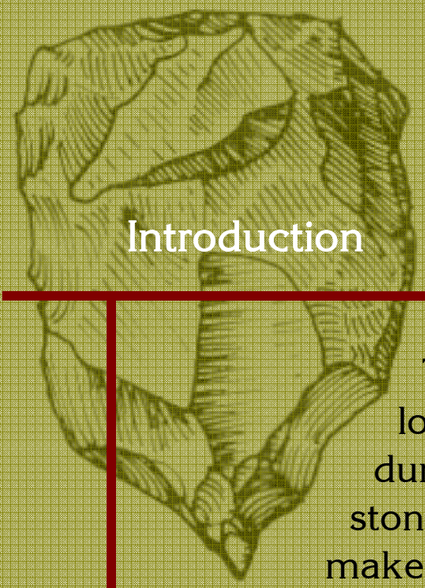
The Stone Age on Del Mar Mesa



Introduction

The **'Stone Age'** refers to a technological phase in human prehistory during which people made and used stone tools. Bone and wood were used to make tools as well, but these are fragile and are less likely to be preserved over long periods of time. Evidence of the Stone Age can be found worldwide, and Del Mar Mesa is no exception. The Stone Age in San Diego started about 10,000 years ago and continued until European arrival in 1769.

Human lifestyles evolved during the Stone Age in similar ways all over the world. As populations grew, reliance on hunting and seasonal migration of small family groups gradually declined. A more sedentary lifestyle was adopted that required management of plant and animal resources, living in larger groups and the invention of new technologies such as pottery. These cultural changes, reflected by the tools people left behind, happened at different times in different places.

The artifacts found on Del Mar Mesa provide evidence of human presence along the southern California coastline as early as 9,000 years ago and trace thousands of years of changes in Stone Age lifestyles. A generous grant from the **Pardee Corporation's Environmental Conservation Foundation** has enabled the **San Diego Archaeological Center** to bring together artifacts excavated from Del Mar Mesa for continued research and public education.

Stone pick made of quartzite

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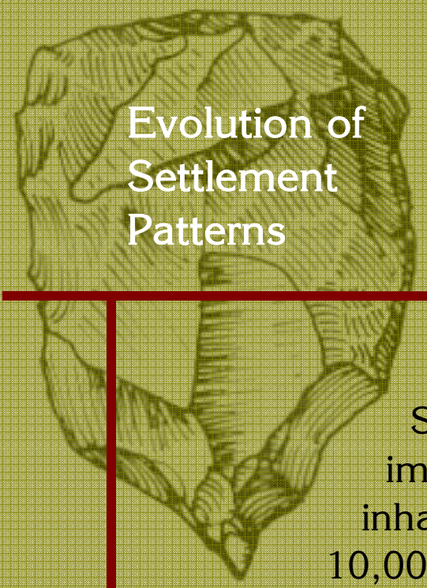
The mission of the Center is to preserve archaeological collections and promote their educational, scientific and cultural use to benefit a diverse public.

PardeeHomes

The funding for curation for the artifacts from Del Mar Mesa was made through a generous grant from the Pardee Corporation and Environmental Conservation Foundation.



Evolution of Settlement Patterns

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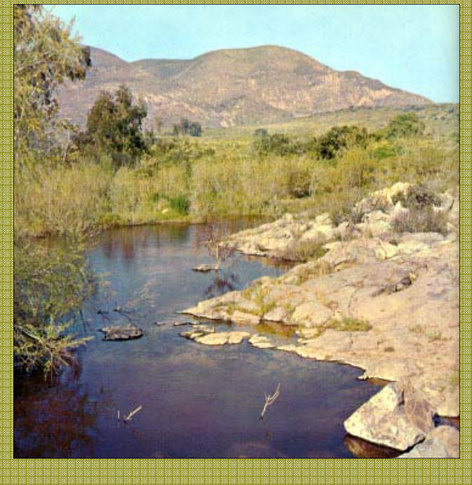
The lagoons and estuaries of the San Diego County coastline provided important resources for prehistoric inhabitants of the area over the last 10,000 years. Coastal occupation increased about 7,000 years ago and then later diminished during the last 3,000 to 4,000 years as populations became focused further inland and mountain resources took on new importance. However, the environmental and cultural processes involved in these shifts in settlement and subsistence strategy are still poorly understood.

