

ARCOFACTS: INTERPRETING A LATE TRANSITIONAL BURIAL ASSEMBLAGE AT THE ARCO SITE, CARSON, CA.

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ABSTRACT

The transitional nature of the protohistoric period is clearly reflected in both mortuary practices and material remains at the ARCO site in Carson, California. This paper will provide an overview of exotic materials recovered from this site and discuss their implications for shifts in traditional trade interactions during the early Mission era on the southern California coast.

Archaeological excavation of a protohistoric burial complex at the ARCO Refinery site, LAN-2682, in Carson, California revealed an overall pattern of anomalous behavior in terms of burial practices. Although twenty-six burials were recovered *in situ* from the Arco site, no fixed pattern for deposition of the dead became readily apparent during excavation of the deposit. While inhumation was the most prominent mode of interment practiced at the site, cremations and partial cremations were also seen to co-occur. Inhumations did not display any apparent marked preference for position, ranging from extended to flexed, and while burials were predominately oriented to the north, some also exhibited southern and eastern orientations.

The ARCO artifact assemblage can also be defined as anomalous in nature, most easily characterized by the absence of many of the material culture indicators commonly associated with late prehistoric burial contexts on the southern California coast. In comparison with material culture indices recovered from other late prehistoric burial contexts from the study area, the ARCO deposit is sparse indeed. A single mano fragment is the only representative of milling equipment present, and except for a single gorge, fishing implements are also absent. Shell ornaments, commonly associated with south coast burial contexts, are also largely lacking. Beads, in the form of five perforated *Haliotis* disks, a ground columella spindle ornament and a single *Megathura* ring are the only shell ornaments

recovered from the ARCO site. It becomes apparent that this deposit does not meet with expectations in terms of established burial and material culture associations, a fact which makes it all the more enigmatic in terms of interpretation.

The ARCO site exhibits two discrete burial lenses defined by depth and associated with tight clusters of radiocarbon dates. These radiocarbon dates were calibrated by Beta Analytic and are based upon the analysis of carbon taken from direct burial associations. The lower levels of the ARCO deposit are framed by three readings ranging from 580-480 years before present (ybp) (1420-1620 calendar years), while four dates from the upper levels range between 520-190 ybp (1680-1810 calendar years). These data suggest that use of the Arco site as a cemetery began during the late prehistoric/ protohistoric transition and continued into the Mission era.

This time frame represents a very thin window of time in the archaeological past, which is characteristically transitional in nature. The anomalous behavior exhibited in terms of burial practices and material culture at the ARCO site is quite possibly a manifestation of this transitional period as it occurred among the Gabrielino of the Su'anga village area. This paper will provide an overview of the attributes of the ARCO material culture assemblage with a particular focus on ritualistic-archaic artifact forms and exotic materials as indicators of pre-existing traditions and cultural transition occurring during the protohistory and

Mission era history of this site.

It is an unfortunate fact that due to the extensive disturbance of the ARCO deposit from trenching activity prior to the recognition of the remains, much of the data recovered from the site was retrieved from trenching spoils and is thus hopelessly out of context. However, roughly 50% of the deposit remained intact to be excavated *in situ*, and the patterns of artifact distribution reflected in this context provide the basis for discussion here. Artifacts recovered out of context from trenching spoils are included in terms of their implications for further illustrating the overall complexity of the artifact assemblage, but their interpretational value is recognized to be limited.

The artifact assemblage at ARCO is comprised of limited numbers of the following artifact classes: beads, lithics, bone tools, expedient shell tools, whole *Haliotis* and *Haliotis* ornaments, and historic artifacts. Certain artifacts, such as bone tools and whole *Haliotis* placed with burials occur throughout both upper and lower burial strata. Expedient shell tools occur in the deposit only in association with earlier use of the site as a shellfish processing locality.

Central to this analysis of the ARCO artifact assemblage is the premise that exotic items and ritualistic-archaic artifact forms are of primary utility to the cultural interpretation of material culture. This is due to their value as barometers of patterned economic and social behaviors. This paper employs use of the term ritualistic-archaic to refer to artifacts which appear to demonstrate continuity with previously established cultural traditions which existed prior to European contact. These generally appear to be ceremonial in function, thus the term ritualistic-archaic was chosen as a descriptive classification to address both functional and temporal assumptions of their interpretation.

