EARLY PERIOD RESULTS FROM DATA RECOVERY CONDUCTED ON A PORTION OF STRATIFIED PREHISTORIC SITE SDI-9243, SAN DIEGO COUNTY, CALIFORNIA

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ABSTRACT

Data recovery investigations were conducted by Ogden Environmental and Energy Services Company, within a portion of prehistoric site, SDI-9243, located along the San Diego River, near the City of Santee, California. Impacts were to occur within a 25-foot wide corridor from the construction of a reclaimed water pipeline. Ogden's data recovery program consisted of the excavation of a 5% sample of the corridor or 30 square meters. Previous testing of the site in 1986 by Caltrans for the Highway 52 construction project, produced evidence that the site might be a stratified, multiple occupation site. Results of the data recovery investigations verified the presence of such a sequence of cultural stratigraphy at the site, with a basal date of 5700 B.P. and extending to the time of European contact.

INTRODUCTION

Between November 1991 and January 1992, Ogden Environmental and Energy Services Company conducted a data recovery field program of a portion of a prehistoric archaeological site, SDI-9243, situated approximately 25 kilometers from the coast, along the southern side of the San Diego River (Figure 1). This data recovery program resulted from expected impacts to the site by the construction of a City of San Diego Water Utilities Department Interceptor Force Main pipeline. Site SDI-9243 is a National Register-eligible site and an important site, as well, under the California Environmental Quality Act (CEQA). This data recovery program was conducted to serve as the basis for a determination of no adverse effect from the construction by the City of San Diego, under Section 106 and CEQA guidelines.

Principal archaeological analysts and authors of the study were Richard Carrico, myself, and Brian K. Glenn (Carrico et al. 1994). Contributing analysts and authors participating in the assemblage analysis and/or preparation of sections of the report included: Joyce Clevenger, who analyzed the non-biface lithic tools; Kirsten Collins, who analyzed the ceramics; Danielle Huey, who described the field methods; Brandon Lewis, who analyzed the groundstone tools; Patricia Mitchell, who analyzed the faunal bone and bone artifacts; and Andrew Pigniolo, who conducted the chipped stone debitage analysis. Fern Southcott served as Native American monitor and advisor on the project.

While it is the intention in this paper to provide a brief overall summary of Ogden's project results, by mutual agreement, the paper in this symposium, by Meg McDonald and Dan Saunders (McDonald and Sanders 1994), reporting Brian F. Mooney Associates' results from the site, focused on the Late Period occupation or occupations of the site, while this paper will focus on the earlier La Jollan site occupation.

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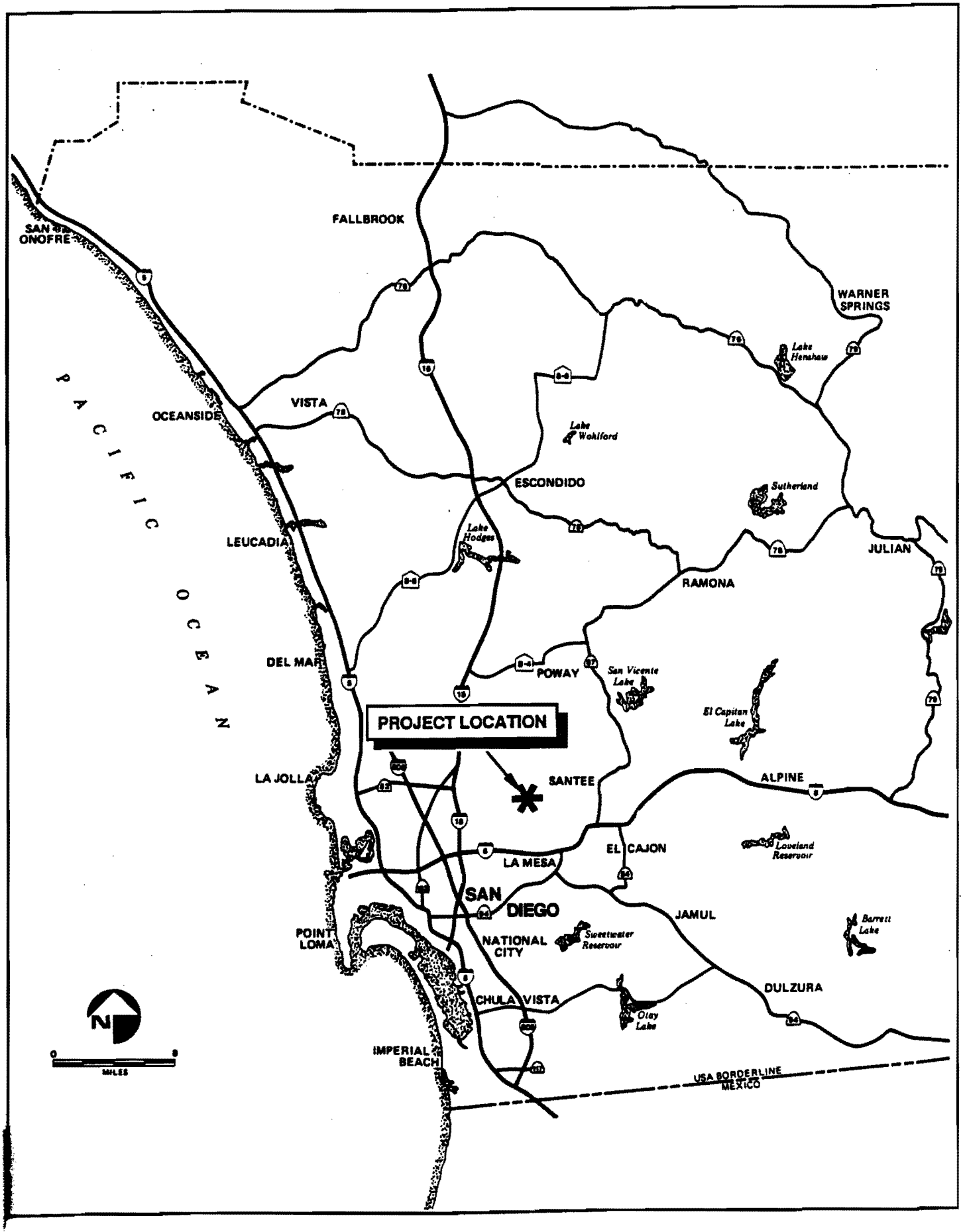


