

# Small Shell Disk Beads in a Prehistoric Central Baja California Site: Interaction Implications

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## Abstract

A cremation in a late prehistoric dune site (LGN-3) along Baja California's Laguna Guerrero Negro revealed small shell disc beads that appear to have their closest parallel to beads found in the American Southwest, including those occurring among the Seri (Comcaac). Interactions between the prehistoric peninsula peoples (as in historic Cochimi territory) and peoples to the east and north seem exceptional rather than common, but the intriguing evidence of exotic goods points to the potential for future discoveries that could lead to a better understanding of past regional intergroup interactions.

## Introduction

Intriguing research issues in Baja California prehistoric archaeology include the levels of sociocultural interactions that occurred among ethnic groups within the peninsula. What cultural influences, direct or indirect, ensued from outside, especially from the north and northeast in what is now the United States and from the east across the Gulf of California from what is the present mainland Mexico? It is important to recognize that Baja California's prehistoric cultures likely had influences on aboriginal societies outside the peninsula and that the peninsula was a source of at least one valued resource, marine shells, such as abalone and perhaps *Olivella*.

Laylander (2006:5–9) called attention to research issues of continuity versus change and of isolation versus connection with regard to prehistoric peninsular societies. He wondered whether there were

ongoing cultural alterations produced by innovations and by the diffusion of new elements from outside such as the bow and arrow, projectile point styles, and other cultural traits. Both Rogers (1945) and Tuohy (1970:42) discussed the diffusion of late prehistoric pottery from the northern peninsula to a point south of Bahía de los Ángeles. Brainerd (1949) reported on a stirrup pot from Lower California, and he indicated this form may have diffused from the Southwest. The linguistic and physical anthropological evidence (cf. Mixco 2006; Monroe et al. 2008) points strongly to a north-south connectivity.

Hyland (1997:79–82) made a case for the relative isolation of prehistoric Baja California after initial colonization, with the northern gateway as the principal entry point of external influences. Based on anthropological evidence, he concluded (Hyland 1997:81) that “there is probably no other area of North America of comparable size that developed in such relative isolation from the mainland.” This conclusion continues to be testable. Consider other studies cited below.

Macfarlan and Henrickson (2010) undertook a statistically study of select Baja California and Sonora Native groups of contact-period age that shows levels of cultural similarity or dissimilarity. They demonstrated that statistical applications to cultural trait lists can independently reinforce or bring into question linguistic evidence, thus assisting in prehistoric reconstructions

and allowing one to test hypotheses regarding cultural or ecological marginality and core/periphery relationships. Laylander (2006:8) briefly wrote about the possibility of prehistoric links across the Gulf of California between mainland Mexico and the peninsula, potential contacts using a steppingstone pathway of islands previously discussed by Bowen (1976), Kowta (1984), Foster (1984), and Spring (1990), among others. Thomas Bowen (2009:50, 54) reported that Seri pottery made it from the mainland to Isla San Esteban and Isla San Lorenzo. Furthermore, he found that virtually every island in the Gulf was visited by Native folks, especially the Seri or their ancestors/predecessors (Bowen 2009:79). The Seri reported that a small band even lived on the peninsula, traveled often to Isla Ángel de la Guarda to hunt rattlesnakes, and sometimes went to Isla Tiburón to visit and trade (Bowen 2009:67, 81).

Among prehistoric cultural materials found in the central peninsula that appear to have origins in the Colorado Delta area or across the Gulf of California, there is a piece of woven cotton (*Gossypium* sp.) cloth from the Bahía de los Ángeles Palmer Collection described by Massey and Osborne (1961:351). They believed it was from the mainland Mexico cotton-weaving cultures of the Oasis area. The fragment contains warp ends with decorative strengthening known for Southwestern textiles (Massey and Osborne 1961:351). Massey and Osborne suggested that perhaps the Seri (Comcáac) were intermediary traders because they lacked cotton weaving but bordered groups who wove textiles since at least Pueblo I times. They also found abalone ornaments (made from a Pacific species) and brownware pottery. So, following the above information, it should not be surprising to find some material culture on the peninsula from cross-peninsula sources and cross-Gulf sources. Furthermore, it is worth considering Premo and Scholnick's (2011:174) statement that "evidence that artifacts or raw materials were transmitted over a given distance raises the possibility that cultural variants (including ideas) were too."

