

Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Distinguished Professor of Earth and Planetary Sciences, UC Santa Cruz.

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An Offshore Bank

Mountainous waves, crazy adventurers and sunken ships can all capture our interest and imagination, and there is a place off the coast of Southern California with a long history that includes all three of these.

One-hundred and eleven miles due west of San Diego is an undersea mountain that rises a mile from the seafloor to within three feet of the ocean surface at low tides. Passing ships and small boats have even seen a few feet of rock exposed at the top of the mountain in the troughs of large waves from time to time.

Cortes Bank appears to have been first sighted in 1846 by the frigate USS *Constitution* while transiting along the west coast from Monterey heading for engagement in the Mexican American War. Communication was somewhat limited in those days, however, and it was the captain of the steamship *Cortes* seven years later that believed he was the first to observe the waves breaking far out to sea over a shallow submarine feature in 1853. The shallow bank was named after his ship and the name stuck.

It was that same year when the first U.S. Coast Survey map showed the presence of a navigational hazard in the area. The *Stillwell S. Bishop*, a clipper ship apparently hit the top of the seamount in 1855, but was able to continue on to San Francisco, leaving its name on the rock at the top of the bank, which it still carries today – Bishop Rock.

It was just over a century later in 1962, when Harrison Ealy, a surfer and sailor from Laguna Beach, who knew about Bishop Rock, stopped on a sailing trip back from Hawaii as they were passing near the bank. He got out his board, paddled over to a modest size wave and became the first person to ever surf this spot over 100 miles offshore.

In the subsequent 56 years, the word about mountainous waves gradually got out and Cortes Bank slowly became a magnet for a small group of hard core big wave

surfers – including locals Peter Mel, Ken Collins and Brad Gerlach - and entered the legendary status of a handful of places around the world where monster waves break under the right conditions (Mavericks, Ghost Tree, Nelscott Reef, Waimea Bay, Jaws, Cape Nazaré, and Todos Santos, to name a few).

From all accounts, jumping off a small boat with a surfboard in what seems like the middle of the ocean to surf a wave that might be 50 or 75 feet high gets a lot of adrenaline flowing very quickly. It's a very different experience than being able to see the comfort of shoreline a few hundred or a few thousand feet away.

In addition to a number of surfing adventures, there have also been some monumental ship misadventures over Cortes Bank. The USS *Enterprise*, a floating airfield, nearly met her end over Cortes. At 1,123 feet long, this aircraft carrier was not only the longest U.S. Navy ship to have ever sailed, but also the second-oldest commissioned ship still in service and also the world's first nuclear-powered carrier. She was involved in the 1962 blockade during the Cuban Missile Crisis, served as a base for planes in the South China Sea during the Vietnam War, and more recently played a role in launching aerial attacks against Al Qaeda in the Middle East.

On the evening of November 2, 1985, the *Enterprise* and her 4,600 man crew were part of a major naval training exercise offshore San Diego. The captain had a lot on his mind that evening and things got progressively more complicated as time went on.

The aircraft carrier needed to head into the wind in order to get planes launched and landed safely. Due to an untimely and unfortunate combination of the ship running at near full speed to get to its designated station on time, bad winds and multiple course corrections, the need for the captain to leave the bridge for extended periods of time, a major security issue with what turned out to have been a rumor of a man walking around below deck with a submachine gun, and surprising to me, a lack of sonar on board (GPS navigation was not yet in common use), led to a series of serious navigational errors.

By the time the captain realized that they were in imminent danger of passing very close to Cortes Bank it was too late to turn the 93,000 ton floating runway and avoid the rocks near the surface. The entire ship shuddered as it crossed directly over the rocks, which tore a 60-foot long gash in the torpedo-resistant steel hull and destroyed three of the ship's four massive propellers.

They floated off the rocks, began taking on water, but with counter flooding were able to level the ship and make their way to port for \$17 million in repairs. This is not the end of the adventures on Cortez Bank and Bishop Rock, however.