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## ***Five Thousand Years of Maritime Subsistence at CA-SDI-48, on Ballast Point, San Diego County, California.***

Dennis Gallegos and Carolyn Kyle.  
Salinas: Coyote Press, 1998. [Archives of California Prehistory No. 40.] Xiv + 224 pp., 32 figs., 86 tables, 1 appendix. \$23.00, (paper).

### **Reviewed by Claude N. Warren**

Distinguished Professor Emeritus, Dept. of Anthropology and Ethnic Studies, University of Nevada, Las Vegas.

This publication is a 1988 CRM report, reprinted “with very minor editing and corrections.” Unfortunately, it still contains the errors and omissions common to CRM reports, such as poorly keyed maps and illustrations, and incomplete bibliographic citations. The authors include six chapters and an appendix contributed by others. The information in these papers, each of which contains valuable data, is not well integrated with the rest of the report. Nonetheless, this publication is important and has often been cited by southern California archaeologists.

Gallegos and Kyle’s “Introduction” is a very brief description of the project and its setting. Their “Culture Prehistory” is poorly constructed, containing three questions on which they base a series of hypotheses, which form their “Research Design”:

1. What were the changing environmental conditions of San Diego Bay between ca. 10,000 B.P. and historic contact, and how did they affect plant and animal populations?

2. Do the San Dieguito and La Jolla complexes represent a “single people?”

3. Are the Pauma Complex (inland La Jolla) and La Jolla (coastal La Jolla) the result of a seasonal use of sites by the same social units, or by two different peoples?

From these questions, Gallegos and Kyle then construct a series of hypotheses that focus on chronology, diet, subsistence change, seasonality, and intrasite variability. To address these hypotheses, Gallegos and Kyle depend on specialized studies by Patricia Masters (paleo-environmental reconstruction of San Diego Bay), Lynne Christenson (bone artifacts), Lynne Christenson and Mark Roeder (La Jolla subsistence economy), Richard Cerreto (marine invertebrates), James Eighmey (lithics),

Robert Gutzler (palynology, and stratigraphy and dating), and Richard Huddleston (otolith analysis, Appendix A).

The Ballast Point site (CA-SDI-48) is located on the east shore of Point Loma, within reach of the marine resources of its rocky shore and the kelp beds to the southwest, and the sandy beaches and quiet waters of San Diego Bay and the Silver Strand. Terrestrial resources are nearby, on the crown of Point Loma. The site area was long used by Europeans, who greatly disturbed the midden. Two loci containing intact deposits were identified: Locus A, where twenty-six 1 x 1 m. units were excavated, and Locus B, where two 2 x 2 m. units and four test pits were examined. These excavations represent slightly more than a 2.5% sample of Locus A, but a much smaller percentage of Locus B.

The cultural inventory was small: 6 cooking hearths and a rock “platform” feature, 687 flakes, 1,524 angular waste fragments, 36 cores, 2 bifaces, 13 uniface tools, 6 hammerstones, 25 modified flakes (utilized and retouched), 6 scrapers, 8 choppers, 72 manos, 8 metates, 1 fragment of a stone bowl, 28 worked bone and teeth fragments, and 7 Olivella shell beads. Excluding all unmodified flakes, the sample totals 212 tools and ornaments. The only artifacts analyzed and described were the flakes, angular waste, cores, and worked bone, and only the Olivella beads, worked bone, and the two bifaces are illustrated.

Gallegos and Kyle open discussion of their “Research Results” with a synthesis of the paleo-environmental reconstruction and the establishment of San Diego Bay. They describe Inman’s (1983; see also Warren and Pavesic 1963:163–165) Paleo-coastal model for the north coast of San Diego County, and then discuss its “implications for prehistoric populations.” A summary of Masters’ chapter on the reconstruction of San Diego Bay is followed by a discussion of the vegetal and faunal assemblages, which is based on the contributions of Christenson, Roeder, Cerreto, Gutzler and Huddleston. Having briefly examined these paleo-environmental data, Gallegos and Kyle go directly to the research questions and hypotheses they have formulated:

Hypothesis 1. The people of La Jolla complex depended primarily on [shell]fish and plant foods for their dietary needs, with little hunting (Warren 1968).

Hypothesis 2. The people of the La Jolla complex depended on a mix of resources to include a diet of plants, mammals, shellfish and fish.

After some discussion, “generalized conclusions” are presented in 15 sound, specific statements regarding the Ballast Point data. On the basis of these statements, they conclude that Hypothesis 2 is supported, asserting that the occupants of CA-SDI-48 primarily foraged for shellfish and fish, but complemented this diet with small terrestrial mammals, large marine mammals, birds, and plant foods. If the hypothesis were limited to the Ballast Point site, this statement might be supportable, but the data they omitted from their analysis challenges this conclusion. More than one-third of the Ballast Point artifact assemblage consists of 72 manos and 8 metates. An argument can be made that this high percentage indicates that plant foods were more important than large mammals in the La Jolla diet.

