

A Cowry Shell Artifact from Bolsa Chica: An Example of Prehistoric Exchange

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Abstract

This article describes a Gulf of California shell, species *Cypraea cervinetta* Kiener (Little Deer Cowry), collected at CA-ORA-83 (the Cogged Stone Site), Bolsa Chica. An AMS conventional radiocarbon date of 1340 ± 60 B.P. supports the hypothesis that the specimen was a prehistoric exchange item. The shell was either transported the greater length of Baja California, or, more likely, it was moved along the eastern shores of the Gulf to the Lower Colorado River area and thence westward across desert southern California.

Introduction

Over three decades ago, Herrold Plante collected a back-punched cowry shell from the surface of CA-ORA-83, the “Cogged Stone site,” at Bolsa Chica (Fig. 1). Unmodified cowry shells, cowry beads/pendants, cowry bowl/mortar inlays (Fig. 2), and cowry detritus are occasional finds in southern California middens. Virtually all specimens are of a single species, *Cypraea spadicea* Swainson (Chestnut Cowry), the only cowry living on the southern California coast

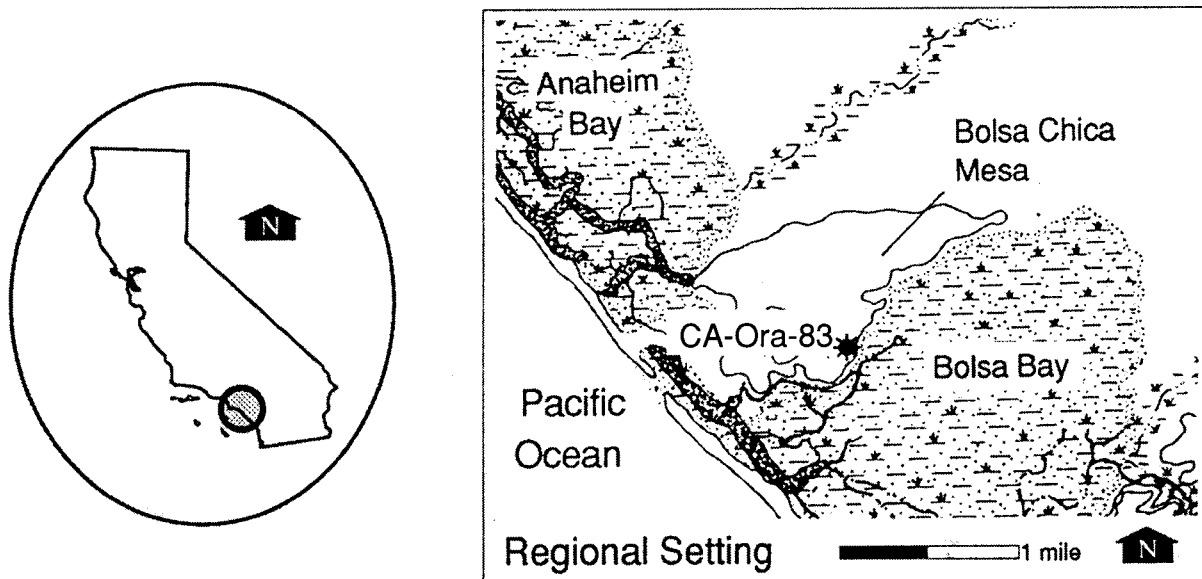


Fig. 1. Regional location for CA-ORA-83. Based upon 1896 USGS topographic quadrangles.

