites.

Specimen	Provenience	Portion	Diameter	Length	Handle Length	Pottery Type	Reference(s)
San Sebastian	SDM-C-123	Bulb (reconstructed?) ^a	6.5	7.5			Rogers 1936; Wallace 1978; Van Camp 1979
Cuyamaca #1	SDM-W-211	Bulb fragment					True 1970
Cuyamaca #2	SDM-W-211	Bulb fragment					Laylander and Hedges 1992
Cuyamaca #3	SDM-W-211	Bulb fragment					Laylander and Hedges 1992
Mason Valley	SDM-C-144	Bulb fragment					True 1970; Laylander and Hedges 1992
Treganza #1	SW of San Sebastian	Handle and base of bulb			5	Salton Buff	Treganza 1942
Treganza #2	SW of San Sebastian	Lower part of bulb	5.5	6.5		Lower Colorado Buff	Treganza 1942
Treganza #3	From mountains	Handle and base of bulb	7.6		6		Treganza 1942; Laylander and Hedges 1992
Indian Hill Rock Shelter	CA-SDI-2537	Bulb fragment				Tizon Brown Ware	Griset 1986
Superstition Mountain	SE of San Sebastian	Bulb fragment				Colorado Red Ware	Schafer 1988; Laylander and Hedges 1992
San Anselmo	CA-MP-6422/6423	Bulb fragment	8	16		Lower Colorado Buff	Laylander and Hedges 1992
Alta DuVall Collection	Anza-Borrego desert area	Handle and 1/2 of bulb	4				Laylander and Hedges 1992
McCain Collection	McCain Valley ?	Bulb ^a	6.5				Laylander and Hedges 1992
Jacumba	Jacumba area ?	Handle (effi- gy) fragment					Hedges 1973
Wynola	CA-SDI-1216	Base of bulb ^b				Tizon Brown Ware	Fritz et al. 1974
McCown #1	Agua Dulce	Bulb fragment ^b					McCown 1980:F19
McCown #2	NE edge of Salton Sea	Handle and base of bulb ^b					McCown 1980:F34
Lake Cahuilla Rattle	SE of San Sebastian	Complete	7.9-8.1	16.3	8	Salton Buff	this report

Note: Measurements and other data from Laylander and Hedges 1992. Measurements in cm.

^aPossibly had wooden handle.

^bPossible rattle.

artifact produced in the Cuyamaca complex ceramic industry. To compare the frequency of rattles with pipes, consider that True recovered 61 ceramic fragments representing a minimum of at least 30 smoking pipes at SDI-860 (True 1970:75, Table 14).

We do not know how the Lake Cahuilla rattle entered the ground, but a review of the archaeological literature provides clues. With the exception of the rattle that Malcolm Rogers discovered at SDM-C-123, archaeological examples do not occur in mortuary contexts. This is counter to expectations because it was common for a person's possessions to be destroyed in connection with a mourning ritual and cremation ceremony. George Heye (1919:3–48) described some 422 buried Diegueño pots from this region, 82 of which had been used as mortuary urns, none containing the remains of ceramic rattles. Rattles were not associated with the cemetery excavated by True (1970) at SDI-860, nor were they present in Heye's sample of 42 cached vessels or any other ceramic caches reported from southern California. When they are encountered, they are usually fragments within village living areas as at Rogers' site W-211 at Cuyamaca, W-144 in Mason Valley (see True 1970:Plate 5), or Indian Hill Rockshelter (Griset 1986). The limited association between ceramic rattles and mortuary remains is interesting because regionally only the deer hoof rattle is recorded as associated with death rituals (Driver and Riesenbergh 1950:9–10, Map 4).

Judging from ethnographic documentations attesting to their important roles in Native ceremonialism, one would expect rattles to have been common possessions of at least traditional singers, shamans, and other ceremonial leaders. Forde (1931:130) stated that for the Yuma "the gourd rattle (*ekna 'il*) is the usual accompaniment to songs and dances." He further indicated, however, that no significance was attached to the rattle "which anyone may possess. All singers have one or more." Thus, it is curious that there is no clear

pattern of either disposal or inheritance in the archaeological or ethnological records.

