

THE Current

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GEOLOGIST FINDS LOST ISLAND IN SANTA BARBARA CHANNEL

An island submerged for more than 13,000 years has been discovered beneath the ocean's surface about halfway between the Santa Barbara Harbor and one of the existing Santa Barbara Channel Islands by Edward A. Keller, professor of geological sciences and environmental studies at UC Santa Barbara.

Isla Calafia, as Keller has named it, lies under 300 feet of water on the highest part of a huge underwater ridge that extends from Point Conception to the north and becomes part of South Mountain near Ventura to the east.

It is about 31 miles in length and three miles wide and rises about 660 feet from the bottom of the channel.

Keller made the discovery while studying high-resolution topological maps of the channel floor to better understand earthquake hazards in the area. "The island shows signs of coastal erosion, had sea cliffs that were 30 feet high, and was flat," Keller said, speculating that Columbian mammoths might have swum out to the island at the peak of the Ice Age 20,000 years ago.

The island is bordered by two major earthquake faults, one of which is capable of producing an earthquake with a 7.5 magnitude and a tsunami. And not far from the underwater island are pockets of natural gas that could pose hazards to passing ships if they erupt, Keller said.

"When these bubbles burst, which we think are relatively rare events, they send huge amounts of methane into the ocean," Keller said.

A dozen craters in the area suggest that gas blowouts may have occurred in the past, he added.

The island, which is being pushed up between colliding tectonic plates at the rate of six feet per 1,000 years, is unlikely to resurface any time soon, Keller said.

"It could emerge above water again in about 1 million years," he said.

Keller will discuss his discovery locally on Thursday, October 18, 7 p.m., at the Santa Barbara Maritime Museum. He will present a paper on Isla Calafia at the national meeting of the Geological Society of America in Boston on Nov. 4 and 5.

The island was named for a mythical warrior queen who ruled a utopian island empire, and was probably the origin for the name California, Keller said.

About UC Santa Barbara

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