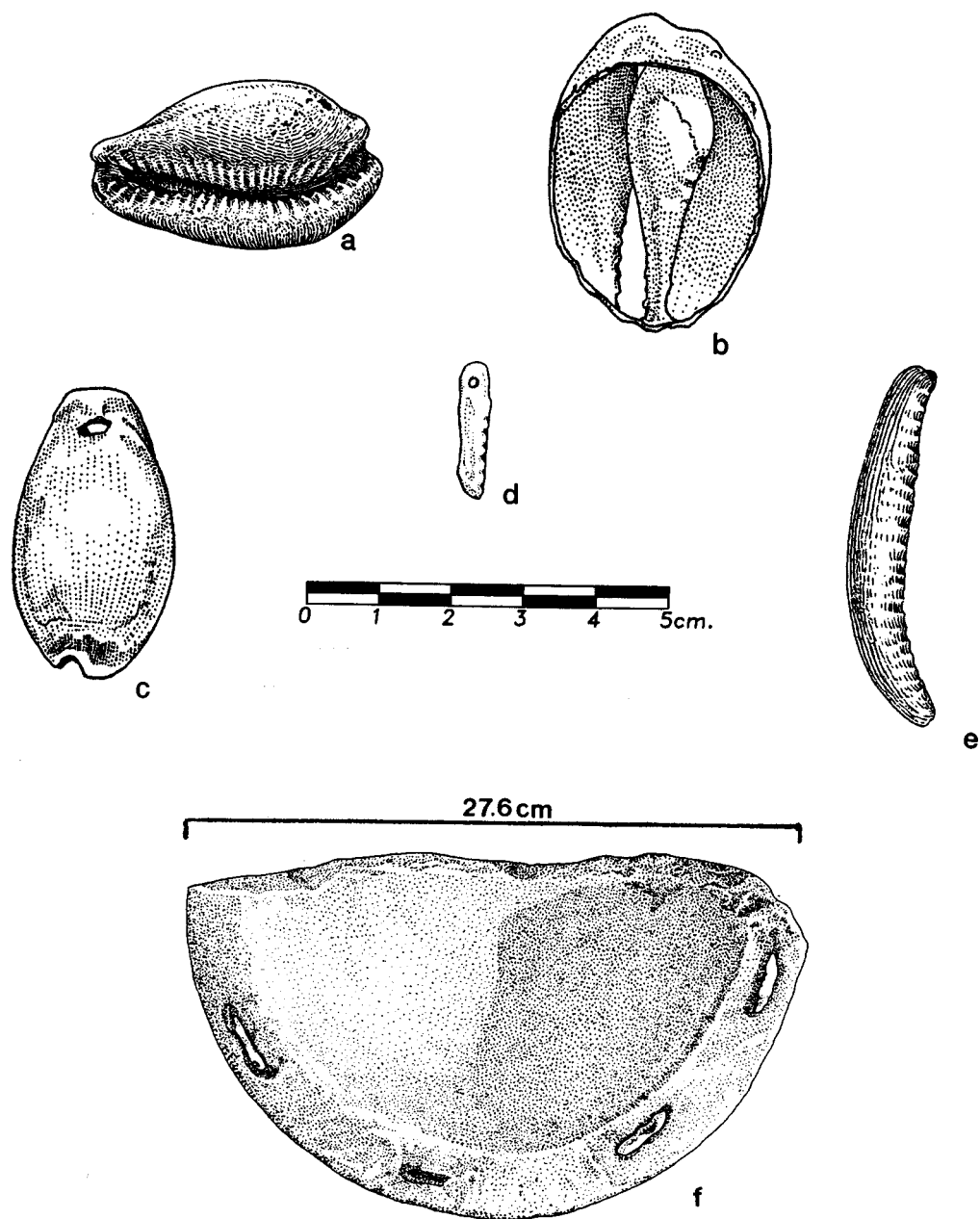


Fig. 2. Chestnut Cowries: a) whole cowry, CA-ORA-378; b) back removed cowry from CA-ORA-190 (after Ross 1970:81); c) back punched cowry, CA-ORA-855; d) cowry pendant (after King 1982:501); e) outer lip cowry inlay from CA-ORA-111, San Joaquin Home Ranch site, Cat. #2282 (Anon. 1938b:167); f) outer lip cowry inlays set into a mortar rim, Medea Creek cemetery collection (courtesy Fowler Museum of Cultural History, Archaeological Collections Facility).



