



Catalina Martinez (1966-Present)

Scientist
National Oceanic and Atmospheric
Administration (NOAA)

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Overview

Catalina Martinez, is physical scientist for the National Oceanic and Atmospheric Administration. She has used the interest and passion for scientist to shape her long career as a research scientist.

This interview was conducted in 2015.

Early Life

Although she did not come to her career as a physical scientist in a straightforward way, Catalina Martinez has always loved science and the natural world. Growing up in inner-city Providence, Rhode Island, and lacking a formal science education, Martinez had to find unorthodox ways to pursue her love of nature. She supported herself from the time she was sixteen, working in a jewelry factory, sandwich shops, a telephone company, and stores at a local mall; but she also learned to scuba dive in a city dive shop, and inherited her grandfather's love for animals. However, it was not until she was in her mid-twenties that Martinez really got involved in oceanography and marine science.

After exploring the Atlantic coast she had always lived on, Martinez decided that she wanted to study fish. She then "switched paths completely" from her work in human services—both in the medical field and with urban middle school students at significant risk of dropping out—and began pursuing oceanography and marine science at the University of Rhode Island (URI). While an undergraduate, she received a grant from the Michael P. Metcalf Memorial Foundation to participate in research linking life history stages with habitat of the white grunt fish off the Southwest coast of Puerto Rico. "The work I did was a collaborative project through URI and the University of Puerto Rico, to demonstrate the need to protect a variety of inshore habitats from fishing," she says. At the time, the Puerto Rican fishing community was willing to protect one offshore reef from fishing, but Martinez and her research associates set out to prove that because

of the fish's life cycle, they needed to protect the inshore habitats as well. "They [the fish] live in a variety of habitats based on their life history stages...the part of the project I worked on demonstrated that the juveniles lived in near-shore coral reefs by day, but fed in shallow seagrass beds at night. Clearly, you can't fish out the juveniles and expect to sustain a population."

Education

Martinez received her bachelor's degree in zoology in 1997, a master's degree in oceanography in 2000 and a master of marine affairs degree in 2002, all from URI. After completing her second master's degree, she was awarded a John A. Knauss Marine Policy Fellowship through National Oceanic and Atmospheric Administration's (NOAA) National Sea Grant office. The fellowship brought her to Washington, D.C. in 2002, where she spent a year working for NOAA's Office of Ocean Exploration (OE). She was hired by NOAA at the end of her Fellowship, and has been with NOAA OE ever since.

Career

Although Martinez's official title at the NOAA is Physical Scientist, she wears many hats in her position. She works predominantly as a project manager/expedition coordinator, and manages the regional office in Rhode Island as the liaison between NOAA and the University of Rhode Island and the Institute for Exploration. She also works as part of the outreach and education team, focusing on work with underrepresented groups, and developing new collaborations to provide opportunity where it might otherwise not exist.

Importance to Mentoring to Career

As someone who followed a non-traditional path into the environmental arena, Martinez says she has had more "influences" than formal mentors in her life. "As an older student, I didn't have much in the way of mentorship," she recalls. However, her close friends, a few members of her family, as well as her master's advisor, Jennifer Specker, supported and inspired her as she pursued her professional goals. While she was in graduate school, Martinez was involved in a minority Fellowship program called "Compact for Faculty Diversity", whose members were also very supportive of her. "After making all of my connections through that program, I wanted to make sure to give back to other students after completing grad school," she says. Martinez is now herself a mentor in a program called Minorities Striving and Pursuing Higher Degrees of Success in Earth System Science (MS PHD). She is also involved in the American Society of Limnology and Oceanography (ALSO) Minorities in the Aquatic Sciences, a minority fellowship program, where she mentors a handful of students. Martinez says she tries to help minority students who have contacted her over the years by helping them network connections and find fellowships, and hopes her experience "going through a hard core science program, often as the only minority in my department," will serve as an inspiration to others.

Highlights

Martinez says the highlight of her career thus far has been taking a research dive in the Alvin Submersible, a three-person vessel operated by the Woods Hole Oceanographic Institution, during a 2004 NOAA OE-sponsored expedition to explore seamounts in the Gulf of Alaska. "It was an amazing experience, a dream come true for me," she says. However, not all of her research trips have been similarly amazing—Martinez notes one cruise she took as a career low point. "Sometimes when you're out at sea for months at a time, conflict occurs between the other people on the boat," she says. "When people don't get along, it can be a real nightmare. Part of my job is to mediate the conflicts and sometimes the days become stressful, emotional and painful."

Despite such occasional drawbacks, Martinez says the ability to participate in expeditions exploring the ocean's depths is why she has remained in the environmental field. "The expeditions result in lots of amazing and useful information," she notes. "[They're] really important. The oceans are in dire need and are critical to all life on our planet. And the public needs to become informed about the issues. Within our office we've been able to bring some critical issues to the forefront, and share some of the excitement and beauty...and thrill of discovery with the public."

Advice to Young Professionals

Martinez also loves the opportunities her job provides to give minority students the kind of mentorship she never had. "Being able to participate in outreach education is what sustains me," she says. "And working with students and teachers that I never would have [worked with] otherwise has been great. It feels like I'm doing something worthwhile every day." She especially enjoys working with middle school students, as she believes it's important to get minority students interested in the field while still young.

"It's hard for some minorities to enter this field because the urban public school systems many of us attend leave us unprepared academically," Martinez says. "We tend not to choose math or science as a career path in college mainly because we have had little exposure and preparation, and also because we have not been encouraged to pursue these fields." She encourages all young minorities interested in the environmental field to take advantage of math and science courses to prepare themselves for what they will face in college. However, Martinez herself chose to go into the field while lacking that background; while she acknowledges that it was often a struggle that required a lot of extra help, she was able to get through it and become successful. "As long as you're determined to get to a certain point, you'll get there," she says. And she encourages minorities and women to do just that in the environmental and all scientific fields: "I believe that women and minorities constitute a vast untapped resource for math and science fields. We are just as capable as anybody else. A little more exposure, encouragement and preparation would go a long way."