

Interview Assessment #5

Name: Dr. Kathryn Bywaters

Profession: Astrobiologist

Location: NASA Ames Research Center---Moffett Field, CA

Date: October 20, 2017--- 4:00 PM

For the past year, I have been working with scientists mostly from the Houston area. I really wanted to expand on my network and speak with someone from NASA Ames because they tend to focus on astrobiology more than the other NASA field centers. I was really fortunate to talk to Dr. Kathryn Bywaters, who is an astrobiologist at the Ames Research Centers and is also a principal investigator for the SETI Institute. Her work comprises of developing life detection instruments, researching nutrient constraints bacterias will face when they are exposed to the martian environment, and conducting experiments in Mars analog environments.

Most scientists went through the traditional academic route. They graduate high school, get their undergraduate degree, and move on to get their doctoral degree. Dr. Bywaters, however, didn't go through this path. Her formal education actually ended when she finished 6th grade because her dad had to move to Russia for work. Once they got to Russia, there was no school for foreigners at that time so she couldn't go to a traditional school. During her late teenage years, Dr. Bywaters decided to come back to the States to restart her education. After getting her GED, she enrolled in a

community college and that is where her love for science started. Dr. Bywaters told me how she particularly loved biology. Ever since then, her passion for this field only increased.

I was amazed to see how passionate Dr. Kathryn Bywaters was and asked her what the coolest thing she has ever done. She told me that she got the opportunity to stay in the Canadian Arctic for four months to work in a Mars simulated environment. All the team members had to wear spacesuits every time they went outside and had to work under the same martian living conditions. She told me how this was the most memorable experience she had and the closest she has gotten to becoming an astronaut. Dr. Bywaters also noted the importance of field work. She told me that a classroom setting will provide you only so much. You only truly start learning when you go out in the field.

After she told me about her cool experiences, I asked her what three things she would do if she went to Mars. Dr. Bywaters told me the first thing she would do is cave exploring. There are so many things we can learn about Mars from these geological sites. The second thing she would do is study the chemical analysis of linear slope linea and the third thing she would do is look for organics because those are the building blocks of life.

As an aspiring female scientist, I wanted to get Dr. Bywater's perspective on women in STEM. She told me that it is no lie that women have to work harder than men in graduate school. The competition is really rigorous and there will be times when you would want to give up. Another thing she mentioned that really caught my

attention is that everyone thinks women are sacrificing everything if they want to be in STEM. Many people have asked Dr. Bywaters if she regrets not getting married or starting a family. She discussed how this question is very stereotypical and people don't usually ask the same question to men. We both talked about how people need to start understanding that just because you are a woman going into STEM doesn't mean that you are sacrificing your life. You are actually living it.