Figure 1. Regional location map of project.

SETTING

Site SDI-9243 is located in the East Mission Gorge area of the City of San Diego, west of the City of Santee. The principal natural feature related to the site is the San Diego River with its associated riparian habitat. The river flows west out of the Peninsular Range creating a narrow gorge just west of the site, known as Mission Gorge. The floodplain of the San Diego River is relatively wide immediately to the west and east of the site, narrowing to the west through Mission Gorge before opening out again towards the coastal plain.

PREVIOUS WORK

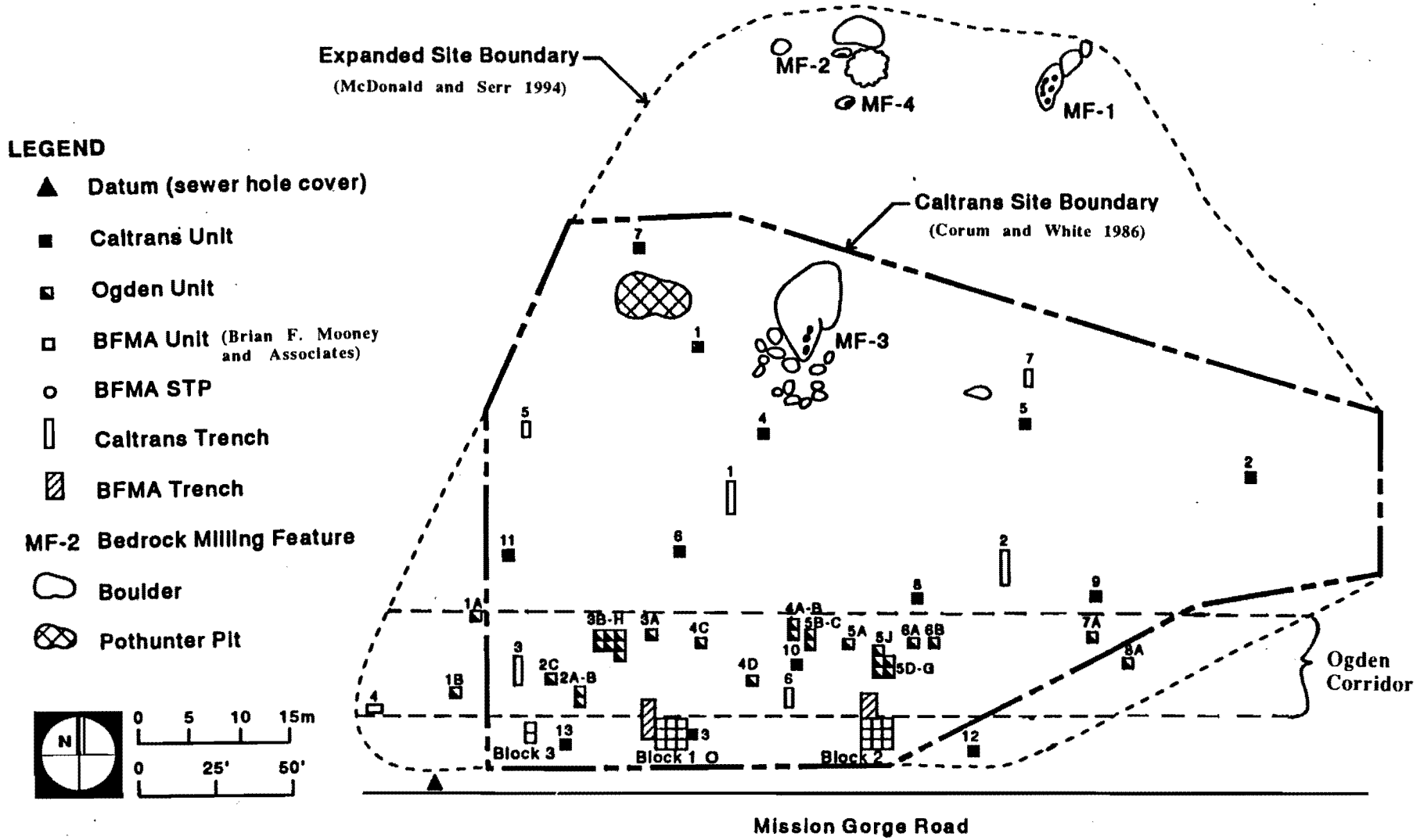
Site SDI-9243 was originally recorded in 1978 by Ken Hedges of San Diego Museum of Man as an occupation area with bedrock milling features, manos, flakes, hammer/choppers, numerous fire-cracked rocks and burned bone fragments. He also noted several large "pot hunter" pits. In 1985, Caltrans conducted a Phase I and an Extended Phase I testing program, and results indicated the presence of an extensive subsurface deposit. Caltrans then conducted a Phase II testing program to evaluate the site's significance and potential eligibility for the National Register. This program included the excavation of 13 1x1 m test units and two shovel test pits (STPs), and resulted in a determination of significance and eligibility for nomination to the National Register (Corum and White 1986). Another data recovery program (reported in this symposium in the paper by McDonald and Saunders), was proposed to be conducted by Caltrans to mitigate impacts to an adjacent area of the site from the construction of State Route 52.

The Caltrans testing programs recovered a total of 17,350 prehistoric artifacts, including a variety of chipped and groundstone artifacts, Tizon Brown Ware ceramics, bone artifacts, vertebrate and invertebrate faunal remains, as well as more than 2800 recent historic items. Faunal remains recovered consisted of 14 marine shell fragments and 14,096 fragments of faunal bone remains, including fish, turtle, reptile, bird, and mammal. Four bedrock milling features, three containing only milling slicks and one containing a milling slick and cupules, were also recorded. The results of hydration analysis of obsidian, from both Coso Hot Springs and Obsidian Butte near the Salton Sea, suggested a span of occupation for the site from approximately 3641 to 708 years B.P. (Corum and White 1986).

