

The Environment of the East Bay Shoreline When Europeans First Arrived

Presentation by
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Introduction

It is my intention this afternoon to convey to you some sense of the nature of the native landscape along the East Bay shoreline when it was first visited by Europeans, more than 200 years ago. And I hope to raise some questions about the historical relationship of people to the land, questions about land use and ecological management that are relevant today.

For at least three reasons, you should be skeptical about the picture I will try to paint.

First of all, we must remember that the land is always changing. Hills rise and erode, creeks meander and migrate, forests and wetlands expand and contract, tidal marshes move upstream with the rising sea, buildings and whole towns come and go. Portraits of a past landscape must focus on some period of time for which the normal or most likely conditions are known and can be shown. But the variability about the norm is what drives life and living. And no single picture can realistically portray this driving force. A series of pictures for different times is required to illustrate change. To some extent, experts in land can infer from pictures of average conditions how they might have varied over time, but the inferences deserve to be challenged.

Then there is the painter's bias. No picture shows everything. A portrait is a result of many little choices about what to show and not to show, as well as how selected features should be shown. It is a question of detail. Do we show every bend in every creek? All the ins and outs of shorelines? Aren't some wetlands too small to matter?

And finally there is the problem of uncertainty. What color were the treeless hillsides in the dry season? Were they the golden color of annual grasses that die after spring? Or did perennial grasses keep the hillside green? Did the creek never reach the Bay, or only in the wettest years? Not all the decisions are equally well supported. But the variations in certainty from place to place, feature to feature, are hidden by the painted face of the land.

Having warned you to be skeptical, I will now present a portrait of the native landscape of the Bay.

Slide 1: regional past view

This is the Native Landscape of the Bay Area as portrayed in the EcoAtlas. The Bay Area EcoAtlas is a computer-based system of maps, images, text, and numerical information that is being developed to help protect and manage the Bay and its watersheds.

This historical view pertains to the period between about 1760 and 1830. This was a relatively dry period, with little variation in total rainfall from year to year, compare to the preceding and subsequent half centuries.

Slide 2: people working around a table

The view was produced by many people from a variety of backgrounds working together to sort through and integrate among thousands of pieces of evidence, including ..

Slide 3: picture of open books

... historical documents from major and minor libraries and person archives throughout the region ...

Slide 4: close up of T-sheet of Coyote Hills, showing words "Indian Mound"

.... Old maps, such as this United States Coast Survey topographic sheet of the boundary between tidal marsh and uplands near Coyote Hills in about 1898 ...

Slide 5: Diseno showing Mission San Jose

... really old maps, such as this Diseno produced in about 1830 in support of the Spanish land grant near Mission San Jose ...

Slide 6: Watkins photo of Albany Hill

... really old photos, such as this 1861 picture looking south from El Cerrito toward Albany Hill, showing the bay, tidal marsh, riparian forest and mixed hardwood forest where Cerrito Creek borders the Hill. There are still native sycamores and oaks along the creek ...

Slide 7: Edward Rook painting of Santa Clara Valley

... paintings of historical landscapes, such as this one by Edward Rook looking east across the native lands now called Silicon Valley ...

Slide 8: Edward Rook painting of White-faced Ibis

... accounts of wildlife, which when combined with knowledge of their natural history yields an understanding of landscape as habitat ; here we see White-faced Ibis, which used to be common in seasonal wetlands around the Bay ...

Slide 9: Laurel with boat in Petaluma Marsh

... field studies of remnant patches of native habitat, such as the 3,000 acre Petaluma Salt Marsh, most of which is about 3,000 years old ...

Slide 10: creek at high flow

... or the few local creeks that still flow freely through native trees on their way to the Bay ...

Slide 11: regional tidal salinity patterns

... and special studies, like this one that produced a picture of how the Sacramento-San Joaquin rivers and local streams used to affect the salinity of the tides around the Bay. The warmer colors show that Central Bay and South Bay were similarly very saline.

Slide 12: regional historical view

More than thousand pieces of strong evidence of historical conditions were used to create this picture of the past. All the pieces of evidence used to define a feature can be retrieved through a data base. There is also a code for the certainty of each feature, in terms of its location, size, and shape.

Now I would like to focus on the native landscape of the East Bay shore. I will do this by comparing the East bay shore to another, quite different part of the historical Ohlone world, the far South Bay.

Slide 13: historical view of far South Bay

Here we see the shallow bay waters, mudflats, moist grasslands, creeks and riparian zones, and large will groves or sausals indicative of the South Bay. The broad valley was noted for large herds of elk and antelope, as well as smaller game. The creeks of the valley floor probably looked something like this:

Slide 14: interior of riparian forest

... wide and not very deep, except in certain places, with a deep gravel bed that was not far below the valley floor, a riparian forest of mostly sycamores and cottonwoods, and much light, owing to the open character of the sycamore canopy. The creeks were not deeply incised, and were therefore easily crossed on foot or horseback.

Slide 15: perennial pond

The few perennial wetlands were shallow and well vegetated by many species of emergent and submergent plants. In the native landscape, the freshwater ponds were not dominated by cattails or tules, as they are now. Whether or not the Ohlone managed the ponds for their biological diversity remains to be discovered.

