ARCHAEOLOGY AROUND SAN ELIJO LAGOON
by Brian F. Byrd

This report summarizes the archaeology within and adjacent to San Elijo lagoon. The report includes a synthesis of the regional culture history, a summary of archaeological fieldwork done in the area, and a discussion of archaeological sites recorded adjacent to the lagoon.

Regional Culture History

A variety of different regional chronologies, often with overlapping terminology, has been used in coastal southern California and they vary from region to region. Today, the prehistory of San Diego County is generally divided into three major temporal periods: Paleoindian, Archaic, and Late Prehistoric. These time periods are characterized by patterns in material culture that are thought to represent distinctregional trends in the economic and social organization of prehistoric groups. In addition, particular scholars referring to specific areas utilize a number of cultural terms synonymously with these temporal labels: San Dieguito for Paleoindian, La Jolla for Archaic, and San Luis Rey for Late Prehistoric (Meighan 1959; Moriarty 1966; Moratto 1984; Rogers 1939, 1945 ; True 1966, 1970 ; Wallace 1978 ; Warren 1964).

A Kumeyaay stone bowl filled with donax clams.
(Photo: Nathalie Taylor Photos)

Paleoindian Period

The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades. The currently accepted model is that humans first entered the western hemisphere between 12,000 and 15,000 years B.P. There is currently no firm evidence of human occupation in coastal southern California prior to 12,000 B.P. The Paleoindian period in San Diego County is considered to date to the terminal Pleistocene and the early Holocene, from at least 10,000 B.P. to 8500/7500 B.P. (Moratto 1984; Warren et al. 1998). Although no Clovis sites are documented in

the region, occasional isolated fluted points have been recovered. A variety of terms has been proposed for Paleoindian assemblages in the southern California region, and Rogers (1939, 1945) coined the term San Dieguito, still widely used today, to refer to the earliest artifact assemblages in San Diego County. San Dieguito assemblages are composed almost entirely of flaked stone tools, including scrapers, choppers, and large projectile points (Warren 1987; Warren et al. 1998). Until recently, the near absence of milling tools in San Dieguito sites was viewed as the major difference between Paleoindian economies and the lifeways which characterized the later Archaic period. The range of possible San Dieguito economic adaptations and the interpretation of the San Dieguito complex as a big game hunting tradition is based primarily on materials from the Harris Site (Ezell 1983, 1987; Warren 1966, 1967). Subsequently, it was hypothesized that differences between San Dieguito and the subsequent La Jollan artifact assemblages may reflect functional differences rather than temporal or cultural variability (Bull 1987; Gallegos 1987; Wade 1986; yet see Warren and others 1998).

Archaic Period

The Archaic period (similar to the Encinitas tradition and the Millingstone horizon) begins between 9,000 and 8,500 years ago and ends between 1,300 and 800 years ago (Gallegos 1992; Moratto 1984; Rogers 1966; Warren et al. 1998). A distinction is often made between coastal shell midden sites (La Jolla complex) and inland non-shell midden sites (Pauma complex). Shell middens are generally characterized by flaked cobble tools, basin metates, manos, discoids, and flexed burials. Three temporal
phases have been distinguished within the Archaic period (Moriarty 1966; Warren et al. 1998).

Initial Archaic exploitation of the San Diego area littoral zone is generally considered to have entailed sizable semisedentary populations focused around resource-rich bays and estuaries (Crabtree et al. 1963; Gallegos 1992; Moriarty et al. 1959; Shumway et al. 1961; Warren 1964, 1968; Warren and Pavesic 1963; Warren et al. 1961). Shellfish were interpreted as a dietary staple; plant resources (both nuts and grasses) were also an important dietary component, while hunting and fishing were less important.

A Kumeyaay olla reconstructed by Dr. Margie Burton.
(Photo: Nathalie Taylor Photos)

Major changes in human adaptations are considered to have occurred after 4,000 years ago when estuarine silting was considered to have become so extensive as to cause a decline in associated shellfish populations.

(Masters and Gallegos 1997; Warren 1964, 1968). There are numerous exceptions to this scenario including San Diego Bay, Mission Bay, Penasquitos Lagoon/Sorrento Valley area, and the Camp Pendleton area (see discussion in Byrd 1998). Most interpretations about the timing of estuarine silting, decreased productivity at specific localities, and related effects on human settlement were based on inferences derived from excavated shell midden sites (Masters and Gallegos 1997; Miller 1966; Warren et al. 1961), and not from independent paleoenvironmental data.

