

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

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Risk of shark attack remains very low



Small great white shark in bay off Santa Cruz.

On a beautiful warm fall afternoon during my freshman year at UC Santa Barbara, I returned to our dorm room to find my roommate huddled under a blanket, visibly shaking. I asked him what was going on?

I liked Clark and was concerned about what might have happened to him. He and I had become good friends and were the only guys in our small, former Marine Corps barracks dormitory that surfed. Somehow, the questionnaire they had given to freshman that they used to try and match up roommates had worked out in our case.

The year was 1961, and foam surfboards were still pretty new. Clark had an old, balsa board; one that had seen the ravages of time. When he was out on the board, it was about half submerged from getting waterlogged over the years. And that was part of the explanation of why he was in bed shaking on a warm September afternoon.

I slowly coaxed the story out of him. He had been out paddling in the kelp beds off Isla Vista, just west of the campus. Clark was also a scuba diver and had an interest

in anything moving in the ocean. He was a few hundred yards offshore that afternoon when he saw a dark shape that he thought was a seal or sea lion. He eagerly paddled over to investigate. When he looked down, what he saw almost sent him into shock. Instead of a seal, he saw a large shark directly beneath him. And his board, partly submerged, was just grazing the top of the shark's body.

Some of the advice they used to provide for downed pilots who find themselves in shark-infested waters is to do a relaxed breaststroke towards the beach, so as not to agitate the water and attract attention. My roommate made it to the beach, but from his condition when I saw him, I don't think he was calm or relaxed as he paddled back with his old balsa board

In all of my years in the ocean, I never had any experience remotely close to what my roommate had that afternoon. But like 99% of us, encountering a shark in the water is one of those things I would just as soon avoid. A shark attack to a surfer, paddler, kayaker or swimmer, is something that we just instinctively fear. Horror fiction and films such as Jaws have tapped into this fear while undoubtedly feeding it further.

While all of the roughly 375 shark species worldwide eat meat, none has any personal agenda against people, although occasionally sharks will mistake a person for prey. Contrary to popular belief, only a few types of sharks are dangerous to humans. Of all of the species of sharks, only four have been involved in a significant number of fatal unprovoked attacks on humans: the great white, tiger, bull and oceanic white tip.

So what are the odds? How often do people get attacked by sharks? There are lots of interesting statistics out there to provide some perspective, and hopefully some peace of mind. Less than one person is killed each year on average by a shark in US waters. You're 25 times more likely to be killed by dog bite than a shark, and 50 times more likely to be killed by lightning or from a wasp, hornet or bee sting. I hope that makes everyone feel better.

If you really want to get worried about your daily activities, just consider this: in contrast to the occasional dog or shark bite, motor vehicle related deaths - whether you are in the car, on a motorcycle, bicycle or a pedestrian - account for nearly 45,000 deaths across the country each year. That's five people every hour, 24 hours a day, 365 days a year!

How about cell phones? This is something we have some control over. In 2005, distraction from using cell phones caused an estimated 2,600 deaths and 330,000 injuries in the United States. You might already guess that the group with the greatest proportion of distracted drivers was the under-20 age group.

But, I digress. Let's get back into our ocean backyard. Although I may have convinced you that just about anything you do every day is far more hazardous than being attacked by a shark, it does happen from time to time.

Not all of the numbers reported agree, but to provide you with some picture, the United States has had more reported shark attacks than any other country, on average about 16 attacks per year, with one fatality every two years. Keep this in perspective now. Remember that dog bites kill 26 people each year on average, cell phone distraction around 2600, and five people die every hour in accidents involving cars

How about our risks here in California? As a state we seem to have kept pretty good records. In the 85-year period from 1926 to 2010, there have been 100 confirmed unprovoked shark attacks along our coastline, nine of these were fatal. Nine deaths due to shark attacks in 85 years is about the same risk of dying from a tsunami in California.

The risks are very, very low, but for those whose minds drift towards sharks when they enter the water, three counties have experienced a little over one-third of those 100 attacks, San Diego with 16, Humboldt with 12, and Marin with 10. Monterey, San Mateo and Santa Barbara counties have each recorded 9 attacks, and Sonoma and San Luis Obispo counties have each experienced eight. Santa Cruz County is next with 6 reported shark attacks in 85 years and none of these was fatal.

While less than one person dies every year in US waters from a shark attack, people around the world kill an estimated 50 million sharks each year. Doesn't seem quite fair, does it? For those people who are brave enough to go to the beach and actually enter the water, the chance of being attacked by a shark is about 1 in 11.5 million, and a person's chance of getting killed by a shark is less than 1 in 264 million. Meanwhile 3,500 people are drowning in the US every year.