Fig. 3. Natural range of the Chestnut Cowry, *Cypraea spadicea* Swainson, after Burgess 1985:106.

and Channel Islands (Morris 1966:79) (Fig 3). What makes the Bolsa Chica discovery noteworthy is that this specimen belongs to the species *Cypraea cervinetta* Kiener (Little Deer Cowry) whose nearest natural occurrence is in the Gulf of California (see Burgess 1985:99) (Fig. 4).



Fig. 4. Natural range of Little Deer Cowry, *Cypraea cervinetta* Kiener, after Burgess 1985:99.

This, however, is not the first report of a cowry shell transported considerable distance into Orange County. Herman Strandt (1965:31) claimed to have recovered a cowry of the species *Cypraea moneta* Linn. (Money Cowry) as part of a necklace accompanying a burial. From this he inferred “that traffic had at some time existed between the Canaliños and the South Sea Islanders” (Strandt 1965:31). Incontrovertible evidence to further support such contact with Oceanic peoples has never surfaced. If Strandt’s species identification is correct, how do we account for the occurrence of a Money Cowry shell so distant from its natural range (Fig. 5) (see Burgess 1985:228)? Perhaps the shell arrived at the California coast via Manila galleon, or perhaps the gut of some animal once carried the shell on its long odyssey. Questions of species identification aside and assuming no fraudulent claim (see Koerper and Chace 1995), Strandt’s discovery of the object subsurface and in association with other past cultural remains establishes the item as prehistoric. Unfortunately, Strandt did not identify the site where the Money Cowry shell was discovered.

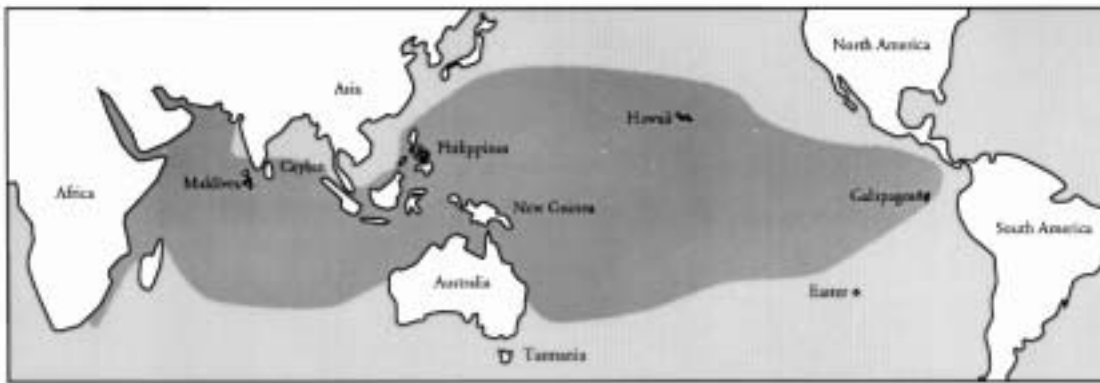


Fig. 5. Natural range of the Money Cowry, *Cypraea moneta* Linn., after Burgess 1985:228.

Unlike Strandt’s find, species identification is a certainty for the Little Deer Cowry from Bolsa Chica, however, as a surface find, chronological placement is more problematic. This article will address the issue of prehistoric authenticity, the confirmation of which would add an item to an expanding list of goods transported into Orange County.

The Artifact

The Little Deer Cowry shell from CA-ORA-83 is 73mm long, 42mm wide, and 31mm in height (Fig. 6). It weighs 33 grams. As is typical for this species, the specimen is rather elongate with an aperture that is strongly toothed, as compared to the Chestnut Cowry, which, lacking a cylindrical form, appears more oval or egg-shaped and is more weakly toothed. Its original coloration (lower sides violet brown; yellow brown above; sometimes purplish brown bands; whitish spots) (Morris 1966:79) is gone, and instead it exhibits very light tan coloration over much of its surface, lacking, in other words, the appearance expected of a present century souvenir discarded at ORA-83.

