

Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Director, Institute of Marine Sciences, UC Santa Cruz.

#218 September 4, 2016

The Earliest Human Migration Into California

One of the most exciting things about doing science is that there is always room for new ideas and opportunities for new discoveries. No matter how long some scientists believed that they had it all figured out and that the picture was complete, new eyes, and now new technologies, are changing many long-held ideas in nearly all scientific disciplines. This opens the door to young curious students and provides encouragement and incentives for them to consider science as a career.

The finding of 13,000-year old human remains in Clovis, New Mexico, in the 1920s is a good example of how a long-established belief can be completely overturned with new discoveries. Older evidence of humans in the Americas has now been unearthed in Oregon, Texas, Florida and Chile.

Based on the number of sites where evidence of early human habitation has now been uncovered, stretching from Alaska to Chile, and despite some archaeological arm wrestling over what counts for concrete evidence and what doesn't, it seems that humans arrived in the Americas at least 15,500 or 16,000 years ago. Pushing the arrival date back introduced another problem to be solved, however. Based on sea levels and ice coverage 15,000 years ago, there wasn't an ice-free highway open for traffic yet for these early visitors to follow into North America from the north.

The lack of a convenient or even passable route on dry, ice-free land introduced the idea that perhaps the first Americans didn't walk here at all, but came in small boats and followed the coastline south. This idea was first introduced in the late 1950s after some very old human bones were discovered on Santa Rosa Island, off the coast of Santa Barbara.

After an initial belief that the remains were of a male, the bones were later determined to be female, and were given the name, the Arlington Springs woman, after the discovery site on the island.

What was important was that the bones were later dated at 13,000 years old, making these the oldest human remains found anywhere in the Americas at the time. Although sea level was about 150 feet lower than today, Santa Rosa Island was still separated from the rest of California by about five miles of deep ocean.

Unless this early woman was an Olympic swimmer, she and her friends and family must have crossed the deep Santa Barbara channel by boat. Although pygmy mammoth bones of the same approximate age were also unearthed on Santa Rosa Island, indicating co-existence with this early human, it is not believed that this miniature elephant shared the boat.

The finding of human bones on an offshore island provided more credence to the theory that the earliest humans may have entered North America and traveled down the coast by boat, along what has been dubbed the “kelp highway”. There was ample seafood and seaweed along the way so they didn’t go hungry. The finding and dating of Arlington Springs woman also altered the prevailing view that the earliest humans reached the interior of North America first and then dispersed to the coast, but that they more likely worked their way down the coastline from the north.

The earliest Americans seemed to have thrived along the state’s ocean edge. While the 13,000-year old woman from Santa Rosa Island is the oldest dated human discovered thus far in California, by about 10,000 years ago there appears to have been fairly widespread occupation of the coastal region, and for a number of good reasons.

The same climate that draws people to the coast today was also more agreeable year round than inland areas 10,000 years ago. California has also been a fertile and productive region with an unusually rich diversity of plants and animals that provided year round subsistence for the early inhabitants.

Ultimately, more than two-dozen tribal groups occupied the coast, stretching from the Tolowa near today’s Oregon border to the Kumeyaay in the San Diego area. Today, even with all that the indigenous people suffered through with the arrival of Europeans, there are over one hundred federally recognized tribes, giving California the largest Native American population and most distinct tribes of any state in the nation.