Crab claw, fish vertebrae and shell bead are evidence of coastal life during the Stone Age

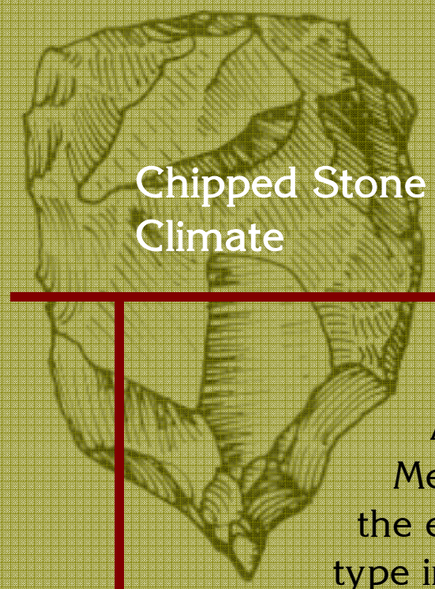
The sites discovered on Del Mar Mesa range from small limited-activity sites to large residential bases. The long time period of occupation may help archaeologists understand the subtle or dramatic environmental and cultural changes that affected how people lived.

Detailed analysis of trends in site size, site type and site function over time and comparison with data from other areas of San Diego County may help to clarify several regional research issues including:

- The timing and nature of the transitions during the early, middle and late Stone Age in San Diego
- Whether a population decline or hiatus occurred in the second half of the Stone Age
- The degree of cultural continuity during the Stone Age



Lagoons and estuaries of the San Diego coastline were inhabited during the early Stone Age. Later, more emphasis was placed on resources in the mountains.



Chipped Stone
Climate

The Stone Age on Del Mar Mesa

Chipped Stone Technology

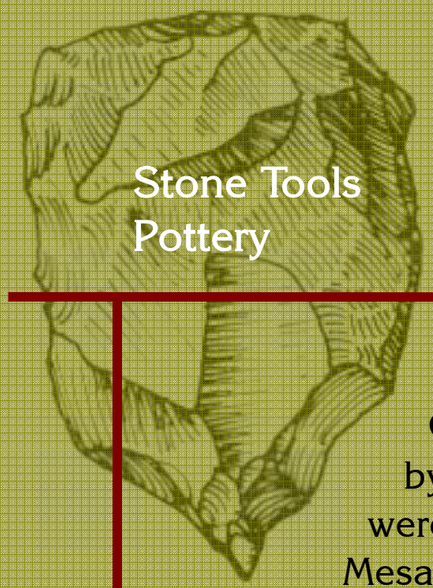
All of the sites excavated on Del Mar Mesa include chipped stone artifacts—the earliest and most common artifact type in the San Diego County area and worldwide. Analysis of the raw material used to make the tools may help us understand the degree to which raw material selection was affected by distance to sources, and how such patterns may have changed through time. On a regional basis, such analysis may also help to clarify specific uses of particular raw material types. The **debitage**, or waste flakes produced during the tool making process, can give new insights into this important survival technology.

Quartz, chert and felsite projectile points from Del Mar Mesa
Chipping stones produced tools with sharp edges, perfect for chopping, cutting and spear points.

Paleoenvironment

The shell, animal bone and soil samples recovered from Del Mar Mesa can be used to reconstruct how the coastal geomorphology and related ecosystems may have changed over the past 9,000 years. Shell and bone species distributions and types of carbonized seeds indicate the presence of certain animals and plants within foraging distance of sites. In addition to providing information about subsistence strategies, these data can reflect past environments and provide baseline population species data that are crucial for assessing long-term climate trends. Detailed analysis of the types, abundances, and sizes of the plant and animal remains in these collections may also help to identify seasonality of site occupation and cultural trends toward resource intensification.

Donax or bean clams were intensively used during the middle Stone Age



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Ground Stone Technology

Ground stone artifacts—tools made by grinding rather than chipping—were found at almost all of the Del Mar Mesa sites. Ground stone implements were used to process food, especially plant foods, and for preparing hides, wood and bone tools, and inorganic materials such as clay for pottery. Studies of the ground stone tools from these collections that focus on formal manufacture and use-wear attributes can help to define trends in subsistence emphases over time, as well as occupational continuity. Residue studies may also help to define tool functions.

Granitic grinding tools and quartzite chopper
Ground stone tools were made to process food and clay for pottery. Continued research may reveal other uses

Pottery Typology

Pottery—essentially artificial stone—was the first synthetic material created by humans. The critical feature that distinguishes pottery from other human uses of earth and clay is the application of heat, which transforms soft clay into something hard and durable. Within California, indigenous pottery is unique to the southern portion of the state. Pottery first appears in the archaeological record in San Diego County about 800-900 AD. Two of the Del Mar Mesa collections include pottery sherds. Typological, petrographic, and residue studies of the sherds can help to resolve important research issues regarding temporal and spatial patterns in the adoption of ceramics within the region.

Pottery appears in San Diego at the end of the Stone Age