Even on a less extraordinary level, it is worthwhile to know about exotic introductions of material goods (or individuals or small groups of people with non-local genes, ideas, and language variations) to prehistoric cultures that may have had no dramatic or only minor effects to general lifeways but simply show some level of interaction and knowledge of extraneous influences and items. Recognizing such occurrences has potential heuristic value in terms of understanding or postulating prehistoric cultural stability, conservatism, or liberalism. Clearly, historic period introductions of material culture, disease, and ideas/behavior had profound influences on peninsular Native American societies, a topic beyond this paper. It seems probable, contrary to contentions of relative cultural isolation after initial late Pleistocene colonization as stated by Hyland (1997:79–82), that there were some influences on prehistoric groups from material supplies or ideas originating with neighboring groups or from those more distant, a topic briefly explored here. This paper will more pointedly focus on one data set, a single lot of small shell disk beads, that are perhaps best explained as having a distant origin and as reflecting a widespread belief by the past peninsula peoples regarding the role of valued goods as accompaniments in mortuary practices, property more important with respect to ownership than origin.

### **Background to Discovery**

For well over a decade spanning the 1990s and early twenty-first century, this writer has conducted archaeological research along the arid shorelines of three adjoining lagoons that lie on the Pacific side of Baja California, near the middle of the peninsula (see Ritter 2009), documenting 51 sites over a distance of some 20 km of current and ancient shorelines (Figure 1). Understanding the dynamic relationships between Native lifeways in this region and the changing environmental setting, especially with regard to the lagoon ecosystems, is important to archaeological interpretations, particularly because of the common

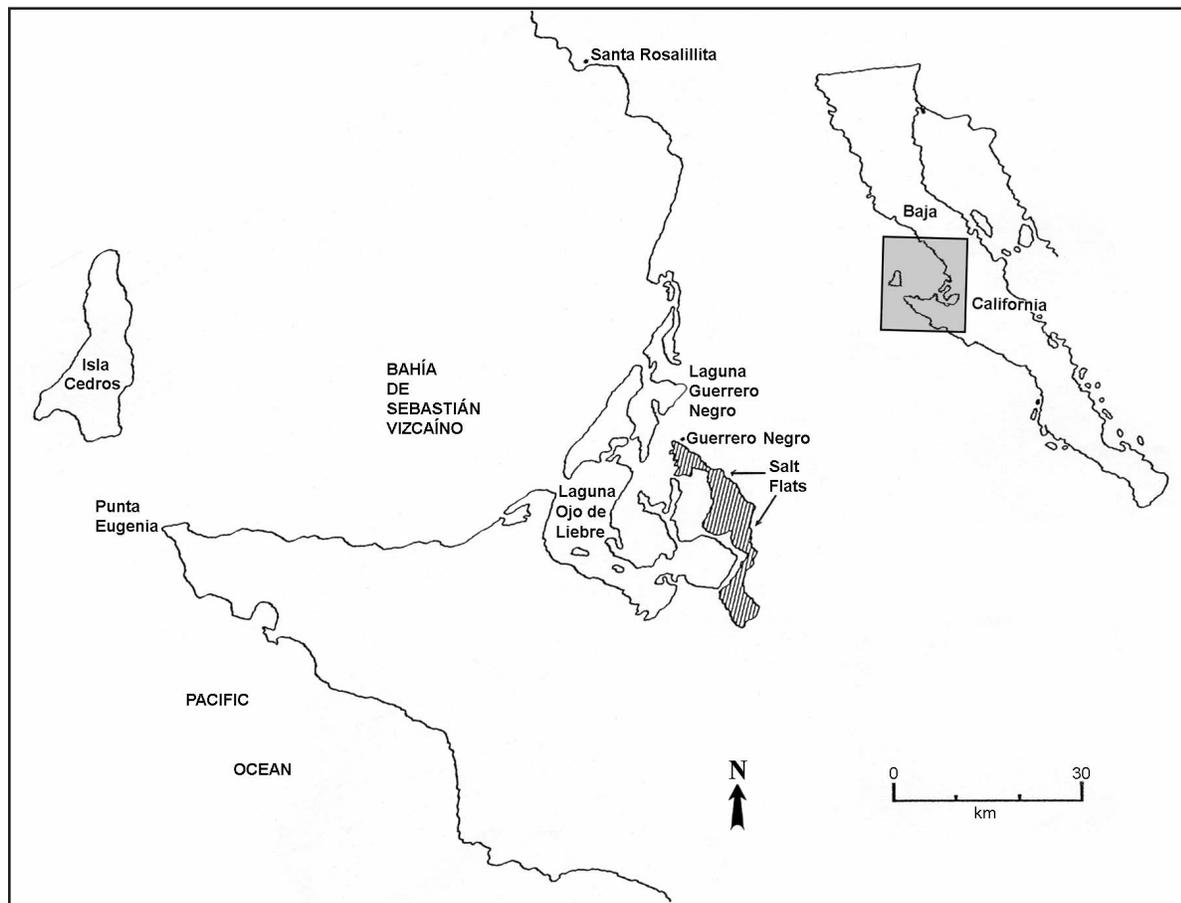


Figure 1. Site vicinity map.