DATA RECOVERY RESULTS

Ogden's data recovery program (Carrico et al. 1994) was designed to address impacts to a 25-foot wide corridor within the site for the pipeline trench, expected to encompass 600 square meters (Figure 2). Ogden's program sampled this impact corridor at a 5% level for a total of 30 square meters of excavation units. A large artifact sample was recovered, consisting of 46 projectile points, 133 other biface tools, 273 cobble and flake tools, 61 cores, 93 hammerstones, and 66,034 pieces of chipping debris, including 146 pieces of obsidian. Projectile point styles included 34 Cottonwood Triangulars, nine Desert Side-notched and three Elko-eared specimens. Groundstone materials included 317 manos, 85 metates, two polishing/smoothing stones, three stone beads, and a grooved and shaped stone. The pottery assemblage consisted of 101 small Tizon Brown Ware sherds and three pipe fragments. Bone, shell, and miscellaneous artifacts recovered included fragments of 50 modified bone artifacts, three shell beads, and 1 glass trade bead. In addition, 11 discrete individual rock features and one large scale site-wide rock layer feature were identified.

The vertebrate faunal collection recovered consisted of 5729 grams of bone, of which a subsample, consisting of 30% of the units excavated, was selected for faunal analysis. Analysis of this sample indicated a variety of animals were represented at the site, including some seasonal indicators. Among the seasonal indicators were turtles, migratory birds, and reptiles. While both the early



Adapted from Corum and White 1986, Carrico et al. 1994, and McDonald and Serr 1994 (BFMA)

Figure 2. SDI-9243 see excavation map.

and late occupants of the site exploited the food resources in the immediate area, the early inhabitants, in particular, supplemented their meat diet with coastal marine resources, as evidenced by the relatively greater occurrence of these resources in the lower levels of the site.