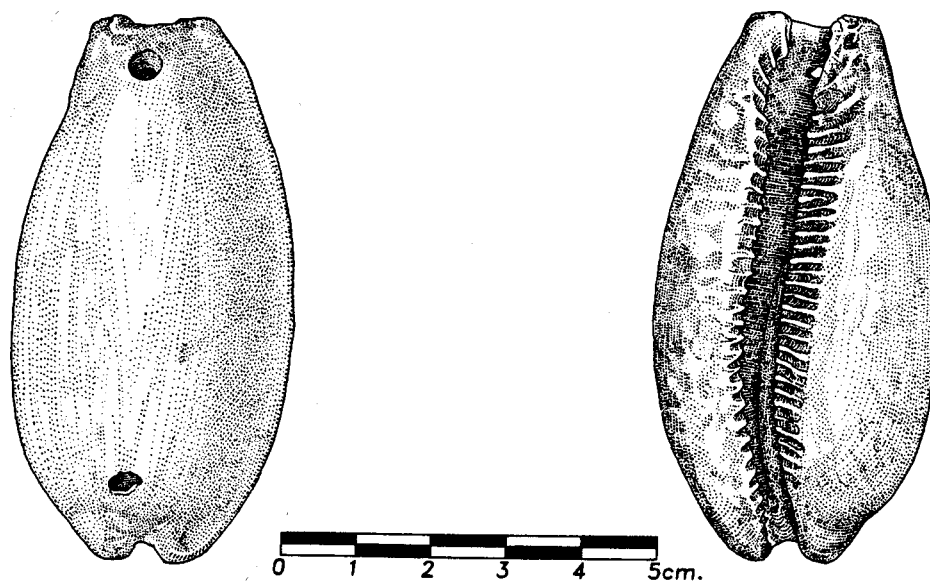


Fig. 6. Little Deer Cowry from CA-ORA-83.

Small drips of what appears to be asphaltum cling to the shell surface near the margin of the dorsal side. Clearly, these are not the remnants of a “marginal spot” or a “dorsal blotch,” natural characteristics appearing on many cowries. The presence of asphaltum would further suggest that the specimen is a prehistoric object.

At one end of the dorsum there is a small bore hole, the work of some predatory species. At the opposite end, the shell has been punched in a manner similar to many Chestnut Cowries recovered in and near Orange County (e.g., Anon. n.d., 1937 1938a, b, c, 1939; Ross 1970; Bates 1972; Lyneis 1981; Cottrell et al. 1985; Barter 1987). Back punching might reflect stringing on, say, a necklace (e.g., Hudson and Blackburn 1985:277, Fig. 284-11) or attachment to clothing. Modern day Cocopá Indians carry on this tradition of back punching Chestnut Cowries to manufacture body adornment (Alvarez de Williams 1991:44). Curiously, while the vast majority if not all whole Chestnut Cowry bodily ornaments are holed (punched, drilled, or abraded) (see King 1981:362-363) at the anterior end (narrow end), the Little Deer Cowry specimen is back punched at the posterior end.

With some uncertainty clouding the attribution to a prehistoric provenance, we decided to submit the Bolsa Chica shell to radiocarbon assay using AMS technology. Employing a Dremel drill fit with a 0.5mm dental bit, a sample was taken from the columellar element of the specimen on the shell’s basal surface, and it was sent to Beta Analytic Inc. for analysis. The measured radiocarbon age B.P. is 920 ± 60 years (Beta-127334). The conventional ^{14}C age is 1340 ± 60 B.P.