perception that this area is and was bleak and inhospitable to people.

The locality is part of the Vizcaíno Desert (or larger Central Desert), straddling the state line between Baja California Sur and Baja California. This coastal setting is the western terminus of an expansive plain bordered on the east by the Sierra de San Francisco and on the west by the Pacific Ocean and Bahía Sebastián Vizcaíno. Nelson (1921:71) noted that this desert stretches some 240 km from Santa Rosalía Bay on the north to a point just south of Ballena Bay.

Shreve (1951) and Wiggins (1980) designate this general study region as part of the Sarcophyllous

Desert (also known as the *Agave-Ambrosia* region or Vizcaíno region). Zippin and Vanderwier (1994:103) found that the vegetation of the Vizcaíno Desert plains today is primarily composed of two vegetation types, the first dominated by very low (< .5 m) shrubs of mostly *Frankenia palmeri* and *Atriplex* spp., and a second occurring on stabilized and non-stabilized dunes, that while relatively species-depauperate, includes *Larrea tridentata*, *Lycium californicum*, *Errazurizia megacarpa*, and *Atriplex barclayana*. In addition, observations from this author's studies suggest two principal local vegetation communities, one related to marsh vegetation along the lagoon shore and one just inland that is differentiated into high dune and low dune/plains .

Marine animals were probably the most important attraction to the Indian visitors. Hubbs (1960:142) listed fish from the coast of northwestern Baja California, from north of Bahía Sebastián Vizcaino: 65 Panamic species, 96 San Diegan species, 62 Californian species, 60 Californian-Vancouverian/California-Alaskan species, and eight Pacific amphiboreal species. Concerning marine reptiles, Hubbs (1960:142-143) noted that all sea turtles of the eastern Pacific probably occur at least occasionally along the west coast of the peninsula.

The marine and terrestrial biota certainly offered prehistoric peoples a rich source of food and other resources on a seasonal if not multiseasonal basis, luring people from at least the highlands to the east and possibly places more distant.

Work previously conducted built on the cultural-historical base by discriminating between the material records of regional prehistoric, protohistoric, and early historic people. Our project was an effort to explore prehistoric mobility patterns, trade and exchange systems, and ecological/adaptive strategies of the past societies. Spatial and diachronic perspectives were closely considered, especially with regard to geomorphologic processes and environmental changes that occurred in this locality, such as shoreline and lagoon transformations (see Ritter [1999] for more details). The proposed methodology was to complete a series of transects and locate sites during the process.

This methodology revealed a ribbon of intra-dune sites along the present and ancient shorelines, the rich archaeological remains quite visible due to contrasts between dune sands and human refuse. The data suggest very mobile populations and possibly long-range interactions, at least to the central cordillera, and likely beyond (Ritter 2009). The proposed regular, short-term visits to the rich coastal waters extended across at least two millennia. It appears that visits were being made to these central-west lagoons by

groups from many locations in the central cordillera to the east. Based on burial information, even the aged and children made these trips. Such visits may be related to a cultural florescence influenced by such factors as population expansion, climatic influences, technological breakthroughs, and group movements and interactions (Ritter 2006:151–152). One result of these ongoing cultural changes, albeit minor, may have been interactions with distant groups and acquisition of goods like those discussed in this article.

In sum, there is considerable evidence to suggest a proliferation of uses of the west-central peninsula lagoons over the last 2000 years. These variable econiches were extremely rich in foods, although exploitation was seemingly curtailed by very limited fresh water availability. We surmise that as more people were present in the central peninsula, this resource base became increasingly attractive, especially where cooperative forays with logistical support could be mustered from the upland camps.