Invertebrate remains from the site were less substantial in quantity but did reflect the presence of 11 shellfish genera. Two hundred five pieces of marine shell (80.4 grams) were recovered from 27 of the 30 units. The predominant types occurring at the site were chitons, *Argopecten aequsulcatus*, and *Chione* spp. These three shellfish types accounted for 83% of the identifiable shellfish remains recovered. Marine shellfish remains occurred across the project corridor, with 66%, and nine of the 11 genera occurring in the western half and five genera in the eastern half of the project corridor. Seventy-nine percent of the shellfish remains occurred below approximately 50 cm at the site, across the entire length of the site corridor. The 11 genera present represent both rocky shore and bay and/or estuarine habitats, all of which could be found at the mouth of the San Diego River throughout most of the proposed period of site occupation.

Three samples of culturally associated organic material were sent for radiometric analysis: a large fragment of *Laevicardium elatum* shell; a bulk sample of soil containing charcoal; and fragments of several species of shellfish recovered, combined from four of five levels of a single 1 x 1 meter unit. The *L. elatum* sample was obtained from the 70 to 80 cm level and the charcoal-in-soil sample from within a probable hearth feature at the 50 to 60 cm level of the site. The third sample consisted of all the shell recovered from four levels between the 60 and 110 cm of one unit.

The combined-levels sample of shell yielded a date of 5740 ± 100 RCYBP; the bulk soil with charcoal sample, a date of 5400 ± 120 RCYBP; and the *L. elatum* shell, a date of 2340 ± 60 RCYBP. All of these dates are uncorrected. The 5740 year date and the 5400 year date, even though they derived from different depths, still belong to the lowest cultural stratum associated with the earliest occupation of the site. The location of these two dates, one at the west end and the other at the east end of the project corridor, confirmed that the oldest occupation stratum extended, east-west, across the entire project corridor. The *L. elatum* shell fragment date of 2340 years BP, however, was clearly situated in a recently formed rodent burrow. In consequence, the stratigraphic association for this date was somewhat uncertain.

A selected sample of 18 pieces of the obsidian recovered was analyzed for trace element sourcing and hydration measurement. The most probable source of 11 of the samples was Obsidian Butte, with six others originating from the Coso Volcanic Field. The remaining measurable specimen derived from a currently unknown source. With a concentration in the central area of the site, the horizontal distribution of the specimens from Coso roughly corresponded with the overall stratigraphic interpretation of the project corridor. The central and eastern portions contained, predominantly, Early Period or La Jolla occupation deposit, and the western area, the Late Period, probably Tipai, occupation. The vertical distribution, however, was less definitive, with a rather even distribution of both Obsidian Butte and Coso specimens within upper and lower site levels.

Hydration rinds for the Coso specimens ranged from 5.2 to 9.9 microns, while those for the Obsidian Butte specimens ranged from 1.2 to 2.9 microns. These ranges, in general, reflect greater antiquity for the Coso specimens, with lesser time depths reflected by the Obsidian Butte specimens. These temporal ranges are consistent with the expected associations with earlier and later occupations of the site. Vertical distribution, however, was not definitive, with, at best, a scattered distribution of greater and lesser rind thicknesses within upper and lower site levels.

Figure 3 presents a schematic diagram of the interpreted overall natural and cultural stratigraphy east-west across the project corridor. It is important to note that the patterned occurrence of

