

Why I Want to be a Geologist

By

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My mom freaked out and starting yelling at me when first I told her what I wanted to do with my life. I told her I wanted to work with rocks for a living just like my dad. I smirked a bit and patiently waited for her to finish her rant. “We did not work day and night for you to be breaking your back at work like your dad! We did not come here for you to end up like this!” Now, let me add some context as to why she was so upset.

My parents moved to the United States shortly after getting married. They wanted to have a family but knew that they would have greater opportunities to succeed in the U.S. Like most immigrants, they took whatever jobs they could find. My dad, being a blue-collar worker, has been building rock walls in the brutal El Paso sun (~110 F in summer) for almost 27 years now. So one can see and understand why my mom was so upset when I said I wanted to work with rocks like my dad. After she cooled off a bit, I explained to her that I wanted to be a geologist. She did not know what that was so she asked me, “What is a geologist and where did this decision come from?”

As you will recall, my dad builds rock walls for a living and while on the job he would come across pieces of what looked like shells in the rocks. He thought they were interesting and would bring them home to show me. As a six-year-old child, I had many questions for my dad (e.g. why are there shells in a rock? How did they end up there? What type of rock is this?). He would answer them as best he could but I would always end up asking more questions to the point he could no longer answer them. This led me to acquire an intense fascination with fossils (also important was my obsession with Jurassic Park at the time). These were my first interactions with a field that would shape the rest of my life. Though I am not a paleontologist, these early critical moments in my life influenced me to begin a lifelong journey to answer my own questions through the study of geology.

It was not until I fully immersed myself in geology at the University of Texas at El Paso (UTEP) that I learned about the important questions that geology could answer. Much of the information that we currently know and understand about the Earth rely on quantitative measurements of dates and rates of events provided by the study of geology. For example, early challengers to the theory of evolution stated that our planet and universe were not old enough to permit time for organisms to evolve. It was the study of geology, specifically geochronology and isotope geochemistry, that helped prove that the Earth and universe had billions of years for organisms to develop. These types of answers immediately hooked me in and have led me to focus my Ph.D. career to answer important questions about climate change using isotope geochemistry, hydrology, structural geology, and carbonate formation applications in the Rio Grande Rift.

In my opinion, geology is the only science that can truly offer everything that makes life meaningful and fascinating. It includes varying doses of travel, culture, interdisciplinary science, nature, and politics just to name a few. Being a geologist at UTEP and previously at the University of Arizona, have afforded me the opportunities to do research in exotic lands like

Indonesia and Guam to more local places like the Rio Grande Rift and in Utah. Geology continues to encourage and motivate inquiries that I have had since I first wondered how was it possible for shells to be in rocks. That is why I chose to be a geologist, for the facts it offers and for the immense benefits our society attains from understanding the many processes that affect our active planet.

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