The Lake Cahuilla rattle is without specific context, so we will never know how it was left to be discovered. It was exposed by erosion in the side of an arroyo, suggesting that perhaps the rattle was intentionally buried or that it was left where it quickly became buried. Its completeness and unweathered appearance support these suggestions. As previously mentioned, no evidence points to mortuary context. The absence of other artifacts in apparent association was noted, but there was no concerted effort to explore the surrounding matrix. The "smooth rock" was removed by scratching away a minimal amount of soil. No other artifacts were observed in the immediate vicinity including the floor of the arroyo. However, the large fragment of a shallow ceramic bowl measuring 38 cm in diameter and having a strongly recurved rim was found a short distance up the arroyo, and this suggests the rattle was collected from a prehistoric habitation site along the high shoreline of ancient Lake Cahuilla.

It is tempting to speculate that it was left as an offering by a shaman after singing to a rapidly vanishing Lake Cahuilla, or some other imaginary scenario. However, it is more likely that it was simply left hanging in a thatched house or ramada and that the abandoned structure eventually decayed and settled into the landscape where the rattle was buried by sediments that washed down from slopes of the Superstition Hills immediately to the south.

Summary and Conclusions

This paper describes the only known complete example of a confirmed prehistoric ceramic rattle from southern California. Although much contextual information is missing, the artifact still contributes significantly to understandings of ceramic rattle form. Its provenance provides evidence to link the Mountain Kumeyaay of eastern San Diego County with the Eastern Kumeyaay,

or Desert Kumeyaay, who inhabited the ancient shores of Lake Cahuilla in the Imperial Valley,

Attention is called to the fact that manufacture of prehistoric ceramic rattles was unique in the western United States to Kumeyaay peoples, something largely ignored or overlooked in regional ceramic studies (e.g., May 1978; Waters 1982; Porcayo Michelini 2009). Malcolm Rogers (1936:19) identified ceramic rattles with the “eastern periphery” of the Southern Diegueño, where they were made “to some extent.” Delbert True (1970:53–54) assigned them to the Cuyamaca complex, suggesting they were among a number of shared traits that set the late prehistoric Cuyamaca complex apart from the adjacent and contemporary San Luis Rey complex. The Cuyamaca complex is the archaeological manifestation of the ancestral Kumeyaay.

The Lake Cahuilla rattle was not a trade item from the peninsular mountains or the Colorado River area. Rather, it is of Salton Buff ceramic clay, made at or near the lake. As seen in Table 1, ceramic rattles are found throughout the range of the southeastern Kumeyaay, in both upland montane and lowland desert habitats. The association of Tizon Brown Ware rattles with the mountains and of Lower Colorado River Buff Ware rattles with the desert indicates these were probably manufactured locally and did not travel far. The only evidence to counter this pattern is the fragment from Superstition Mountain identified as Colorado Red (Schaefer 1988), a ceramic type found on the eastern side of the Colorado River. We suggest the taxonomic identity may be problematic based on our distributional analysis. Because ceramic rattles are not found elsewhere within the distribution of Lowland Patayan ceramics (Waters 1982), these percussion instruments add to our understanding of ceramic variability within this tradition. Although uncommon, they appear to be a culturally diagnostic trait, and their presence is

therefore significant to a major purpose of ceramic classification, that is, recognizing and discriminating past cultural entities. In the Lake Cahuilla basin, for example, the presence of these artifacts may be useful in distinguishing the prehistoric boundary between the Kumeyaay and their Cahuilla neighbors to the north. The McCown survey collected a possible rattle fragment from the “Agua Dulce beachline” that appears to be from Cahuilla territory (McCown 1980:F19). Since the Cahuilla did not make or use ceramic rattles, this may be evidence of a past boundary shift associated with the arrival of the ancestral Cahuilla as described in their oral traditions. Future treatments of this subject should consider these artifacts carefully because they represent a unique example of independent invention that may have important implications for understanding the process of the development and evolution of ceramic technology in southern California.

Acknowledgments and Dedication

This paper is dedicated to Jay von Werlhof, who was very much interested in Native American ritual and ceremony and also in the participation of the general public in archaeological research. He would have been fascinated by the discovery of this rattle and appreciative of the fact that it was brought to the attention of scholars.

The authors thank Don Laylander, Ken Hedges, Dennis Gallegos, and Susan Hector for sharing their knowledge and unpublished information about rattles in southern California. Michael Sampson provided editorial comments that significantly improved our draft report. Joe Cramer rendered the location map of Figure 1 and provided the rattle illustration for the cover of this *Quarterly* issue. We also express our gratitude to Russell Kaldenberg for inviting our contribution. Finally, we thank the anonymous reviewers for their insightful comments and corrections.

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