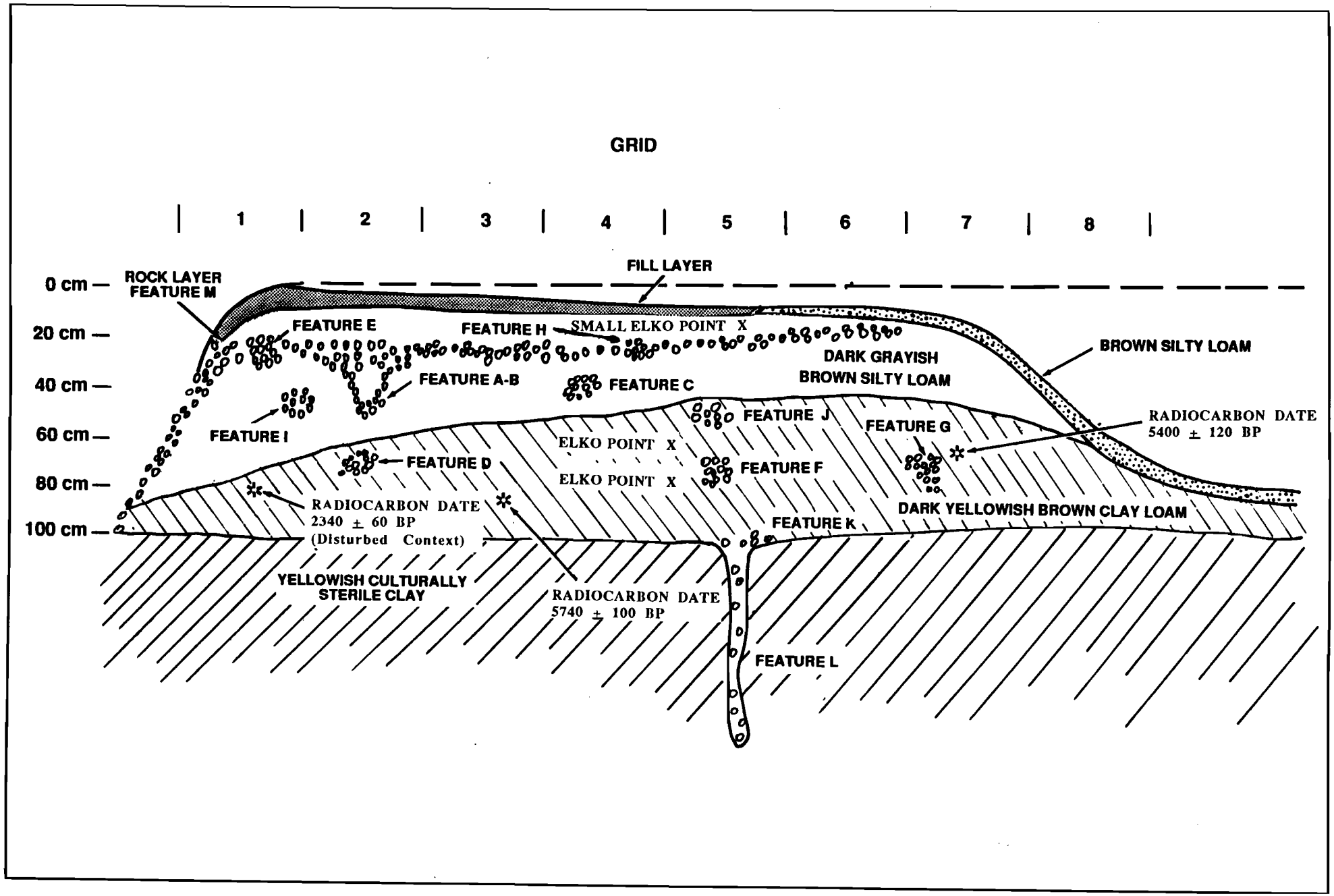


Figure 3. Schematic stratigraphic sequence at SDI-9243.

certain cultural materials suggested strongly that both horizontal and vertical cultural stratigraphy are present at the site. One cultural component is primarily associated with the lower levels and a compact dark yellowish brown or dark grayish brown clay loam soil stratum. Another cultural component occurs primarily in the upper levels in a dark grayish brown silty loam stratum. An upper level, lighter brown silty loam stratum, identified during the Caltrans testing phase, was determined to be nearly absent in Ogden study area. Verification of the associations of the other two strata, however, substantiated the presence of a stratified cultural deposit at the site. Radiocarbon dates indicated that the deposit developed over a long-enough period of time for distinct material culture and subsistence changes to be discernible.

RESEARCH TOPICS

Deriving from the project research design, several research topic areas were addressed including diet and seasonality, and chronology/ cultural tradition.

In regard to seasonality and diet, the subsistence system of the people of the La Jolla complex must currently be considered as poorly documented. Research questions involved whether the site constituted a base for resource procurement during La Jollan times, used to collect and process a wide variety of resources, including plants, land and sea animals, birds, shellfish, and fish. Such a resource inventory would reflect a mixed-strategy of resource procurement unlike that currently documented for the La Jolla complex. An implication of this hypothesis would be that certain inland valleys were used intensively by the La Jollan peoples, either permanently or seasonally. Either way, documentation of this use pattern would contribute to our understanding of diet during the Early Period/Encinitas tradition times in the San Diego area.