Warren (1968:172) described the Encinitas Tradition as based on a collecting economy because (1) the majority of the tools which could be assigned a function were related to collecting activities; (2) manos and metates were among the most numerous artifacts; (3) a few pinyon nuts, pine cones, and California hollyhock seeds were recovered; (4) shellfish remains were plentiful; (5) projectile points were rare; (6) mammal bones were rare; and (7) fish bones were rare. The faunal and floral remains from coastal sites in southern California should exhibit differences in relative quantity and diversity because of the different environmental settings of those sites.

Next, Gallegos and Kyle propose two hypotheses regarding seasonality:

Hypothesis 1: The Ballast Point prehistoric site was a seasonally-occupied campsite within the seasonal round of a culture that used both coastal and inland campsites to fulfill their year-round subsistence needs.

Hypothesis 2: The Ballast Point prehistoric site... contains artifacts and ecofacts reflective of year-round occupation.

The authors provide a convincing presentation that there is a great deal of faunal data, especially the otoliths, that support a year-round occupation of this site. But again, this conclusion applies only to SDI-48, which is important and intriguing, but should not necessarily be anticipated for other coastal sites where resources were more restricted.

Strangely, chronology is the most complex question addressed. Again, the authors offer two hypotheses:

Hypothesis 1: San Diego County is typified by three traditions, beginning with the San Dieguito Tradition (circa 9,000 to 8,500) [actually, “beginning sometime before 9,300±350 B.P., persisting until sometime between 8,490±400 B.P. and 7,640±380 B.P.” (Warren 1968:168)], followed by the Encinitas Tradition from 7,500 B.P. to 2,000 B.P., and subsequently by the Yuman Tradition (Warren 1968).

Hypothesis 2: There are two traditions. One is the San Dieguito Complex, derived from the California deserts. The change from inland to coastal subsistence, with related changes in site settlement and stone tool technology, identify what Gallegos and Kyle call the “La Jolla Complex/Encinitas Tradition.” This period of occupation begins circa 9,000 B.P. and continues to circa 1,500 B.P., during which time the people adapt to the coastal environment, change “site settlement” [settlement pattern?] and stone technology, and become the La Jolla people. Within the past 1,500 years, Yuman influences from the east introduce the artifacts and the practice of cremation that identifies the Yuman Tradition.

Gallegos and Kyle recognize that the data from Ballast Point do not allow them to address questions regarding the interface between San Dieguito and La Jolla, or La Jolla and Yuman. However, they compare Ballast Point with the Encinitas Tradition and the Campbell Tradition, citing Warren (1968) as reference. The Encinitas Tradition persisted on the Santa Barbara coast between ca. 7,500 and ca. 5,000 years ago, and was followed by the Campbell Tradition, which persisted until ca 1,500 B.P. Second, the Encinitas Tradition in San Diego County extended from 7,500 to 1,500 years ago, but the Campbell Tradition was not present.

In comparing the Ballast Point materials with the Campbell and the Encinitas traditions, Gallegos and Kyle find that the artifact assemblage from SDI-48 is similar to the Encinitas Tradition, while the faunal assemblage from Ballast Point is more similar to the Campbell Tradition. This determination leads them to conclude that CA-SDI-48, the Ballast Point site, reflects a composite of both Encinitas and Campbell traditions. However, they state, this composite “does not identify all sites in San Diego County as hybrids.”

This is a misuse of Warren’s (1968:167) definitions of “tradition” and “ecology,” parts of which are quoted here:

A cultural tradition is here defined as a generic unit comprising historically related phases. Cultural traditions are identified and distinguished from one another on the basis of differences in cultural patterns reflected in artifact types and assemblages and

difference in cultural features within site units. Ideally a tradition is defined in an environmental vacuum with ecology playing no part in the definition.

Cultural ecology is viewed as the interrelationship between a cultural tradition and its environment(s). It is assumed that at the archaic [hunter-gatherer] stage of evolution the major ecological factor is the point of articulation between the technology and the environment in the production and processing of materials necessary for subsistence, especially foods.

Cultural tradition requires historical descent and continuity of artifact assemblages. Interaction between the cultural system and a changing environmental system may result in culture change. Cultural continuity and culture change are found in the cultural assemblage; e.g., artifacts, features, structures, site distribution, etc. The faunal remains in archaeological sites are not artifacts, they are debris resulting from interactions between humans and their environment in which artifacts are normally used; e.g., if a bow and arrow is used to kill a deer, the bow and arrow and the human behavior are cultural, the deer and its bones are not.