Late Prehistoric Period

The Late Prehistoric period is generally considered to have begun between 1,300 and 800 years ago (Moratto 1984; Rogers 1945; Warren et al. 1998). Local regional cultural complexes have been distinguished including the Yuman complex around San Elijo Lagoon and southward. In general, this period was characterized by the appearance of small pressure flaked arrow points (Cottonwood Triangular and Desert Side-notched points) indicative of bow and arrow technology, the appearance of ceramics, the replacement of flexed inhumations with cremations, the possible appearance of the mortar and pestle, and an emphasis on inland plant food collecting and processing, especially of acorns (Christenson 1990; McDonald and Eighmey 1998; Meighan 1954; Rogers 1945; True 1966; Warren 1964, 1968). The precise timing of the introduction of these items is still debated due to the poor chronological resolution and bioturbation at multicomponent sites (Griset 1996; McDonald and Eighmey 1998).

Explanations for the origin of the Late Prehistoric period vary. Kroeber (1925:578) speculated that Shoshonean-language speakers migrated from the deserts to the southern coast of California at least 1,000-1,500 years ago. Some archaeologists have embraced this hypothesis and correlated it with the origins of the Late Prehistoric period (Meighan 1954; Warren 1968). Subsequently, scholars have emphasized several cultural processes to explain Late Prehistoric cultural developments including: a chronological gap (Wallace 1955), cultural continuity and the addition of new traits (True 1966, 1970; Warren 1964, 1968), a population replacement (Bull 1987), or that several factors were at play (Moriarty 1966). In addition, the Late Prehistoric period has been paradigmatically linked with the subsequent ethnohistoric record, and direct historical analogies assume considerable adaptive stability for populations, linguistic groups, and their territorial extent as documented by Europeans.

Post-Contact Native American Ethnohistory

The Post-Contact period began in A.D. 1769 with the Spanish establishment of the Mission San Diego de Alcalá. Yet, Spanish explorers first encountered Native Americans in the San Diego area in A.D. 1542 when Cabrillo landed at Point Loma along San Diego Bay, and local inhabitants may have been negatively affected by protohistoric transmission of diseases via sea visits and through contact with Native Americans in the Baja region. Portolá's A.D. 1769 expedition from San Diego to Monterey documented a series of Native American coastal villages in the San Diego area, typically situated along the region's major drainages (Carrico 1977). The subsequent establishment of the San Juan Capistrano Mission in 1776 and the San Luis Rey de Franciscan Mission in 1798 further impacted traditional coastal settlement systems.

Aculturization, assimilation, and the introduction of Old World diseases greatly disrupted and reduced Native American populations, and by the early 1800s traditional coastal villages were largely abandoned (Carrico 1998). As a result, we know very little about traditional coastal life, except what

can be gleaned from mission records. Nineteenth and twentieth century ethnohistoric reconstructions provide only minimal insight into coastal adaptations. San Elijo Lagoon falls within the territory of the Yuman-speaking Kumeyaay (also termed Diegueno and Ipai-Tipai) who occupied a large and diverse environment including marine, foothill, mountain, and desert zones (Luomala 1978; Shipek 1982; Spier 1923). Considerable variability in social organization and settlement is noted, and the Kumeyaay claimed prescribed territories but rarely owned resources (Luomala 1976; Spier 1923). Some of the lineages occupied procurement ranges that required considerable residential mobility (Hicks 1963). Acorns are considered to have been a primary staple, and Shipek (1982, 1989) argued that protoagriculture of small-seed grasses, notably fire management activities, occurred prior to contact.

Euro-American History

The Hispanic era in California's history includes the Spanish Colonial (1769-1820) and Mexican Republic (1820-1846) periods. This era witnessed the transition from a society dominated by religious and military institutions consisting of missions and presidios to a civilian population residing on large ranchos or in pueblos (Chapman 1925). The effects of missionization, along with the introduction of European diseases, greatly reduced the Native American population of southern California. At the time of contact, Kumeyaay population estimates range from 5,000 to as many as 10,000 individuals. Many of the local Kumeyaay were incorporated into the Spanish sphere of influence at a very early date. Most villagers, however, continued to maintain many of their aboriginal customs and simply adopted the agricultural and animal husbandry practices learned from Spaniards.

By the early 1820s, California came under Mexico's rule, and in 1834 the missions were secularized. This resulted in political imbalance and Indian uprisings against the Mexican rancheros. Many of the Kumeyaay left the missions and ranchos and returned to their original village settlements (Shipek 1991). When California became a sovereign state in 1850, the Kumeyaay were heavily recruited as laborers and experienced even harsher treatment. Conflicts between Native Americans and encroaching Anglos finally led to the establishment of reservations for some villages.

The subsequent American period (1846 to present) witnessed the development of San Diego County into a capitalistic economy in which American entrepreneurs gained control of most large ranchos and transformed San Diego into a merchant-dominated market town. Between 1870 and 1930, urban development established the cities of San Diego, National City, and Chula Vista, while a rural society based on family-owned farms organized by rural school district communities also developed. The Army and Navy took an increased interest in the San Diego harbor between 1900 and 1940. The 1920s brought a land boom (Robinson 1942) that stimulated development throughout the city and county, particularly in the Point Loma, Pacific Beach, and Mission Beach areas. Development stalled during the depression years of the 1930s, but World War II ushered in a period of growth based on expanding defense industries.