Management of the acquisition and distribution both nearshore and inland of the presumed abundant sea harvests may imply nascent leadership and differential regional access to surplus goods. Variable burial practices, *chacuacos* (shamanic paraphernalia), possible wealth or status items (beads, well-made bifaces, shell ornaments, and a perforated coin), water stewards, specialists or craftsmen in manufacturing flaked stone tools such as the very thin Guerrero Negro points, balsa/raft tenders, timing of coastal visits, and possible interaction with Cedros islanders (see Aschmann 1959:72) are all suggestive of role variations among adult males, but also of differential access to resources.

### **The Discovery Site**

At prehistoric and protohistoric sites found during the 1997 and 1999 surveys, including the discovery site, select limited excavations in .5 x .5 m to 2 x 2 m units

were conducted (Figure 2). Small-mesh screens (1.7 to 3 mm) were used for recovery.

The beads that form this article’s focus were found at site LGN-3 (Las Argumentistas), a scattering of cultural remains in a blowout or hollow in a large dune field. This location is near the northeast end of current Laguna Guerrero Negro. Dunes as high as 5 m are actively moving across the site (Figure 3). Shallow cultural deposits reside on a low ridge about .5 m high above the pan but within the dune field, and the ridge

is composed of dry yellowish red (5YR 4/5) to gray (7.5YR 6/1) sand. This location may approximate an older shoreline area. The site is characterized by three loci totaling just over 4,200 m<sup>2</sup> in area.

Characteristics of the site, other than a cremation with scattered shell beads, include dense shellfish and flaked stone remains; a small, obsidian perforator or eccentric projectile point; late prehistoric obsidian Guerrero Negro series projectile points; obsidian and quartz Comondú series projectile points; cores; bifac-

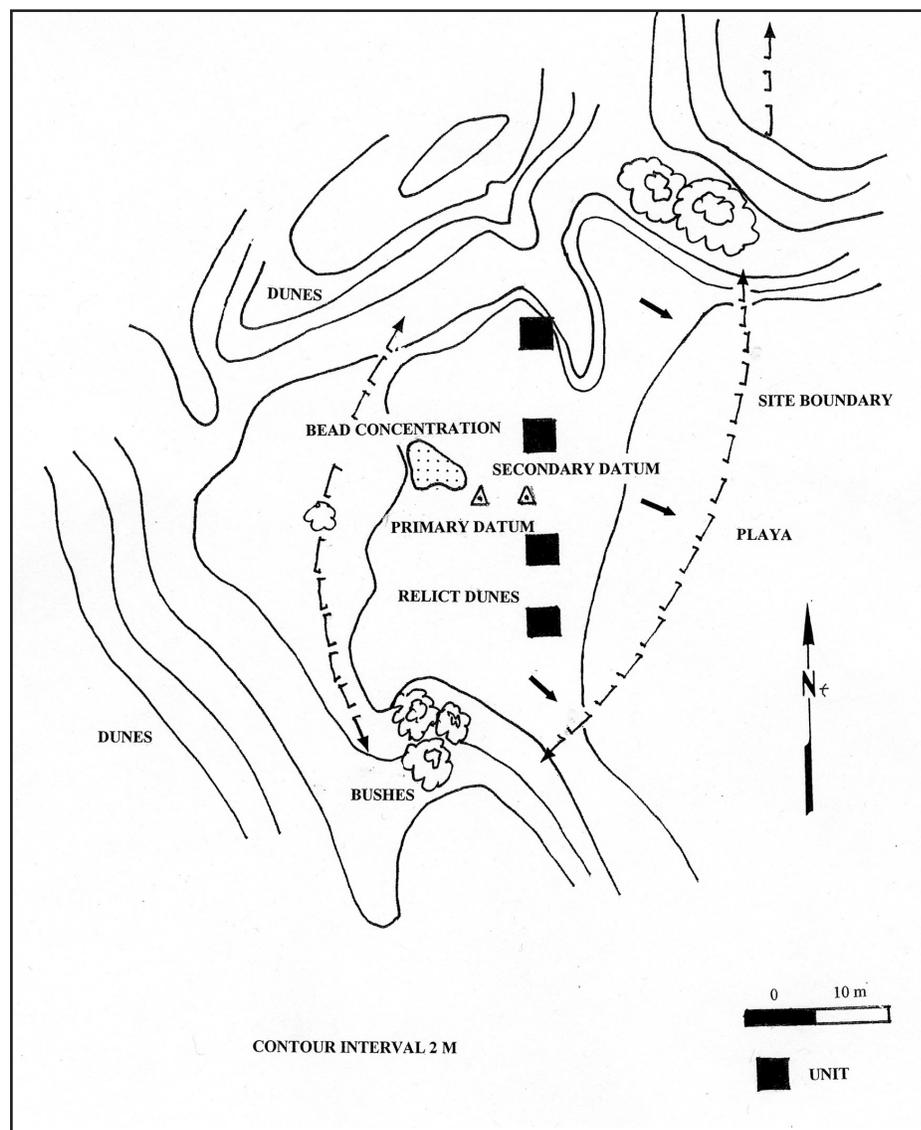


Figure 2. Map of site LGN-3 illustrating excavation units and area of shell bead concentration.



