

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

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Swimming with Sharks and Other Risky Activities

The interaction that pro surfer Mick Fanning had with what was believed to be a great white shark in a South African surfing contest on July 19th got a huge amount of media attention. The on-line video has now been watched by over 21 million people and generated 5,600 comments! People are interested in anything involving sharks; and danger, no matter how remote, is fascinating.

Of the countless articles and postings of this event, many take a fair amount of liberty with just what the shark was thinking: phrases like “shark attack”, “Fanning got lucky”, “the shark missed”, are good examples. Does anybody really know what the shark was doing or its intentions?

Ten days earlier, many California papers carried a story with another shark headline, “Stanford researchers show the risk of shark attacks is way down”. The research concluded that the hazard of a shark attack on the California coast has dropped by more than 91% since 1950.

Did this study make all of those triathletes at Seacliff this past Sunday feel much safer as they started their swim leg of the Sandman Triathlon? What does this number really mean? More accurately, “the individual attack risk has dropped by more than 91% during the past six decades.” Is that any clearer?

I’ll try to explain the risk of a shark attack in California waters with some history. In the 88 years between 1926 and 2014, there were 114 confirmed unprovoked shark attacks, of which ten were fatal. So just a little over one attack each year, on average, for the millions of people using California beaches and coastal waters, and one fatality every 9 years, along the entire 1,100 mile coast of California. To me, that sounds like a very low probability.

Some areas are more dangerous than others, however, with large colonies of seals or sea lions serving as meat markets for great whites. The hottest spots for shark attacks by county and the number of attacks during this 88-year period: San Diego 17 attacks; Humboldt 15, Monterey 11, Santa Barbara 11, Marin 10, San Luis

Obispo 10, San Mateo 9, Sonoma 8, Santa Cruz 7, Los Angeles 6, San Francisco 5, Del Norte 2, and 1 each for Mendocino, Alameda and Orange.

To reduce your anxiety the next time you enter the water, Santa Cruz County has never experienced a fatal shark attack. Monterey County has a lot of coastline and has only had two fatal attacks, the last one 34 years ago.

California shark attacks are more frequent between July and October, which is likely a result of these being the months of greatest beach and water use. Not surprising, winter months have the fewest number of attacks.

While the Stanford study reports that the “risk” of shark attack is down 91% since 1950, the actual “number” of attacks has increased every decade since 1960. There were six attacks in the 1960s, 13 in the 1970s, 15 in the 1980s, 20 in the 1990s, and 28 between 2000 and 2009.

The conclusion that your risk of attack is now lower than 60 years ago is based on the greater numbers of people going to beaches now (they estimate 165 million in 2013) compared to 1950 (about 53 million), and big increases in ocean activities, in particular surfing and scuba diving. Eleven attacks in the 1950s with 53 million beach goers give you odds of an attack of about 1 in 500,000; 21 attacks between 2000 and 2009 gives you odds in that decade of one in about 800,000. This doesn't sound like a 91% reduction to me.

Equally important, how do the risks of shark attacks compare to other daily activities? Well, during the decade of the 1990s, there was one death from a shark attack along California's entire coast, but 177 people drowned.

During the decade from 2000 to 2010, there were 114,000 accidental deaths in California from all causes; 41,277 of these involved motor vehicles, 30,445 involved some type of poisoning or drug overdose, and 18,472 were due to falls. Just five people died from shark attacks.

Drive, bike, walk, swim and eat carefully, and don't text while doing any of the above.