

Video Transcript - YES! Intern Talk - 'Mislabeling of Fish in the Caribbean'

- Maiss: It was Community Day, a day when all the high school interns who had spent the summer working at the Smithsonian's National Museum of Natural History presented their research to anyone that would be willing to hear it.
- Maiss: It was also the last day of a long, six-week internship. So to be honest, I was exhausted. As I stood by my table, I didn't really know what I was expecting to happen. After a few hours of only a couple visitors walking by my table, I was approached by a 13-year-old girl. Once again I wasn't expecting to gain much from this interaction, but this one girl proved me wrong.
- Maiss: As I started to give my [00:00:30] introduction speech, I realized that I had said it probably a couple dozen times. As I continued the talk, the girl sitting in front of me, with brown hair and eager eyes, asked me a question. I paused for a second because every time I had given that speech, everyone would simply nod their heads. However, this girl was different.
- Maiss: I answered her question, and after that, she had about 10 more. And this is when I started to feel truly engaged. This summer I interned at the National Museum of Natural History in Washington, D.C. in the Vertebrate Zoology Department. [00:01:00] My research mentor had developed an interest in South American fisheries, so that was the focus of our research. The issue at hand was the mislabeling of fish in the Caribbean.
- Maiss: Due to the lack of abundance of traditionally caught species, substitute species were being introduced into the fish market. Many of these fish were being sold in restaurants to tourists who were unaware of what they were truly eating. This issue poses a number of other ones such as over-fishing, and the decline of the conservation [00:01:30] statuses of these fish.
- Maiss: This issue really interested me, and I decided that in order to expose these malpractices, I had to conduct DNA barcoding. DNA barcoding is a scientific method used to identify different species. I used it specifically for fish, which I was really interested in, but it can be used for a variety of different species of animals.
- Maiss: Basically what is done is (that the) DNA goes through a series of steps [00:02:00] which it's first extracted, and then it is then sequenced. Going into this experience, I realized I was surrounded by a lot of scientists who had spent many years in college, learning and studying different techniques of conducting lab work. And here I was, a 17-year-old girl, simply trying to successfully attempt the basics of lab work.
- Maiss: As I started throughout the internship, I realized that things were going to be a lot more difficult than I had imagined. However, with the help of my research mentor, I was able to successfully [00:02:30] collect data from this research experiment.

- Maiss: After conducting DNA barcoding a few times, I was left with results that would prove to be really interesting. I discovered that 52% of the 29 samples from Guatemala that I researched, and a whopping 77% of the 35 samples from Honduras, were fish that had been mislabeled.
- Maiss: In both of these countries, the amount of mislabeled fish constitutes the majority, [00:03:00] which proves the severity of the issue. I also discovered that the two most commonly substituted species were catfish and groupers.
- Maiss: Catfish are generally from aquaculture, which could pose environmental problems where farming occurs. And catfish are endangered, which means if they continue to be over-fished, their conservation status could decline severely.
- Maiss: So after conducting this extensive research, I was left with a question of, "How do I make other people care about this?" Being in a lab every day from 9:00 to 4:00 p.m. can almost change your perception of reality. Instead [00:03:30] of human interaction, I was getting a lot of time with gels, PCR machines, and my lab coat. I was beginning to forget about why this project was truly important to me. And that made me feel a bigger desire to make other people care.
- Maiss: So it was Community Day and I was nervous. I was nervous that kids would pass right by my table, and I was nervous that people wouldn't understand why the mislabeling of fish was an important issue. It wasn't until that one 13-year-old girl approached me, that I realized that other people do care about the environment and about what I [00:04:00] specifically have to say.
- Maiss: This interaction urges me to encourage other scientists and all of you to not only strive to learn new pieces of information, but to find ways to make other people care and to influence other lives with the information that you know yourself.
- Maiss: That day I didn't just teach a 13-year-old girl about DNA barcoding, but she taught me about the significance of learning, which will have a lasting impact on my life.