The radiocarbon determination substantially raises the probability that the Little Deer Cowry was used prehistorically at CA-ORA-83. Assuming the animal's death date was not significantly different from the arrival of its shell to Bolsa Chica, the beginning of its employment, perhaps as an ornament, magico-religious item, and/or fertility symbol, occurred during the Late Prehistoric period.

Discussion

The local archaeological record contains a remarkable variety of prehistoric trade items that arrived from sources north, east, south, and west of Orange County borders, some even out-of-state (Table 1).

The Little Deer Cowry specimen from Bolsa Chica now adds to the list of archaeologically described exchange items. How the shell ended up in Orange County is an enigma. It may have been carried through Baja California, or it may have been transported along the Mexican mainland to a point north of the Gulf of California and thence west toward the Pacific Ocean. In the Late Prehistoric period, several trade trails led from the Lower Colorado River area into the southern California coast. The best documented Southwest to California trade (textiles for Pacific Coast shells and shell beads), that of the Mohave Indians (see Koerper 1996), fits Renfrew's model for "directional commercial trade" (1972:470-471) rather than a "down-the-line" model (Renfrew 1972:465-466), which best characterizes, for instance, long distance trade in obsidian from the north and into Orange County over several millennia (Koerper et al. 1986; Ericson et al. 1989). Evidence is lacking to support a pre-Late Prehistoric period directional commercial trade between coastal peoples and Southwestern entrepreneurs. Presently, the transport route of the ORA-83 cowry, as well as the nature of its transfer to ancient Orange Countians, appear to be insoluble issues.

As an exotic object, the shell probably bore special significance. Cross-culturally, cowries have been widely esteemed as money and/or ornament (e.g., Kenyon 1941; Quiggin 1949; Einzig 1951; Johansson 1967; Hogendorn and Johnson 1986) and have also found employment as game pieces, as in India (e.g., Gabriel 1996:164), and as divination pieces, as in, for instance, Yoruba culture (Bascom 1980). The cowry is not mentioned as a medium of exchange in Native California (see Taxay 1970), but cowries did play a role in southern California at least as decorative items (Anon. 1938b; King 1981; King 1982:323-325, 422-425; Hudson and Blackburn 1983:78, 109-110, 1985:277; Koerper n.d.), as grave offerings (e.g., Anon. 1938c; King 1981; King 1982), and arguably as clappers for rattles (Anon. 1938a, 1938c, 1939).

Further, cross-culturally, cowries have been imbued with special powers and/or symbolic content. The shell has functioned as an apotropaic to ward off the evil eye and other calamities by, for instance, Asian Subcontinent Indians (e.g., Grigson 1940:159; Elwin 1942; but see also

Table 1. Archaeologically Recorded Exotic Goods Found in Orange County (prehistoric and protohistoric).

Obsidian	Koerper <i>et al.</i> 1986; Ericson <i>et al.</i> 1989
Piedre de Lumbre "chert"	Pigniolo 1992
Franciscan chert	Koerper <i>et al.</i> 1988:182
Fused shale	Demcak 1981; Mason and Peterson 1994:298-299
Tourmaline and Quartz crystals	Anon. 1938b:130, 135
Spodumene	Koerper <i>et al.</i> 1988:245, 252-253
Ceremonial blades	Macko and Couch 1998
Steatite artifacts	Heizer and Treganza 1944:307; Meighan and Johnson 1957; Wlodarski <i>et al.</i> 1984
Grooved mauls/axes	Heizer 1946; Dixon 1960
Sonoran projectile points	Koerper <i>et al.</i> 1996
Pottery	Ruby 1970:264-295; Anon. 1939:Plate 11; Demcak and Cottrell 1985, but see Cottrell 1991; also Koerper 1996:60
Anthropomorphic figurines	Koerper and Hedges 1996
Ceramic smoking pipes	Koerper <i>et al.</i> 1988:244
Shell beads	King 1986:23; Gibson and King 1991:3
<i>Olivella dama</i> shells	Mitchell 1991:70 and 1992
Glycymeris shell bracelets	Anon. 1938; Koerper 1996
Money cowry, single specimen	Koerper 1999, this article
Little Deer cowry, single specimen	Koerper 1999, this article
Glass trade beads	Koerper and Drover 1983:190
Elk antler wedges	P. Langenwalter, personal communication 1999