As noted earlier, radiocarbon dates at ARCO suggest that two contiguous burial use strata occurred at the site. When viewed in spatial terms, the distributional associations of exotics and ritualistic-archaic artifact types in the deposit provide further support for this interpretation. The

following discussion will focus on the quantification of exotic materials and ritualistic-archaic artifacts recovered from this deposit, as well as the characteristics of their distribution in association with both lower and upper burial strata.

LOWER LEVEL BURIALS

Lower level burials are defined on the basis of radiocarbon dates and stratigraphic depth and range from an opening depth of 140 cm to a closing depth of 170 cm. This stratum encompasses six burials, one infant cremation and two disturbed bone concentrations. Dates returned from carbon taken from direct burial associations in units 15, 24 and 27 convert to 1420-1620 calendar years, placing this lower burial stratum in the late prehistoric/protohistoric transition period.

Two hundred and seventy-nine artifacts were recovered from this burial stratum. The assemblage consists of shell beads, lithic debitage and formed artifacts, three complete *Haliotis*, a single glass bead and leather disk, and one bone tool. Eight of the eleven artifacts, or 73%, of the total number identified as ritualistic-archaic recovered from the deposit are also contained in this stratum. These are: a carved deer tibia wand, a Catalina steatite gorget, a Catalina steatite eccentric retrieved in association with a small trinket basket, a large stemmed obsidian dart point, an incised soapstone block, large *Tivela* beads, red ochre, and a ground columella spindle ornament. These were recovered *in situ* exclusively from units in the northwestern quadrant of the site at depths between 140-170 cm.

The deer tibia wand and the columella ornament were both recovered in association with Burial 8, a male placed in extended supine position with head oriented toward the north. The wand was recovered at 145 cm below datum in unit 14 in the left hand of Burial 8, while the columella ornament was recovered from the throat of this burial at 143 cm. The presence of these artifacts indicates that this was an individual of high status. Ethnographic information compiled by Drucker in 1934-1935 from Juaneño, Luiseño, and

Diegueño consultants confirm the use of wands such as this by shamans and dance directors for ceremonial purposes and swallowing exhibitions (Drucker 1937:41).

The wand is a complete specimen, 144 mm in length. A low notch has been carved in the proximal end of the bone, giving it a phallic appearance. The carved end of the bone has been stained with bright red ochre. Deer tibia wands similar to this one have been recovered from numerous south coast archaeological deposits, and are characterized as a diagonal-cut mammal leg bone which forms a handle and blade. Gifford describes four similar types of wands recovered from archaeological contexts on Santa Cruz and San Miguel islands and the mainland in Santa Barbara and Ventura Counties. He places them in a temporal context with the Hunting Culture and Canaliño horizons (Gifford 1947: 116, 122).

The columella spindle recovered from this burial is a non-perforated ornament made by grinding away the whorls of a large gastropod, namely *Kelletia kelletii*, or Kellett's whelk. Its association with the burial suggests that it was placed in the throat of this individual prior to interment. The columella is a very large specimen, measuring 8 cm in length, unperforated, and exhibiting asphaltum stains along its natural whorls. King classifies columella beads as money beads of high value and places them temporally between 1500 and 1834, with use decreasing as they were replaced by glass trade beads. He notes that large columellas such as the one recovered at ARCO generally occur later in the archaeological record than smaller columellas (King 1990: 164-166). The distribution of columella beads and ornaments is generally recognized to be restricted to Chumash country, where evidence of their manufacture has been recovered at sites on Santa Cruz Island and on the south coast mainland at Medea Creek and Burtons Mound.

Burial 9 is an adult male placed in a semi-flexed position oriented to the south 13 cm to the west of the right hip of Burial 8. The skull of this burial is ochre-stained with the same rich red pigmentation as the deer tibia wand. A palm-sized chunk of red

ochre, weighing 11.24 gms, was placed before the frontal section of the skull at a depth of 143 cm. Considering the ceremonial function associated with red ochre in prehistoric contexts, its presence both on the skull of the burial and in the deposit would seem to indicate that Burial 9 was a high status individual.

