

Ely Outfitting Company's Boundary Waters Teen Essay Contest
Claire Jensen Essay

In my experiences, nature and science have gone hand in hand. These two passions are outlets for the curiosity that has shaped and molded my life. The first time I felt the desire to explore, experiment, and discover was in my backyard, jumping on the trampoline as a small child. I remember realizing that several tiny inchworms had fallen off an overhanging tree branch and onto the trampoline. Feeling curious, I began to sort the inchworms by color and size. I brought out a toy magnifying glass and observed their segmented bodies. I discovered that the green worms were hiding on leaves, and the brown worms were hiding on the tree bark. Although I didn't realize it at the time, this was my first taste of science, and my curiosity only grew from there.

I spent the first 10 years of my life in Northwest Iowa. There aren't very many natural spectacles in Iowa, but nature is nature, and to a curious little girl, my backyard was a wonderland. There was a rectangular fence that separated our lawn from the grassland beyond. Most days, I experimented with dirt, leaves, rocks, and even snakes (to my mother's horror). On extra special days, my dad would open the gate to the fence and make the twenty-minute walk with me down to a little stream. I remember seeing my first piece of petrified wood by the bank. I was fascinated with the idea of nature preserving a piece of wood, like a scientific time capsule.

When I was ten, my family moved to Eastern Iowa and my whole environment changed. There was new scenery and a new climate. To my family's delight, we now lived only about five miles away from Palisades Kepler State Park. After our first hike in Palisades, I decided that trees were my new scientific obsession. My mom took me to the book store to pick out a tree-identification guide, and I started collecting leaves. As I got older and more independent, friends slowly replaced my family members as hiking partners. In the summers, my friend and I hike our Palisades trail once weekly. Palisades is no Boundary Waters, but it has such a special place in my heart nonetheless.

In high school, nature and science have taken on a much more concrete role. As a child, my curiosities were more of a whimsical quirk than anything else. Recently, however, it has paid off in the form of invaluable opportunities. This past summer, I interned with a molecular biologist at the USDA-ARS Aquatic Animal Health Research laboratory in Auburn, AL. My host researcher specializes in aquacultural disease prevention, and when I arrived, he was midway through a study on streptococcosis in tilapia. I got to practice skills such as the dissection of fish to collect bacterial samples, polymerase chain reaction assays to amplify DNA samples, gel electrophoresis imaging, density gradient assays to assess capsular density, and more. When I got to work in the "outdoor lab," I instantly fell in love. Several departments of the university shared the lab, and it included grasslands, a forest, bee and butterfly gardens, and the massive pond that I worked with. I loved taking water samples and analyzing the bacterial ecosystem of the pond. I worked forty hours a week during that internship, but I loved it so much that I frequently lost track of time. I truly felt at peace in the labs. The research procedures were the small, measurable steps that I could take to accumulate data and answer my questions about nature. If I had to sum up what the internship taught me, I would say that through nature, I had truly found my niche, and I had truly learned how to connect to my most confident and fulfilled self.

Perhaps the most important idea yet is that science and nature have connected me not just with

myself but with others as well. Through classes like AP biology, AP chemistry, and Earth science, I have learned that life is so infinitely complex, and we as humans have the unique privilege of trying to understand it together. For this reason, I find great joy in participating on my high school's Science Olympiad team. Since Science Olympiad is a collaborative research activity, my ideas are frequently challenged by my peers' perspectives, which is such a beautiful thing. We all perceive nature a little differently, and if we can understand others' experiences, our relationships with both people and nature will improve. I have the Science Olympiad team to thank for such an amazing four years of sharing science with a community that appreciates the natural world just as much as I do.

So, all of this context leads me to the point of this essay: the hope of winning a trip to the BWCA. If I am selected for this honor, I will do everything in my power to fully make the most of the experience and learn as much as I can while I am exploring. For example, I have researched that the lakes are oligotrophic, meaning they are low in nitrogen and phosphorus. This means that they have fewer algal blooms, and the lakes are relatively clear. I would love to compare this water to that of eutrophic ponds back home. I would love to observe the soil underneath pine and spruce trees. Their needles create a phenomenon that acidifies soil, making it ideal for the growth of special types of fungi and mosses that I might not see in my hometown.

To hold me accountable to these scientific aspirations, I would take three members of my Science Olympiad team, including the friend I hike with weekly. All four of us are interested in advocating for sustainability and environmental awareness. I believe myself deserving of this adventure to the BWCA, because I would not just be going for myself. I would be going for nature, for science, and for human connection. As someone who wants to pursue a career in scientific research, I believe that this trip could be a formative milestone in my science journey. The best scientists truly care about what they study, and this trip would only strengthen my love for the natural world. If I could tell the little girl studying inchworms on her trampoline that she was applying to visit the Boundary Waters, one of the most iconic ecosystems in the world, I just know she would give me the sweetest and silliest grin.