

Michelle Averbeck

Dolores Fisher Award

I take advantage of happenstance opportunities when they come my way, including introducing myself to naturalist and author Carl Safina at a fisheries conference last spring. I was extremely humbled by his presence, so I respectfully approached him to sign my copy of his book, *Song for A Blue Ocean*. I shook his hand, and told him what an inspiration he was to me. Somewhat star-struck, I thanked him for signing my book and walked to a quiet corner to contemplate the previous moment. I opened the cover to glance at his autograph, and read the brief inscription he had written. "Because you're the next wave," it read. My spirit soared with this short memo. Carl Safina, a passionate, eloquent, talented marine conservationist and activist, had called *me* the next wave. My generation can have a positive impact on the protection of the ocean, and I can be a part of that movement. Carl Safina told me so.

The calm foothills that surround my native Northern California town are an odd place for a child to become obsessed with marine biology. Having a parent in the airline industry had left me blessed with annual trips to Hawaii, however, and I have been able to snorkel almost as long as I have been able to walk. These trips are where I was first introduced to the glorious wonders of the ocean's biodiversity, and where my passion for the oceans first developed. I remember seeing my first sea turtle outside of captivity at the age of four. I also remember seeing the rainbow of corals and reef fishes at this age. I can hope that the perceived decline in the quality of the reefs that I see when I snorkel today is an artifact of my childhood memories being enhanced by my young imagination. I fear, unfortunately, that my memory does not fail me.

My lifetime has seen a drastic increase in environmental awareness. Before I was born, Rachel Carson's *A Silent Spring* brought environmental issues to the forefront of modern politics. However, the oceans were still largely seen as a dumping ground for waste. The sea was considered too vast to ever be negatively affected by human activity. The perception that fish stocks could not ever possibly be depleted by fishing efforts was widely held. To date, the sad evidence that both these preconceptions were false is glaring. Fishing has depleted numerous once abundant and healthy stocks, and because non-target species are also harmed by marine fishing, marine mammals, sea birds, sharks, and sea turtles are also declining in abundance.

Community-level changes are being observed by marine scientists, and they are a direct result of human activities. In Alaska, the once over-hunted sea otter was slowly recovering. However, declines in seal populations, possibly a result of the removal of their food items due to overfishing, has left Killer Whales with sea otters as the next best meal. Otter populations are again declining because of this increased predation, and sea urchin populations are increasing, thereby decimating kelp forests, because there are less otters available to naturally limit the sea urchin populations. In the North Atlantic, decimated cod populations have resulted in a shift in the community structure, and dogfish and skates are now the dominate species. In the Caribbean, essential fish nursery habitat is being threatened by disease because sea turtle populations are dangerously low. The ecological function of grazing is occurring less and less in turtle grass beds and the community is changing because of this. If these community level changes are a result of human activity, then it is my belief that human activity can reverse or prevent these changes as well.

This is the cause I have dedicated my life to. The protection of our precious seas is how I choose to make a contribution to the earth's history. I am not just aiming for the return of my colorful childhood memories; I refuse to be a victim to shifting baseline syndrome. Knowledge, persistence, and hope are the tools I can utilize to help conserve the marvelous species of the sea that have existed far before humans were able to extract them. Pursuing a graduate degree is an essential step in creating a career where I can actively participate in scientific endeavors that will benefit marine conservation.

My previous professional and educational opportunities, such as a position at the Southwest Fisheries Science Center Sea Turtle Research Lab, have led me to pursue a master's degree with the University of California, San Diego. I am using genetic techniques to look at the nesting stock origins of Hawksbill sea turtles that have been stranded in Texas. This goal is not trivial. Hawksbills are highly endangered because they are harvested for their coveted colorful shells. Using genetics, I will be able to identify which nesting beaches the injured or morose hawksbills were born on. This will provide critical insight for managers trying to save the Caribbean Hawksbill populations from extinction.

My passion for the oceans carries over into my work and my research. I take my scientific education very seriously, because I plan on using it to promote science-based conservation of the oceans. People in my life know I care deeply about marine conservation, and

they respect my passions because they see me diligently and enthusiastically pursuing them. I will not stand by and watch marine biodiversity precipitously decline without trying to do something about. For me that something is marine science. New technology and scientific methods, such as satellite telemetry, molecular ecology, and ecological modeling have the power to contribute to the development of a precautionary approach to the stewardship of the seas. My master's thesis will train me in many of these new techniques, and I will transfer my skills into future research in the name of conservation. I represent the next wave of marine science, and I will use my opportunities, my education and my passion to help mitigate the tragedy of the seas caused by harmful human activity. Humanity can no longer hide behind ignorance. The ocean is not too vast to be harmed by us, nor is it too grand to be protected by us. With my passions as my guide and science and ecology at hand, I hope to make a difference in my lifetime, because I am the next wave of marine protection.