True ochre is rare in its distribution across the physical landscape, and its presence in this deposit indicates likely procurement through trade. It is known to occur in the Cocopa Mountains in Imperial County, in small scattered deposits in San Diego County, and in the Santa Monica Mountains (Heizer and Treganza 1971: 309). Davis notes that ochre was a common component of Mojave trade with the south coast region, and indeed most ochre recovered from south coast deposits is attributed to this trade network (Davis 1961: 67). However, more scientific methods need to be employed before making generalizations of this type. Ochre source characterization using Rietveld x-ray diffraction and x-ray fluorescence analysis has been explored in Australia with moderate efficacy, the results of which appear to indicate that it is possible to identify the greater geological environment from which specific ochre specimens are derived (Jercher 1998). This serves to thus narrow down the realm of possible source localities. The future refinement and application of this technique to south coast archaeological contexts could be of tremendous benefit in terms of our understanding of trade logistics operating in prehistory.

A Catalina steatite object resembling a sewing bobbin was recovered in direct association with a disturbed partial cremation exposed in unit 19, 40 cm east of the feet of Burial 8 at a depth of 140 cm. This artifact had been placed in a basket next to the remains. The basket itself, while degraded, was unburned, suggesting that it had been placed in the burial deposit after the burning ritual.

No archaeological correlate for this artifact has been discovered as yet. This object is very nearly ovoid in form, measuring approximately 4.5 cm in diameter and 2.5 cm in height, with a weight of 68 gms. The face and base are flat and incised with a series of cross-hatches. It resembles closely the shape of a whale vertebra, such as those

recovered from burial contexts at San Nicolas Island by Meighan, but is much smaller (Meighan and Eberhart 1953: 122). The form is similar to that of a lip plug recovered from Component III at Malaga Cove; however, the size would seem to indicate this would be a most uncomfortable function. Size does matter, after all!

The assemblage associated with unit 22, located directly east of unit 19, is somewhat enigmatic in its interpretation. A gorget and large stemmed obsidian dart point were recovered from this unit at a depth of 143 cm in association with seventy-one small shell beads, many of which were burned or covered with asphaltum. These artifacts were not associated with human remains, and their spatial context was discretely separate from adjoining burial features by a distance of a meter. The data appear to suggest that this concentration is representative of ceremonial behavior and that this particular spot was the site of a burial ritual during the late prehistoric/protohistoric transition.

The gorget recovered from this context is thin and rectangular in shape, perforated and exhibits traces of red ochre. It measures 127.2 mm in length and 96.33 mm in width, and is manufactured from Catalina steatite. The exact function of this artifact is unknown, but other specimens of this type have been recovered from archaeological contexts in Gabrielino country on the mainland and on Catalina Island (McCawley 1996: 99). Associations with late prehistoric deposits are demonstrated for this artifact at both LAN-270 and Malaga Cove, where it occurred in association with a Component III cairn. This indicates that artifacts of this type are representative of long-standing cultural traditions.

The large stemmed obsidian dart point recovered in association with the gorget and burned beads is unique both in terms of its type and material. It is one of only three obsidian artifacts recovered at ARCO, and the only large dart point of its type. Of these three obsidian artifacts, only the dart point was retrieved *in situ* through excavation. The other two, a Cottonwood series concave-base projectile and a complete mid-sized biface, were both recovered from trenching spoils.

Hydration and x-ray fluorescence source characterization analysis was performed on all three obsidian artifacts by Jennifer Thatcher and Craig Skinner at the Northwest Obsidian Research Laboratory in Corvallis, Oregon. The dart point and the Cottonwood concave-based projectile were both sourced to the West Sugarloaf source in the Coso Volcanic Field. Interestingly, both returned very similar double rim hydration readings: 2.3 and 5.0 microns for the dart, and 2.7 and 5.1 microns for the Cottonwood point. This appears to indicate that these artifacts were rejuvenated at some point in their use lives, implying a degree of curated value.

The biface was determined to have been derived much farther afield. It sourced to Sarcobatus Flat B, a nodular source located in southwest Nevada on the other side of Death Valley. The presence of this source in the ARCO deposit is quite surprising due to the fact that its western distribution into California is restricted by both the geographic desolation of its location and the availability of the closer Coso sources. A hydration rate for this source has not yet been established, but a rim value of 1.9 micron returned from analysis of this artifact suggests a likely temporal affiliation with the late prehistoric period.

Excavation of two burials in unit 27 revealed 32 *Tivela* beads, most covered with asphaltum at a depth of 146 cm. Prior archaeological investigations at other sites on the south coast such as LAN-1, ORA-83 and ORA-365 indicate that these beads occur in archaic contexts, suggesting that the presence of these beads in the ARCO deposit may represent curated technology. Radiocarbon testing of a single bead appears to stand in support of this hypothesis, returning a date of 500-600 calendar years converted. This date is nearly a thousand years older than the established date for the stratum. Two control dates taken from shell in lower level units 15 and 19 returned dates between 1320-1540 calendar years converted, so while the *Tivela* shell bead date is certainly anomalous, it also appears to be valid.