Figure 3. Collecting cultural materials at LGN-3.

es; flaked stone tools; burin spalls; hammerstone; and milling stones. Comondú period obsidian hydration readings on visually sourced Valle de Azufre obsidian artifacts measured  $2.58 \pm .12$  and  $2.31 \pm .09 \mu$  were obtained. While contact-period artifacts were found at nearby sites, none were found here. A handful of other cremations were discovered in the locality, a few with spire-lopped or spire-ground *Olivella* shell beads and other items, but no cremation contained the bead type discussed herein or rich groupings of nonperishable grave goods. There is no reason to believe that the cremated individual and bead lot were not from the group of individuals utilizing this presumed camp.

Features at LGN-3 also included a hearth area composed of concentrated charcoal and burnt faunal remains, and there were several flaked stone workshops. The undated adult cremation included portions of various long bones, innominate parts, vertebrae fragments, a right talus, and a right calcaneus.

This site, like others nearby, witnessed considerable dune movement from season to season. The main

locus was remapped preparatory to laying out four spaced excavation units (see Figures 2 and 3). A principal reason for revisiting LGN-3 in 1999 was to recover a cremation found during the 1997 field season. Unfortunately, this cremation was overlain by an active dune, although recovered shell beads discussed herein in the vicinity were undoubtedly mortuary accompaniments for this individual. Briefly, the remains from the excavated units adjoining the area of bead scatter are discussed below to provide a sense of site composition.

#### *Unit 5N/3E*

Unit 5N/3E, like the others, lacked appreciable depth of cultural materials, generally 0–10 cm maximum. Near the crest of a relict dune/shore, it contained virtually no cultural materials below 5 cm as the pale yellow surface sands changed into a pale brown to an almost reddish-brown, more indurated deposit. A small quartz Comondú series projectile point, a biface fragment, and a hammerstone were found along with relatively dense faunal materials, both shellfish and non-human osteological fragments.

**Unit 12N/3E**

Unit 12N/3E, with only 2–3 cm depth, was carpeted with shellfish and other cultural remains. Surface sands were gray, changing to yellowish-brown at 3 cm.

**Unit 5S/0E**

Unit 5S/0E also proved shallow but rich in cultural remains, dominated by broken shellfish and sporadic flaked stone and non-human osteological evidence. Several of the *Argopecten circularis* shells had *Ostrea* sp. or *Crucibulum* sp. shells attached, perhaps indicative of shellfish introduced to the site but not consumed.

**Unit 10S/3E**

The final LGN-3 unit, 10S/3E, contained evidence equivalent to the unit mentioned just above, but with charcoal pieces scattered about. Much of the shell was fragmented from probable trampling, and 5 percent of the shellfish remains were burnt, either from roasting or accidental burning in a cooking fire.

**Small Shell Disk Beads**

A previously undiscovered artifact type in Baja California is the small shell disk bead (Figure 4). A concentration of 159 of these beads were found in apparent association with a cremation at LGN-3. These beads are circular in plan view, and they range from flat-shaped disks to slightly cupped specimens, with the exception of six wedge-shaped specimens. Of a 100-bead grab sample, 48 are disks with both sides flattened, and 52 are slightly cupped, with a few more moderately cupped and resembling *Olivella biplicata* saucer beads (Chester King, personal communication 2001). They were manufactured of some kind of bivalve. Growth rings generally run parallel

to the planar surfaces of the beads, or in some cases growth rings are perpendicular to the planar surfaces or run diagonally. The beads are stored at the Museo de Naturaleza y Cultura in Bahía de los Ángeles, Baja California.

