

Iceland is one of my favorite places in the world! I love walking on glaciers and exploring volcanoes. The rocks exposed at the surface are quite young, considering the age of the Earth is 4.6 billion years old. These rocks in this photo are only 13 million years old—they've barely had a birthday!

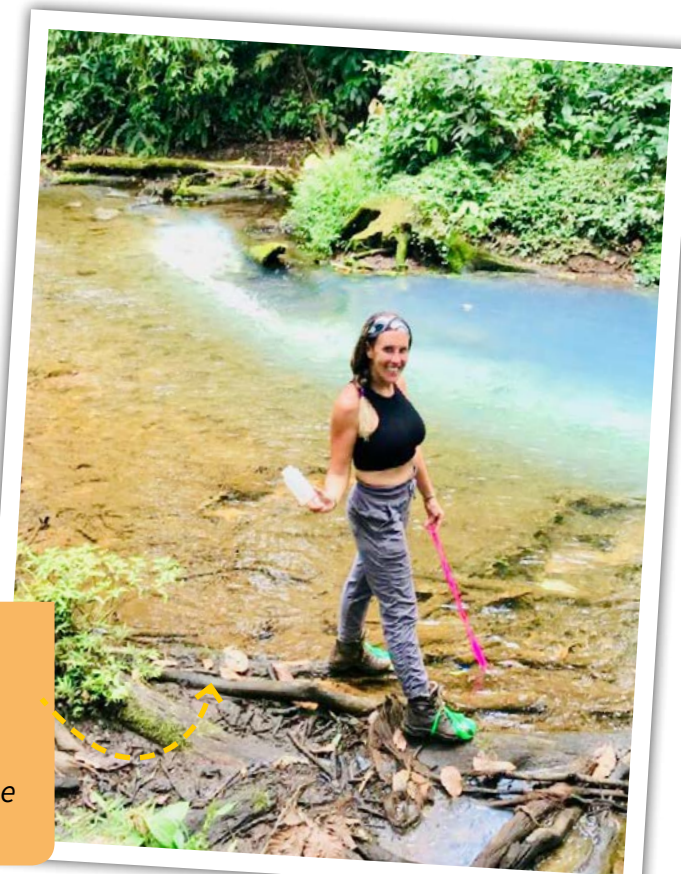


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World Explorer

I GREW UP ON AN ACRE OF LAND OUTSIDE OF SOUTH DETROIT (WAYNE, MICHIGAN). AS A KID, MY DOG AND I WOULD SLIP UNDER A FENCE AND CLIMB A "MOUNTAIN" BEHIND OUR PROPERTY. I PRETENDED THAT IT WAS MT. EVEREST AND THAT WE WERE GREAT EXPLORERS. SIMILARLY, I HAD OTHER AMAZON RAINFOREST ADVENTURES IN A "SWAMP" BEHIND OUR HOUSE.

As a teen, I came to realize that the “mountain” I was climbing was a landfill full of garbage and the “swamp” was raw sewage that backed up from a septic tank. These heartbreaking realizations that my childhood world was contaminated initiated my passion for environmentalism. As an adult, I have dedicated my career to understanding water quality on a global level, driven by the belief that all people should have access to clean water and living environments.



This is a river in Costa Rica called Rio Celeste. Yes, the water is actually blue on the right side of this photo and clear on the left. Why? Minerals! More specifically, silica! Silica from local volcanic activity made the water blue. The many geothermal springs made the area fun to test, because magma close to the surface made the water warm.



It was a life-long dream to visit the Amazon River in Brazil. Because I visited during the wet season, we often had to take a small boat in order to find the point where tributaries (creeks) enter into the main river. When I was writing my field notes, the boat captains would fish for piranhas. They have very sharp teeth and bite! Don't put your feet into the water!

It took me 13 years of college to earn my Ph.D. It was hard and took a long time, but I have learned that hard work always pays off. Now, I am a geologist and I teach at a college. Geology is a fascinating science, because it lets me think about rocks and minerals, volcanoes, earthquakes, tsunamis, plate tectonics, climate change, and water.



Unfortunately, some of the most beautiful areas in Costa Rica are under threat of contamination due to farming and tourism. My research as a hydrologist is important, because I test the water to see if it is clean or dirty. I share my work with forest managers, so that they can better protect the resources.



Yes, those are crocodiles! In Costa Rica (pictured here), and all of the sites I research, I have to be very careful when I am exploring. It can be very dangerous. I often hire local guides and college students to help me in the field, because they are aware of the critters and creatures that can be harmful. Plus, my field sites are very remote, so it is easy to get lost without a guide (and Google Maps doesn't work!).

Over time, more and more women are entering the field of geology! When I am putting together my research team, I like to incorporate young women to help me. Both of these Ugandan women are now college professors and have earned advanced degrees! I am proud to have had them as students when I taught in Africa. If you are interested in studying geology, you should look for a mentor too! They can help answer your questions about science and help you to reach your goals.



The best part of my career is that I get to study water around the globe—just like I dreamed of doing as a child. I have been to five continents studying large rivers like the Nile River in Africa, the Ganges River in India, and even the Amazon River in Brazil. The research question that I am always trying to answer is, “What is the best way to promote clean water for all?”



We all know that drinking dirty water is bad for humans, but did you know it is also bad for animals? Some of my research in Africa has been looking at how dirty water is making animals sick. Here I am in Kenya with Cheetahs that were rescued. They are now happy and healthy.

Word of Advice:

If you want a career in geology, work hard in all of your math and science classes. Don't get discouraged if you feel that those subjects are hard. The reward is getting through the tough part and looking back to see how much you've learned!