Two fragments of an incised Catalina soapstone block stained with red ochre were also recovered from unit 27 at the same depth as the

beads. It is covered by irregular cross-hatching, and is much thicker than standard incised soapstone tablets described from other archaeological contexts. This artifact appears to have been ceremonially killed, unlike any of the other artifacts in the lower level deposit.

UPPER LEVEL BURIALS

The upper level burials at ARCO are defined on the basis of radiocarbon dates and stratigraphic depth and range from an opening depth of 67 cm to a closing depth of 113 cm. This stratum frames the majority of the deposit, encompassing twenty burials and three disturbed bone concentrations. Dates returned from carbon taken from direct burial associations in units 2, 5, 11, and 4 convert to 1680-1810 calendar years, placing this upper burial stratum in the late Protohistoric/ Mission transition period.

The upper burial stratum exhibited a pattern greatly different from that observed in the lower stratum. There are several strong indications of social stress. While lower burials exhibited care in their placement and demonstrated a degree of social complexity in terms of the associated artifact assemblage, upper stratum burials were observed to be haphazard in their placement and had few artifacts. Two *in situ* burials exhibited signs of major trauma with extremities severed, while a third burial consisted of a single cremated skull.

Six hundred and eight artifacts were recovered from the upper level burial stratum. Shell beads were the predominate artifact form recovered from the burials in this stratum, followed by lithic debitage and formed tools, a small number of bone implements, three whole *Haliotis*, one clay pipe fragment, and a burned bowl fragment of Catalina soapstone.

There are two ritualistic-archaic artifacts, or 18% of the total recovered from the deposit, associated with this stratum. The first of these is a clay pipe or sucking tube fragment that was recovered in association with a bundled burial placed in unit 1 at 67 cm. Pipes and sucking tubes are ethnographically described as having ceremonial functions.

The second of these is the burned bowl fragment. While the artifact itself does not demonstrate a ceremonial function, ritualistic function is implied through its context. The bowl was recovered in direct association with a cremated skull in unit 4 at a depth of 108 cm. It is burned, and the charcoal and ash lens associated with this feature indicates that this artifact was broken and placed *in situ* prior to the cremation of the skull, providing an excellent argument for the ceremonial killing of the bowl in a ritualistic context. A radiocarbon date taken from this carbon lens places the date at 1690-1770 calendar years converted.

This stratum is associated with a much higher debitage count than lower levels. The debitage index encompasses all stages of tool manufacture from core reduction to biface thinning, with banded Monterey chert the most common material present. Biface fragments make up over half of the total count for formed lithics, while Cottonwood series triangular and concave-based projectiles contribute another quarter. These indices suggest that biface manufacture for placement with the burials possibly took place at the site in later periods.

Historic artifacts recovered from ARCO consist of two leather disks and thirteen glass trade beads. The leather disks and four of the trade beads were recovered *in situ* from the deposit, while the remaining nine trade beads were retrieved from trenching spoils.

Historic items recovered *in situ* were mixed throughout the deposit. The majority occurred in association with upper level burials. One leather disk fragment was recovered from the 40-50 cm level from upper burial unit 4, while a complete leather disk specimen was recovered at 146 cm from lower level burial unit 27. Three glass trade beads were recovered in the upper level burial units, two from the Burial 6 pedestal in unit 3 at 90-100 cm and one from unit 4 sidewall sluff; the fourth trade bead was recovered from the lower level Burial 8 at 139 cm. All thirteen trade beads recovered were of the most common drawn variety, with half appearing translucent and the remaining half opaque. Colors present were blue, white opaque and clear, with blue providing the

predominate 62% of the total, white 23%, and clear 15% of the total.

The presence of trade beads within the ARCO deposit is of especial interpretive importance due to their utility as chronological indicators. While Cabrillo does not mention trade beads specifically in association with his voyage of 1542-1543, trade beads are known to have been distributed by Vizcaino in 1602-1603, as well as by Anza during his 1774 expedition through the interior (ONeal 1992). We can infer from this information that it is likely that the trade beads present at ARCO found their way into the deposit after 1602, a time frame which serves to further bolster radiocarbon dates returned from the deposit.