Slide 16: historical view of far South Bay

Bayward of the seasonal wetlands were vast tidal marshlands ...

Slide 17: tidal marsh

... with a profusion of channels large and small, and natural ponds between the channels. The marsh provided waterfowl and fish at high tide ...

Slide 18: tidal marsh channel at low tide

... and shellfish along the exposed channel bottoms and open mudflats at low tide.

Slide 19: historical view of far South Bay

There were large areas of very fine sediment along the bayshore away from any creeks. Surface drainage was very poor in these areas, and they tended to get saturated during the wet season. These areas are referred to ...

Slide 20: Moist grassland

... as moist grassland, which was mostly green year-round with perennial bunch grasses as small sedges ...

Slide 21: vernal pools in bloom

... and grasslands with vernal pools, which would become rich in color with golden fields and meadow foals during early spring.

Slide 22: historical view of far South Bay

So we see that the far South Bay included a number of large creeks flowing throughout the year to the Bay, in association with narrow riparian forests of sycamore and cottonwood, large willow groves or sausals near the upland edge of the moist grassland, where poor drainage caused shallow groundwater from further uphill to emerge onto the ground surface, and vast areas of mudflat and tidal marsh, with its abundant channel and shallow ponds. This is a picture of paradise, of verdant valleys among wooded hills with abundant game in an equitable climate.

Slide 23: N.C. Nelsons midden sites (1909)

It is no wonder that there is much evidence of native inhabitation. Here we see the location shell mounds as shown by Nelson in 1909. WE know that this is just a few of the mounds and other evidence of inhabitation that exists. But even this map shows a clear association between native people and sausals, riparian forests, and tidal marsh.

Slide 24: regional historical view

Now lets compare the South Bay to the east bay shore. The first thing to consider is the difference in position, relative to the Golden Gate and the winter storm track. The Central East Bay shore is directly opposite the Gate. It is attacked by strong winds and waves, which have literally taken a bite out of the shoreline, resulting in its characteristic crescent shape. It is almost marine in character, rather than estuarine. It has a sandy substrate. There are even beaches between the mudflats and the uplands. There must have been a relatively large supply of debris, including large carcasses of marine mammals, delivered to these beaches by the Bay. It was almost always wind-swept, and in the summer it was usually foggy and cool.

Slide 25: close up of East Bay shore

The mudflats, marshes, and plain beside the bay were rather narrow. The creeks carried a very high load of sediment from their small watersheds in the nearby hills. Most of the creeks were not able to carry their sediment loads all the way to the bay, but built fans instead, into which the little creeks dissipated. Temescal, Strawberry and Cerrito creeks were exceptions.

They had perennial flow from larger watersheds. They would have therefore supported steelhead and perhaps Coho salmon, as well as smaller native fishes. There are few accounts of abundant game, but some accounts of numerous large bears, perhaps due to the occasional presence of large amounts of carrion on the beaches.

If we look closer in this region, just south of Temescal Creek ...

Slide 26: close up of early T-sheet
... in this Coast Survey T-sheet from about 1856, we can see that the high ground supported large stands of oaks.

Slide 27: the oaks of Oakland
These were the coast live oaks for which Oakland was named.

Slide 28: close up of East Bay shore
If we look a little further north, along any one of the little creeks crossing the narrow plain ...

Slide 29: we can see the moist grassland associated with poorly drained alluvial soils, but no extensive areas of vernal pools ...

Slide 30: interior of sausal
... and where the creek ends or meets the marsh, we find small sausals, open beneath due to burning and perhaps from harvesting shoots and small branches for fuel, arrows, and construction materials.

Slide 31: view along the shoreline
... Stepping out from the sausal we can see the long, open shoreline, where the grasslands meet the marsh and beach, interrupted by wind-swept sausals and small creek mouths. In the distance we can see the narrow riparian forest of Temescal creek, or perhaps the oak forest beyond. This, of course, is not really a picture from the East Bay, but it is reminiscent of the historical East Bay shoreline, on a clear spring day.

Slide 32: regional historical view
Let us look again at these two part of the historical Ohlone world, the Central East Bay and the far South Bay .

Slide 33: far South Bay
The far South Bay is a warm place with abundant natural resources of many kinds laid out across a broad valley. And by all accounts there were many people living well there, mostly in permanent or year-round residences.

Slide 34: central East Bay
The Central East bay shoreline seems much less inhabitable. The conditions are harsher, with more uncomfortable weather, less game, and fewer places to take shelter.

Slide 35: central East Bay showing middens
And yet the area was well inhabited. Why? Was it well positioned for trade? Were sunsets through the Golden Gate worth the effort?

Slide 36: Edward Rooks' painting of Ohlone looking across Santa Clara Valley
Perhaps the native people of Temescal and elsewhere in the central East Bay commuted between the bayshore and the nearby hills. If so, were creeks the commute lanes? They run against the grain of freeways and railroads and sewer lines, but they go with the natural flow of the land. Can creeks be used to reconnect people to the bay? Maybe the shellmounds have the answers.