Archaeological Fieldwork Around San Elijo Lagoon

San Elijo Reserve County Park is administered by the San Diego County Parks and Recreation Department and the California Department of Fish and Game. The Reserve, situated 20 miles north of San Diego, is one of the region's largest and best preserved coastal wetlands. The rich natural resources include tidal channels and mud flats, six plant communities, and a wide range of vertebrates, invertebrates, and bird species (CSDDPR 1996; Welker and Patton 1995). The watershed draining into

the estuary covers 220 km2 with two main tributaries, Escondido Creek (187 km2) and La Orilla Creek (13 km2).

Prior to the 1880s, San Elijo Lagoon was a fully tidal estuary system, connected to the Pacific Ocean by inlet channels and characterized by a low-lying marshy plain (Goodwin et al. 1992). At high tide, ocean water flowed through the entrance channel and reached eastward for more than 1 km. The mouth of the estuary migrated from year to year, breaching the wave-deposited sand berm at its lowest point, and there was a constant unimpeded exchange of fresh and salt water. Subsequent modern construction altered the ecological dynamics. Yet, modern disturbances have been limited in areal extent, and a 1991 pilot sediment coring project revealed estuary deposits dating back to almost 8000 RYBP (Foster 1993). These results have been confirmed by recent geological coring aimed at creating a detailed Holocene record of the lagoon (Byrd et al., in prep).

Malcolm Rogers' 1929 San Diego-Smithsonian Expedition represents the earliest academic recording of archaeological sites along the coast of San Diego County (Hanna 1982; Rogers 1929). Site recorded by Rogers begin with a "W" and his field records are curated at the San Diego Musuem of Man. This pioneering study laid the foundations for all subsequent archaeological research in southern California. Several prehistoric sites around San Elijo Lagoon were initially recorded by Rogers.

Most of the archaeology around San Elijo Lagoon was recorded by archaeological surveys just prior to the creation of the San Elijo Reserve County Park (Loughlin and Bull 1974; Fink and Hightower 1976). Archaeological excavations at sites immediately adjacent to the Reserve (and in a few cases within the Reserve) have been, until recently, limited in scope and done under the context of CEQA CRM investigations as urban development reached the edge of the Reserve.

With funding from National Science Foundation, the author conducted a research project within the Reserve in 2001 and 2002 that entailed excavations at eight prehistoric sites (Byrd et al., in prep). The results will ultimately provide detailed insights into 8,500 years of prehistory around the lagoon. Based on a record search conducted at the South Coast Information Center in 1999 (Byrd and O'Neill 2002), more than 50 prehistoric sites have been recorded within a 1.6 km radius of the San Elijo Lagoon. Most lie outside the San Elijo Reserve and have been destroyed by urban development.

Of the 19 archaeological sites that lie either within the San Elijo Reserve or immediately adjacent to the lagoon but outside the reserve, 15 are prehistoric sites, one has prehistoric and historic components, and three are historic sites. A number of these sites are major shell midden habitation sites. Several of these sites have been completely destroyed by urban development, while others have been severely impacted by modern development. Only a few of these sites lie immediately adjacent to the edge of the lagoon.

Potential Project Impacts to San Elijo Area Archaeological Sites

Recent research in the San Diego coastal region has demonstrated the fundamental role that alluvial and colluvial deposition have played in obscuring the archaeological record. On Camp Pendleton, Waters et al. (1999) and Byrd et al. (2000) have documented these processes in several major drainages, and a recent review by Gross and Robbins-Wade (1998) along the southern San Diego coast

has also demonstrated the fundamental role valley alluviation and colluvial deposition have played in burying coastal sites (see also Erlandson 1994, 1997).

In addition, Carrico (1998) has argued that historic alluvial deposition has probably buried a number of Post-Contact coastal sites, including along the San Dieguito River. Thus, it is not surprising that there is considerable potential for discovering buried sites in this region given the importance of valley floor occupation during the late Holocene, the friable nature of the region's marine terraces, and the extent of middle and late Holocene alluvial deposition. Current knowledge of the geomorphic history of the region and recent paleoenvironmental coring of San Elijo Lagoon (Byrd et al., in prep), provides a strong basis for assessing the potential for discovering archaeological sites within the confines of the lagoon. Areas currently inundated or periodically inundated by the San Elijo Lagoon are considered to have a low potential for buried archaeological sites. All deposits documented in paleoenvironmental coring within the lagoon have revealed active lagoon bottom or high energy stream sediments. Both of these environmental contexts are extremely unlikely to yield significant archaeological material.

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