Sharon Urban (personal communication 2011), an expert on Southwest archaeological shellfish collections, suggested, based on examination of a color image showing unburnt beads (Figure 4), that these could have been made from *Aequipecten circularis* (*Argopecten circularis*). Keen (1971:87) believes that these shells exhibit a wide variety of color and markings and occur from both sides of the peninsula. Current bead colors based on an unaltered digital color image are dominated by pink (Munsell 5YR 8/3, 5YR 8/4, and 7.5YR 8/4) and reddish-yellow (Munsell 7.5YR 7/6 and 7.5YR 8/6) with several somewhat mottled with Munsell colors on one bead 10R 6/6 and 10R 6/8 (red) and on another bead Munsell 2.5YR 5/6 and 2.5YR 6/6 (light red to red). Taxonomic placement of these beads' shellfish origin is not yet resolved. Perhaps oxygen isotope testing might reveal the side (or sides) of the peninsula from which these beads originated. Also, experimental archaeology might shed further light on the species involved and the manufacturing technique.

These beads were polished, a factor somewhat obfuscated by sand abrasion. They include central perforations that are biconically (n = 42), conically (n = 18), and straight drilled (n = 40). Haury (1976:310) suggested that small straight holes in beads may have been drilled with a cactus spine and an abrasive. The larger holes may have been made with a flaked stone drill. The orifices average .24 cm (s.d. = .04 cm) in diameter, with a range between .12 and .32 cm. One bead exhibits three equally spaced lateral grooves along one face, its presumed wear possibly resulting from stringing or sewing the bead onto leather with the face directed outward.

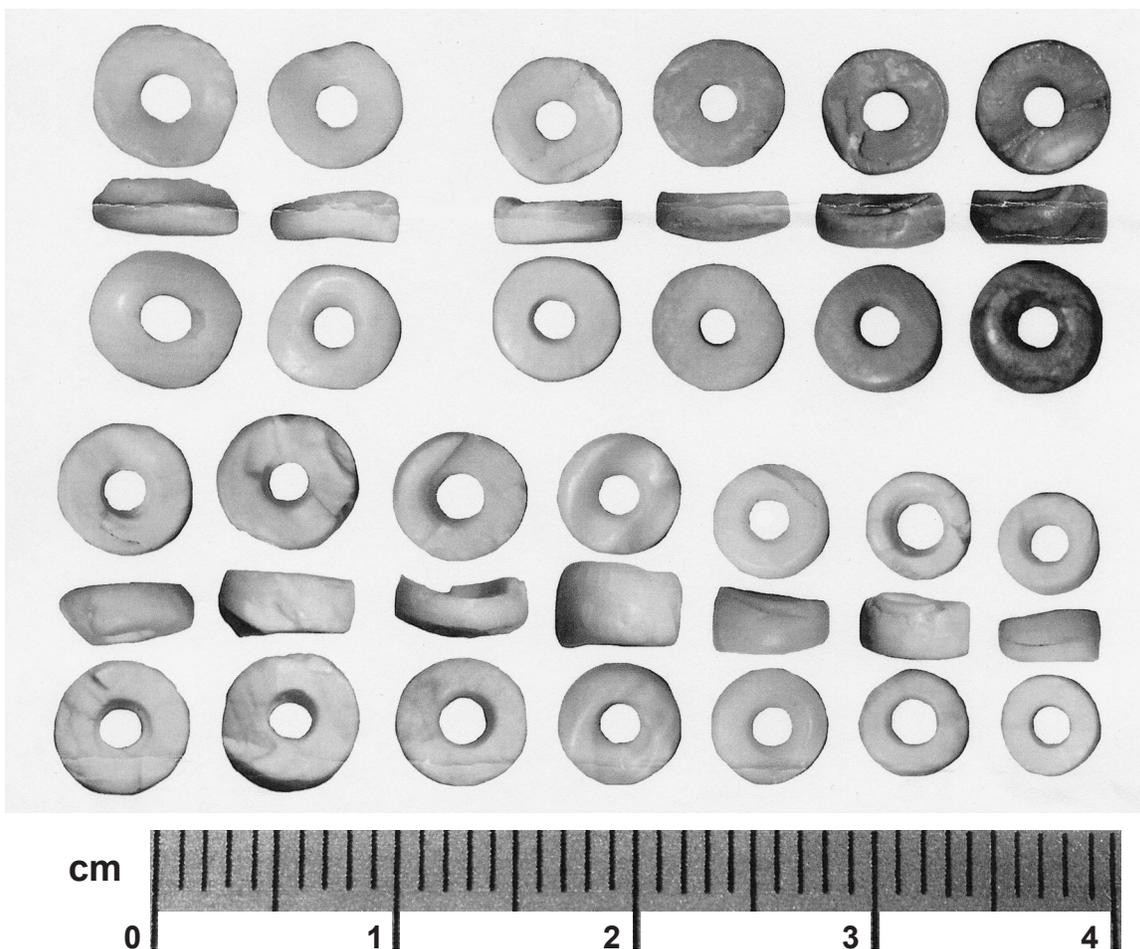


Figure 4. Sample of beads. Photograph by Chester King.