Murray 1939:167; Durham 1940:79; Lethbridge 1941:48). The cowry often stands for the eye in African, Indonesian, and Melanesian art (e.g., Meek 1941:47-48; Hutton 1940b; Murray 1942:144), but a cowry may also be set into the vulvar position on West African sculptures (Gravel 1995:120). The cowry also has connections to fertility/fecundity/vulvar and corollary life-force beliefs attaching to such social phenomena as birth ceremonies, weddings, and funerals/burials in a wide range of cultures (e.g., see discussions in Sheppard 1939:200; Meek 1940:62; Jeffreys 1940:63, 1942:120, 1943:144; Hutton 1940a:79; Durham 1941:24; Harris 1943:143; Gobert 1951; Safer and Gill 1982). The linkages of the evil eye, eye, vulva, fertility, etc. receive cogent treatment in Gravel (1995). There is strong circumstantial evidence to support the hypothesis that cowry shells connected to sex-based symbolism in prehistoric southern California (Koerper n.d.).

Concluding Remarks

Five nonindigenous shellfish species, including four gastropods and one pelecypod, all transported over great distances, are reported from Orange County archaeology sites. The Money Cowry shell found by Herman Strandt (1965:31) represents the most perplexing of the finds; however, its present whereabouts is unknown.

The Little Deer Cowry from Bolsa Chica is not without difficulties, also, but its physical presence at least allows macroscopic observations and a radiometric analysis to infer that prehistoric exchange of this Gulf of California shell best accounts for its discovery on a coastal midden. We tend to favor a route through the Lower Colorado River area and across the Colorado Desert or Mojave Desert, if only for the fact that trade following that course was well established within the Late Prehistoric, protohistoric, and historic periods (see Koerper 1996). The trade included bracelets made from the only bivalve species (*Glycymeris gigantea*) among the five nonindigenous molluscs. One such bracelet was from CA-ORA-225 and another from CA-ORA-57[-77] (Koerper 1996). *Olivella dama* shells also were transported from the Gulf of California into Orange County where they likely were manufactured into Barrel beads and Cap beads (Gibson and Koerper n.d.). For instance, *Olivella dama* beads have been recovered at CA-ORA-236 (Mitchell 1991:70, see also 1992).

The last of the five species is represented by a single specimen from the Atlantic Coast, a Knobbed Whelk (*Busycon carica* Gmelin) (Fig. 7) unearthed at CA-ORA-64 (Koerper 1998:134). Like the Bolsa Chica cowry, a tarry substance adheres to the outer surface of this trade item. Fortunately, the tar spells out a precise provenience, thereby avoiding any confusion regarding its cultural affiliation (1953 National Boy Scout Jamboree), and saving the cost of a radiocarbon assay.



Fig. 7. Knobbed Whelk (*Busycon carica* Gmelin) shell recovered at CA-ORA-64 and attributed to activities of the 1953 National Boy Scout Jamboree. Shown approximately half size.

Acknowledgements

We are indebted to Joe Cramer for all drawings of artifacts appearing in this article, and we very much appreciate Carey Cramer's maps of Figures 3 through 5. We thank Mike Macko for permission to illustrate the shell in Figure 7. Personnel at Scientific Resource Surveys, Inc. produced Figure 1. Wendy Peeter of the UCLA Fowler Museum of Culture History, Archaeological Collections Facility was generous with her time. We wish to thank Karen Koerper who typed several drafts of this paper. The efforts of the reviewers are appreciated as are the editors' notes. Above all, without Herrold Plante's contribution this study would not have been possible.

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