In regard to seasonality, while a number of hypothetical subsistence patterns are possible, two view points presently prevail. One hypothesis suggests the La Jollans were an incipient maritime people living close to the ocean year-round, with little change in diet. The other states that the La Jollans had separate coastal and inland campsites and occupied these camps on a seasonal basis. Complicating the issue in the archaeological recorded, however, is the proposal by Claude Warren (Crabtree et al. 1963) and others, that a possible population shift occurred in the coastal area of San Diego County during Encinitas tradition times, as a result of the rise of sea level and the resultant silting in of the resource-rich estuaries of the northern costal areas. Encinitas or La Jollan peoples, then, would be seen as gradually shifting their marine resource foraging areas in Late La Jollan times south to the bay areas at the mouths of the San Diego, Otay and Tijuana rivers. The proposition, then, that SDI-9243 may have been occupied seasonally would imply that, while the areas that were exploited may have changed in late La Jollan times, the temporal or "timing" aspect of the subsistence system may have remained the same. Of interest also would be, specifically, what time of year the site was occupied. This latter question was tentatively posed, however, because of the uncertainty of whether or not an adequate quantity of the particular types of artifacts/ecofacts necessary to address this question could be recovered.

Project results applicable to diet consisted mainly of faunal remains, which suggested a mixed-strategy-type of subsistence and procurement, with local as well as non-local maritime resources used during Early Period/La Jollan times. More specifically, the presence of marine shell, skates, and rays in the lower levels indicated procurement of these resources from at least 25 km to the west and transportation of them to the Mission Gorge camp. The absence of otoliths and skull bones may indicate that fish were butchered on the coast at coastal fishing camps and either dried or brought to the inland valley as fillets.

Nearby resources exploited included pond turtle, rodents, hares, rabbits, and other small game. An abundance of milling tools in the lower older stratum is consistent with the overall artifact

inventory of the La Jolla complex, and indicates that seeds, nuts, and grasses were exploited and processed on site. While hardly surprising, given the richness of the San Diego River drainage and riparian habitat, the combination of inland terrestrial and riverine resources at an inland La Jollan site clearly reflects the mixed resource procurement strategy of the occupants.

Project results applicable to seasonality questions were somewhat disappointing. Few specific indicators of seasonality were recovered, and those that were, were recovered in small numbers. The absence of fish otoliths and the poor condition and size of much of the bone precluded the use of these data sets for seasonality studies. The faunal analysis did suggest, however, that the presence of kingfisher birds may indicate a late summer to mid-spring occupation; that reptile remains might be correlated to a mid-spring to early fall occupation; that pond turtle remains might indicate a mid-spring to early fall occupation; and that the presence of grebe remains might reflect occupation of the site during the late summer to early winter months.

Taken collectively, these data seemed to suggest a nearly year round occupation or, at best, minimal use in the summer months and perhaps in the mid-to-late winter. For La Jolla complex peoples, the summer months were likely the preferred times for fishing, as well as for clamming. Lacking sufficient data to the contrary, the question of seasonality is tentatively answered by speculating that the site may have been occupied for much of the year, with a possible hiatus or decreased use during the summer months. Based on these limited data, it appears that the site may have been occupied more than earlier models for seasonal use have posited, especially for the Early Period people, but the results were not conclusive.

Chronology and cultural tradition research topics involved whether the site spanned the Early and Late Periods, with a possible preceramic phase in between. The Caltrans test data from SDI-9243 appeared to indicate that occupation of the site was not confined to one chronological period. While distinctions in material culture, settlement patterns, and subsistence practices between the early Yuman and the late Encinitas (La Jollan) cultural traditions have not yet been clearly defined, some diagnostic artifacts and cultural traits such as arrow-size projectile points, ceramics, and burial by cremation are known to characterize Yuman occupation assemblages, but not earlier La Jolla complex assemblages. Also, changes in lithic technology, evidenced by variations in debitage characteristics, or differences through time shown by changes in lithic raw material usage, could provide additional evidence of single or multiple occupations.

Project results indicated that, based on projectile point types and their occurrence, obsidian exchange, minor changes in subsistence, the types and proveniences of features encountered, radiocarbon dates from the lower levels, the presence of a trade bead in the upper levels, a bimodal distribution of milling tools, and the use of quartz over quartzite in the upper levels, the site was occupied by at least three chronologically (and possibly also culturally) discrete groups of people. What could not be definitely defined was a stratum or assemblage strictly attributable to a preceramic occupation of the site. What was definable instead were two distinct layers, roughly delineated as the upper 50 cm of the site and the lower 50 cm of the site, measured from the bottom sterile layer to the ground surface (see Figure 3).