These beads are quite close in size. They vary from .11 to .36 cm in thickness, with a mean thickness of .19 cm (s.d. = .05 cm). Diameters range from .41 to .62 cm, with a mean of .50 cm (s.d. = .05 cm). Figure 5 shows how clustered these beads are when comparing diameter/ thickness ratios. Forty of the 150 beads exhibit burning, suggesting they were mortuary offerings or accompaniments charred during the cremation process. However, Felger and Moser (1985) remarked that *Olivella* shells for beads among the Seri, or Comcáac, were bleached white by roasting them in hot sand, perhaps charring some, so there is a possibility these beads were charred prior to use as funerary-associated items.

### Discussion

It is very possible that these beads were not made at the Laguna Guerrero Negro-Laguna Manuela coastal location. This is based on a sample survey yielding 51 coastal sites (limited excavation/screening of cultural debris, transects across most sites on hands and knees, and general observations by various team members) that revealed no shell bead workshop debris. These observations involved only limited sampling of the sometimes extensive and thick shell debris without considering what might be revealed at local unsurveyed locations.

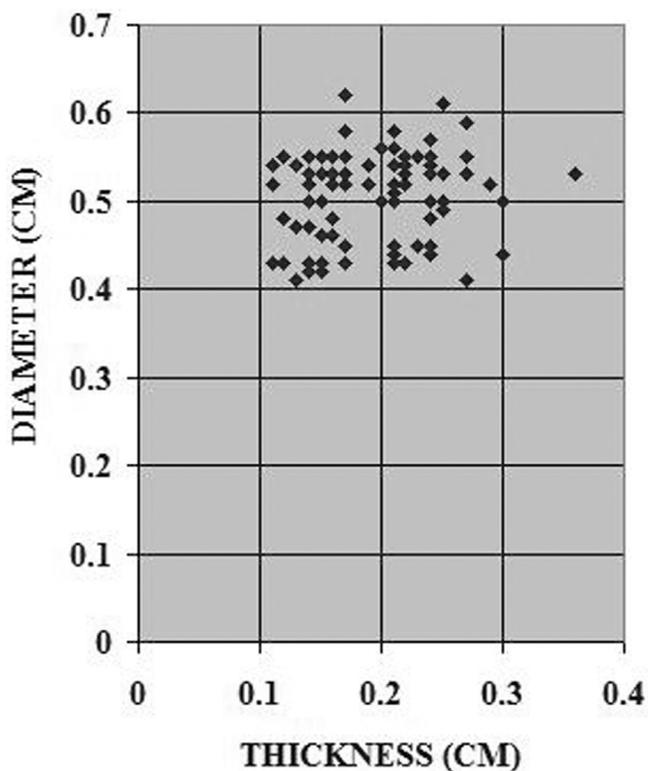


Figure 5. Scatterplot of bivariate data based on bead diameter and bead thickness; LGN-3 sample (n = 100).

If indeed these LGN-3 beads are exotic, it is possible that such ornamental wear was brought with an occupant, apparently for the last time, from a more permanent camp in the mountains. The mobility model reflected in this scenario sees late prehistoric/protohistoric family-based forays to the coastal lagoons from various locales within the uplands to the east (see Ritter and Burcell 1998; Ritter 1999). Timing of visits was likely variable with year-round resources present, but at times lean upland resources may have prompted coastal visits.

Southern California bead expert, Dr. Chester King (personal communication 2001), indicated the LGN-3 beads were not made from shell species used for beadmaking on the Pacific coast of southern California, but rather from a species used over a large area of northern Mexico. Haury's (1976:309–310) description of the Hohokam included a disk type with a diameter range of 1.5 to 11.0 mm, which is within this sample's

range. These beads occur throughout the Hohokam sequence. Gifford (1933:277) reported that during ethnographic times or within historic memory, the Cocopa acquired flat white clam shell beads (ca. 1/4-in diameter) for necklaces from the Walapai. These may have been derived directly or indirectly from Pacific coast peoples, such as the Chumash.