The Encinitas and Campbell traditions are differentiated on the basis of artifact assemblages. Their technologies are very dissimilar, and represent two different ways for humans to interact with the environment. Peoples of both traditions, living on the southern California coast, developed and maintained technologies for interacting with marine resources. The prehistoric culture of the Ballast Point Site is La Jolla; there is no evidence of contact with the Campbell Tradition. At the Ballast Point Site, the La Jolla people did increase their use of marine resources by making minor changes in their technology and subsistence scheduling. As mundane as that may appear, it is an example of cultural evolution and worthy of vigorous scientific scholarship.

Subsistence change is also addressed by Gallegos and Kyle:

Hypothesis 1. Site SDI-48 is a multicomponent site wherein subsistence change can be demonstrated for three distinct complexes/traditions.

Hypothesis 2. Site SDI-48 is a single component site which does not demonstrate subsistence change through time, thereby supporting the premise of site occupation by one people.

Gallegos and Kyle conclude that Hypothesis 2 is supported, despite the fact that shellfish recovered from

the site reflect changing littoral conditions as the sea level rose, and compound fishhooks appear late in the deposits at Ballast Point. On a different note, identifying changes in technology over a period of 5,000 years from only 212 tools and ornaments is difficult (to say the least). The rate of artifact deposition in the areas excavated by Gallegos and Kyle was about one artifact every 23.6 years, or 4.2 artifacts every 100 years, or about one artifact per generation. Such a low number is not sufficient to demonstrate changes in artifact assemblage, or cultural behavior.

Lastly, the authors hypothesize about intrasite variability:

Hypothesis 1. Site CA-SDI-48 is a campsite representing exploitation of only ocean resources. The lack of intrasite variability is explained by the few tasks conducted at this site.

Hypothesis 2. Site CA-SDI-48 is a habitation site wherein intrasite variability represents the diversity of activities conducted.

Gallegos and Kyle conclude that Ballast Point cannot be identified as a site where "specific activities" took place, given the variability in tasks conducted at the site. It appeared to them that the site has no recognizable work area features other than hearths, although many activities are represented in the faunal data and artifacts. Gallegos and Kyle did not excavate a systematic random sample of the midden. They placed all Locus A units in one half of the site, and the excavation units in Locus B were limited to two small areas of this much larger locus. While the placement of the excavation units was affected partly by site disturbance and modern construction, the problem should have been addressed in the report.

The most serious shortcoming of this report is the lack of description, discussion, and analysis of the midden, site formation processes, soil development, and description and analysis of site stratigraphy. In place of a coherent, focused discussion, bits and pieces of stratigraphic information are scattered through the various chapters. The reader must glean the relevant data from these papers. For example, Cerreto provides a profile from excavations at Locus A that shows hearths, but the matrix is not described. He mentions "six distinctive soil horizons" in Unit 14 of Locus B, but there are no profiles or description of them. Gutzler's "Site Stratigraphy and Dating" presents profiles and limited discussion of reconstructed topography, showing

areas of recent soil removal and redeposition, but not the stratigraphy of the archaeological components. His Figure 31, "Site CA-SDI-48 Stratigraphy, Radiocarbon Dates, and Diagnostic Artifacts" is a composite of stylized strata. It shows locations of hearths, radiocarbon dates, worked bone, and Olivella shell beads, all arranged by some mysterious geological strata or arbitrary levels. The tabular presentation of artifacts by level, without describing the artifacts or the stratigraphy, is inadequate. The failure to adequately describe and analyze the stratigraphy seriously detracts from the value of this report.

Regarding the "required" hypothesis testing, the authors relied on citing two opposing points of view and excluded other, possibly valid positions. This approach forced the data to fit the hypotheses, an unfortunate result. This is a format followed by, if not required of, many CRM archeologists. There must be a better approach.

The work by the six specialists comprises most of the analysis in this report, and is its most significant contribution. These papers contain data and analyses that will be valued for many years. For example, Masters' chapter, "Paleo-Environmental Reconstruction of San Diego Bay, 10,000 BP to Present," addresses many questions regarding past environmental conditions along this part of the California coast. This study describes how San Diego Bay was formed by a rising sea level during this period. Understanding bay formation provides insight into the changing habitats of the marine species utilized by the occupants of Ballast Point. This chapter presents basic information essential to studies of prehistoric subsistence and cultural ecology of prehistoric sites on San Diego Bay. Masters' work complements that of others (Gallegos 1985; Inman 1983; Miller 1966; Warren and Pavesic 1963) on the north coast of San Diego

County, and is an important contribution to San Diego County archaeology. In summary, it is not the work of the listed authors but that contained in the six chapters written by the contributors that confers lasting value to this publication.

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