While not conclusive, it was clear that the western portion of the project corridor, and in general, the upper four to five levels of the site, contained cultural elements such as Desert Side-notched points, Tizon Brown Ware ceramics, and fragments of cremated human bone, directly associated with the Late Period, probably sometime after A.D. 700. The presence of a single green glass trade bead combined with obsidian hydration measurements indicating occupation between the 1770s and the late 1880s, suggested that the site was occupied, to an unknown degree, into the Spanish period. Analysis of the lithic materials present in the debitage sample, as well as in the finished projectile points, reflected a shift from

quartzite use in the lower levels to quartz use in the upper levels. Analysis of millingstones from the site did not indicate a significant difference in types or frequency within each of these hypothetical upper and lower assemblages, but did reveal a bimodial distribution indicative of two separate upper and lower occupations.

Analysis of the non-biface chipped stone tools, however, did not appear to provide a clear difference between the upper and lower site levels. But distributional analysis of some of the tool classes, and several of the tool class types and type variants did appear to yield some temporal sensitivity by depth. Analysis indicated, for example, that, in total, the artifact class of hammerstones (60 out of 93) and in particular, five of the nine type variants of hammerstones, all occurred most frequently in the lower levels at the site. In addition to hammerstones, hafted scraping tools, cobble choppers, and scraper planes with worked edges all around, appeared to have been tools characteristic of the assemblage of the earlier, probably La Jollan, site inhabitants.

In general, the lower levels, particularly in the eastern portion of the project corridor, reflected a near absence of diagnostically Late Period materials and possessed an artifact assemblage more typically associated with La Jolla complex sites. Specifically, the lack of ceramics and Desert Side-notched points and the presence, instead, of older Elko series points (Figure 4) are indicative of a mid to late Millingstone Horizon culture assemblage. Radiocarbon dates of ca. 5700 and 5400 years B.P. are consistent with other dates for Millingstone Horizon sites, and the 2340 year date is either late Millingstone or could even be associated with an early expression of an undelineated preceramic occupation of the site.(Figure 5).

The predominance of shellfish, along with skates and rays, in the lower levels and eastern portion of the project corridor, in contrast to their paucity in the upper levels and western portion, is suggestive of a dietary shift over time. Assuming that the shift occurred, it may reflect a culturally based subsistence mode wherein the earlier people, presumably inland La Jollans, brought coastal resources to the inland valleys, where they also exploited that environment. By contrast, the upper levels and the western portion of the site corridor are more typical of inland valley Late Period exploitation, with a near absence of shellfish and fish.

SUMMARY

Data recovery at site SDI-9243 has produced a large and varied assemblage of artifacts, faunal remains and in-place rock features. Radiocarbon dates, obsidian hydration results, the presence of a contact period trade bead, and typological analysis of diagnostic artifacts have clearly indicated the site to have been occupied by three differing cultural complexes during three different time periods. A lower stratum, present below approximately 50 cm at the site, was radiocarbon dated at 5700, 5400 and 2340 years B.P., placing that occupation in the Early Period, probably as an inland manifestation of the La Jolla complex. Another stratum that exists predominantly in the western portion of the project corridor, above 40 cm, is assumed to date post-2340 years B.P., and probably represents post-ceramic, Late Period and Contact Period Kumeyaay/Tipai occupations. While a transitional preceramic phase of Yuman occupation may exist at the site, due at least in part to deposit disturbance, such a stratum could not be definitely delineated. In regard to La Jolla complex subsistence, the data seemed to suggest a nearly year round occupation or use or, at best, minimal use in the summer months and perhaps in the mid-to-late winter. La Jolla complex associated faunal remains suggested a mixed-strategy type of subsistence with local and non-local resource procurement, including the use of non-local maritime resources. The abundance of milling tools in the lower older stratum was consistent with a La Jolla complex ground stone assemblage, indicative of an emphasis on the use of vegetal food resources.

