



Holocene Landscapes and Human Land-use in the Ballona Wetlands of West Los Angeles, California

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Introduction

The Playa Vista Archaeological and Historical Project provides an important opportunity for conducting geochronological research in the Ballona Wetlands. A detailed landscape reconstruction was made based on multidisciplinary paleoecological studies of core samples. This reconstruction is being used to explain how and why human land-use and settlement patterns have shifted over the last 7,000 years. Archaeological excavations have been completed at all of the sites depicted on the aerial below.



Methods

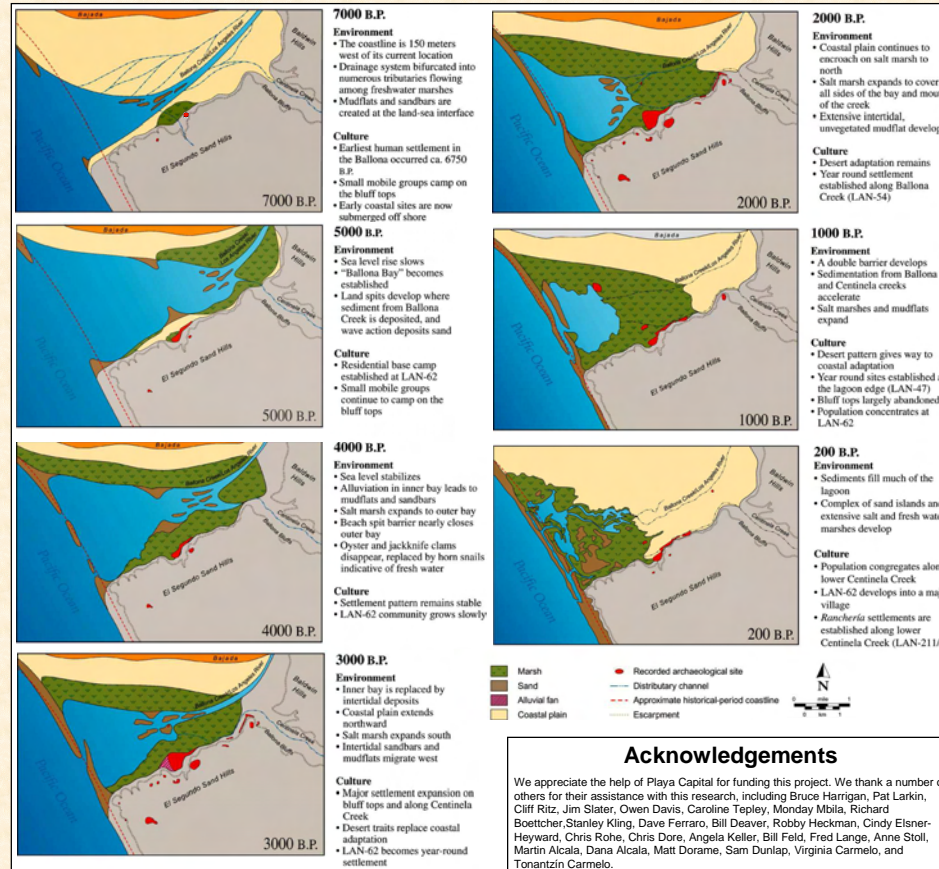
- 200+ cores were taken from depths up to 15 m using a hollow stem auger. Complete core descriptions were made, Cross sections of the lagoon were prepared, and depositional environments were interpreted.
- Sediment analyses (particle-size, organic C, micromorphology, and mineralogy) were completed.
- Shellfish, charcoal, and wood were ¹⁴C-dated.
- Paleoecological analyses were completed for pollen, diatom, foram, ostracode, and mollusk samples.

Research Objectives

- Reconstruct Holocene landscape change in the Ballona.
- Evaluate effects of landscape change on human settlement, subsistence, and adaptation.

Conclusions

- Estuarine conditions prevailed after a barrier closed off part of Santa Monica Bay, ~4000 B.P. The resulting lagoon stabilized by ~3000 B.P., and then began shrinking after ~2000 B.P. as it continued to fill with Ballona Creek alluvium.
- Human settlement expanded from bluff-top settings to the base of the bluff and into seasonally dry wetlands that formed around the lagoon.
- Human settlement tended to move westward through time. Initial occupation focused on the Baldwin Hills, shifted in the Middle period to the Westchester Bluffs and Centinela Creek, and culminated in large settlements at the mouth of Centinela Creek and the Ballona Lagoon.



Habitats Identified by Ostracode Analysis