Alvarez de Williams (1975) summarized sea shell use in the peninsula, noting the many references to shell trade between California/Baja California and the greater Southwest (cf. Henderson 1930; Brand 1935, 1938; Colton 1941). She also mentioned small shell disk beads with cremations around Lake Cahuilla as reported by Smith (1942).

Thomas Bowen (1976:87–88, Figure 72), in his work along the central coast of Sonora, Mexico, reported on two sites with very similar small disk beads. These beads are likely attributable to the Seri, or Comcáac,

who either made these or acquired them from another group. One burial included 6,300 specimens. Holzkamper (1956: Figure 8) discussed disk-shaped beads from Estero Tastiota along the same coast that are slightly larger than those reported here and in Bowen's sample. Furthermore, a recent powerline project between Kino Bay and Estero Tastiota led to the discovery by Instituto Nacional de Antropología e Historia archaeologists of over 1,000 disk shell beads, nearly all of them at a single site with burials. These outwardly appear smaller than the beads in the sample from Laguna Guerrero Negro (Thomas Bowen, personal communication 2010). In the 1960s Glen Conklin, a relic collector from San Diego, recovered a large number of shell beads (100s to 1000s) from a burial eroding out of a cliff on Tiburon Island in the Gulf of California. They were found with a "scraper and skull" and are now curated at the Museo de Naturaleza y Cultura in Bahía de los Ángeles. A brief examination of the beads by the author in 2011 suggests they are very similar to those found at Laguna Guerrero Negro. The beads are disk to cup in configuration; a limited sample of these specimens measured .35, .47 and .48 cm in diameter. Thicknesses of a "grab sample" measured .16, .23, .25, .27 and .3 cm. Orifice openings of four strung beads measured .18, .19, .2 and .22 cm. They are very close in measurements to the Laguna Guerrero Negro sample. Whether they are from the same shell species could not be determined in the brief examination, but they seem to be made from a large bivalve.

It is not certain that the Laguna Guerrero Negro beads have a connection with the Southwestern types. Nevertheless, such a link through down-the-line trade (or even direct transmittal) cannot be ruled out. DuShane (1971:10) noted that "trade went on between peoples of the mainland of Mexico and the outer (Pacific) coast of Baja California." However, she offered little information to support this contention.

Formal shell artifacts at Laguna Guerrero Negro for the most part appear to be mortuary related or are

manufacture discards. Small shell disk beads, while quite possibly not manufactured locally, appear to have been imported or carried in, perhaps from as far away as across the Gulf of California in what is today the greater American Southwest, where they seem widespread. *Olivella* beads may also have been imported, possibly from coastal zones to the north or south, as no *Olivella* shells were observed in natural or cultural contexts during work at the central Pacific lagoons. Keen (1971:629) did note *Olivella* shellfish from Magdalena Bay to the south of the study area. Those *Olivella* beads observed at lagoon archaeological sites are similar to *Olivella biplicata* beads of southern California, although the exact species has not been determined. They are not *Olivella dama* beads as reported from the Gulf side of the peninsula and Sierra de San Francisco in archaeological contexts (cf. Ritter 1979, Hyland 1997:319). It is also likely that shell tools and ornaments were transported to interior camps from these western lagoons.

Based on material goods alone, it is increasingly apparent that there was at least sporadic contact between late prehistoric people of northern Baja California and people from locations both to the north (Alta California, Arizona, and beyond) and across the Gulf of California. Interaction or acquisition, perhaps through third and fourth parties, is more apparent during late prehistoric times. It is not surprising that this later contact or trade between intermediaries reached the central Pacific coast of Baja California in the form of small shell disk beads. During protohistoric times, Indian groups continuing to use the Pacific beaches brought items from the missions as well as important goods, such as obsidian from Valle de Azufre (some 90 km away) and rarely even as far away as the San Felipe source.

One prehistoric individual visiting the Pacific shores did not make the return trip and was cremated at LGN-3. With him or her were buried valued beads, perhaps more than recorded here. Mortuary accompaniments are not unusual in central and northern Baja

California (cf. Massey and Osborne 1961; Ritter and Schulz 1975; Ritter 1994; Oviedo García and Guía Ramírez 2008).

As research continues in the peninsula, additional evidence is expected of late (and likely earlier) prehistoric interactions between peninsular peoples and those in the Southwest and Alta California. Goods produced in the peninsula made considerable journeys north and east (and to a limited extent to the south) and vice versa. However, so far the material evidence of interactions seems to be exceptional rather than substantial.

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