TRENCHING SPOILS

While the primary context of data recovered from trenching spoils at ARCO has been lost, the presence of such data is a clear indication of its original association with the burial deposit. The maximum depth of trenching activity was 139 cm, which implies that trenching spoils are most likely associated with the upper burial deposit. However, this association is tenuous at best due to the fact that two lower level burials exhibited trenching disturbance. Material culture retrieved from trenching spoils is thus held to maintain a certain level of interpretative value as solely secondary sources of data, and serves as a control index for comparison with the *in situ* assemblage.

The assemblage recovered from trenching spoils consists of nearly three hundred artifacts, the majority of which can be classified as utilitarian or ornamental in function. There are two exceptions to this. The first is an incised tablet fragment manufactured from Catalina soapstone. These tablets have been described in a number of archaeological contexts on the south coast from Seal Beach to Ventura and on the Channel Islands (McCawley 1996:98-99), and are held to have an association with shamanism. The second example of a ritualistic-archaic artifact recovered from the trenching spoils is a pipe also manufactured from Catalina soapstone.

Beads and lithic material were the most

commonly recovered artifact types. One hundred eighty-four pieces of lithic debitage representing all stages of tool manufacture and 84 formed lithic artifacts were identified. Thirty-five per cent of the tools recovered were typed as Cottonwood series projectiles. Both the bead and lithic indices returned from trenching closely mirrored those recovered *in situ* from the deposit.

Six bone tools, seven bone and *Haliotis* ornaments, four soapstone artifacts, a mano and a single incised pottery rim sherd round out the rest of the artifact assemblage retrieved from trenching spoils. The presence of the ornaments and single pottery sherd are somewhat contradictory to the pattern established by the *in situ* deposit, while the presence of four soapstone artifacts met with expectations in terms of trade.

CONCLUSIONS

In conclusion, the lower level artifact assemblage recovered at ARCO appears to indicate that during the late prehistoric/protohistoric transition burial practices exhibit a degree of continuity with preexisting traditions in terms of both ideology and material culture. Ceremonial behavior was manifest in a number of ways. The ritualistic assemblage associated with Burial 8 appears to indicate status and ceremonial rank associated with ideological traditions and symbolism, as does the ochre-stained skull of Burial 9. In addition, the presence of an unburned basket and steatite eccentric placed with a partially cremated burial in unit 19, coupled with the presence of unburned shell beads directly associated with a complete infant cremation in unit 15, seems to indicate that ritual ceremony was practiced in the placement of goods in cremation contexts. The presence of burned shell beads in association with the gorget and obsidian dart point in unit 22 also indicates ritualistic behavior possibly associated with Gabrielino mourning ceremonies.

The majority of artifacts associated with this deposit have correlates in other late prehistoric contexts in the study area, while in the case of the gorget, ochre and the *Tivela* beads, these correlates can be extended further back in time

into Archaic traditions. The presence of exotic materials such as Catalina steatite, red ochre and obsidian suggests that during this time period the Gabrielino of the Su'anga area were partners in an extensive trade network which encompassed trans-Sierran, Chumash and Channel Island spheres of interaction.

Upper level burial strata suggest that during the late protohistoric/Mission era transition native Gabrielino culture in the Su'anga area was associated with tremendous upheaval. Mortal trauma injuries associated with at least three of these upper level interments indicate that this transition was not peaceful in nature. Gabrielino customs of decapitation and the mutilation of foes during the course of intratribal conflicts have been documented ethnographically by a number of sources (McCawley 1996: 106-109). The presence of these injuries in the ARCO deposit indicates that the Gabrielino of Su'anga were involved in such brutal encounters on at least one occasion during this transition period.

Patterns of cultural continuity expressed by lower level burial strata are largely absent in the upper levels. Although this locality continued to be used as a traditional burial site, interments exhibited little care in their placement and traditional status indicators in terms of material culture are largely absent. Evidence of ritualistic behavior is illustrated only in the case of the skull cremation encountered at the lowest depths of this stratum, and the occurrence of ritualistic-archaic artifact types is seen to decrease dramatically.

The artifact assemblage of the upper levels is characterized by its sparsity, with small shell beads and lithic projectiles the most common artifact types present. The presence of Catalina soapstone in the upper levels suggests that trade with the islands existed into this period, but a lack of other exotic materials present coupled with the increased occurrence of historic artifacts indicates that networks of native trade and interaction were severely impacted and in the process of being replaced by Mission-era economic constraints.

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