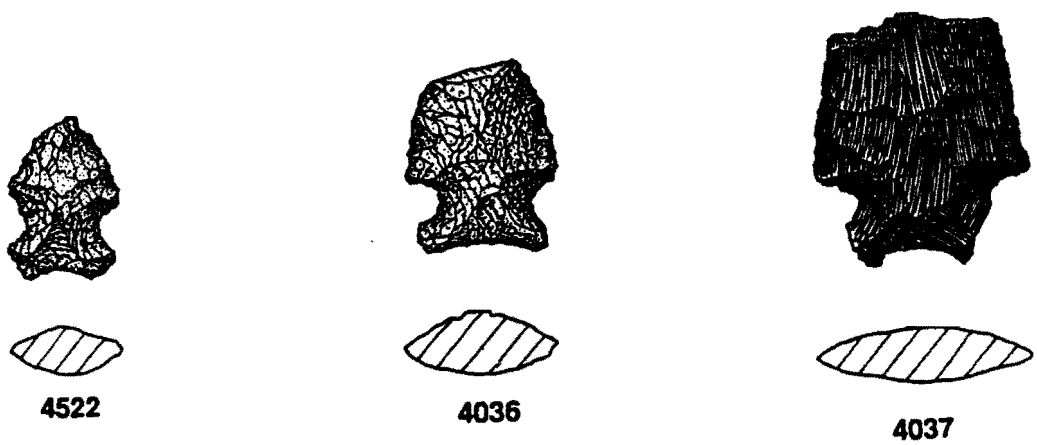


Figure 4. SDI-9243 Elko Eared projectile point series.
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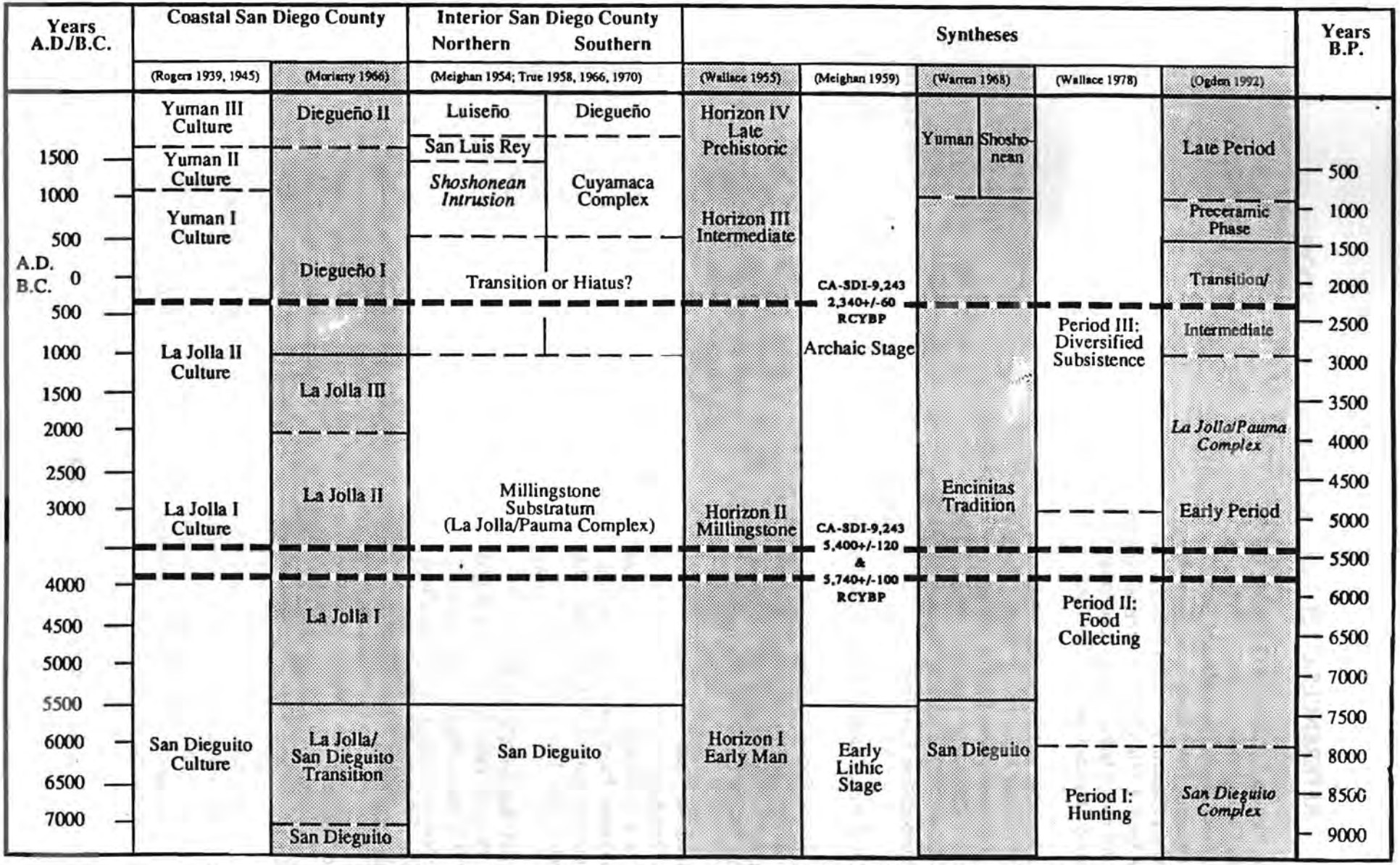

Figure 5. Concordance of archaeological units, San Diego subregion with SDI-9243 radiocarbon dates superimposed (after Moratto 1984:Figure 4.17).

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