

I have always been an explorer, obsessed with discovery and adventure. As a child I spent my days wandering the woods and rivers of Northeast Ohio, practicing for the day I would be a “scientist” exploring faraway locales. Although I was interested in all things scientific, this most often manifested itself as a love for living nature. As a teenager I was fascinated with the logical flow and seemingly unlimited power of math and physics, and almost became a physicist. Related to my love for math and physics, I also found foreign languages fascinating. In elementary school I taught myself the Greek alphabet and some vocabulary, and practiced writing my notes in this new “code.” Likewise, I excelled in French in high school. As an 18-year old pressured to choose a single direction, all my diverse interests seemed to conflict—nature, physics, language, exploration. Fortunately, faced with the decision to either continue my academic education or begin my real education through travel, I chose the latter.

In 2003 I enlisted in the US Marine Corps, out of a desire to serve my country, test my limits, and have adventures abroad. The experience opened my eyes to the world, introduced me to new cultures, and gave me my first glimpse of travel. I became an Arabic linguist, learning the culture and language of the Middle East, and graduated first in my class in the rigorous 63 week course. Immediately after finishing my training I asked to go to Iraq, and was shipped out within 3 weeks. Less than a year after returning, I asked to go a second time and my wish was granted. Iraq provided some of the lowest moments of my life, but it was the perfect opportunity to test myself. Thrown into a combat environment, entrusted with the lives of fellow Marines and Iraqis, and with a rare ability to communicate between the two, I was forced to be flexible, navigate linguistic hurdles, and execute rapid judgment to accomplish missions.

I became the senior military linguist for Al-Anbar province, the largest in Iraq, with duties ranging from quality checking intelligence reports and teaching other linguists, to going on helicopter raids and providing care to a wounded Iraqi soldier. On one combat mission I pioneered a new intelligence gathering technique, the results of which were presented to the Director of the NSA, and which quickly became standard procedure throughout the province. Upon leaving Iraq I wrote a battalion level report proposing improvements to the linguist training program, many of which were implemented within a year. When not in Iraq, I worked at the NSA’s Counterterrorism Division, where my work was included in daily briefs to the US President. In recognition of my service, in 2007 I was nominated for Marine Corps Language Professional of the Year, the highest honor bestowed upon a linguist.

Most importantly, my military experience was the perfect setting to explore myself, rediscover my love of nature, and find my path in life. I wiled away time in Iraq reading biology textbooks, collecting insects and birdwatching. Every morning I would sneak onto a sandbag fortified roof with a pair of heavy military binoculars (defying strict orders, given the risk of mortars and sniper fire) and watch the daily flights of birds to the banks of the Euphrates. It was moments like these that cemented my intention to be a biologist.

At age 23 I made the difficult decision to leave my life as Sergeant Helms and assume the role of biologist. For a year I had planned a great exploration of North America, and within two days of leaving the Marines I was on the road. I spent five months traveling around the US and

Canada on an ecological exploration of the continent, from the wet prairies of Florida to the tundra of the Yukon. That trip gave me firsthand knowledge of every basic ecosystem type north of Mexico and my first experiences planning expeditions. For the first time in my life I had unlimited potential to explore geography and nature - no longer a boy in Northeast Ohio, I could go anywhere, explore anything. The feeling has never left me, and I have yet to stop.

Reluctantly ending my travels in 2008 to start formal studies at the Ohio State University, I spent the next few years filling out my training in more traditional ways. I spent a summer working for the US Geological Survey, a role that allowed me to combine my loves of biology and geography for applied conservation goals. The next year I took a field ecology class in Costa Rica, my first taste of the tropics. I then spent a summer at OSU's research laboratory in the Lake Erie Archipelago, taking field classes and studying patterns in island biogeography. As a capstone to my time at OSU, I worked as the lead student researcher in an ant lab, investigating colony foundation success of queens. I was involved in the process at every step, from planning to manuscript writing, and presented the results at two campus research forums. After less than 2 years of school, I felt I had progressed from amateur naturalist to real biologist.

However, my greatest adventure came after graduation. After 3 years of planning, in 2011 I spent 6 months in New Zealand, Australia, Indonesia, Thailand and Egypt, emulating the great explorer, Alfred R. Wallace. Indonesia especially gave me a chance to once again challenge myself. Alone in a foreign country, I learned to speak basic Indonesian, and again overcame language barriers to arrange expeditions to remote islands, hire and negotiate wages for employees, and ask questions about the organisms around me. One of my most rewarding moments was on an expedition I organized to Halmahera, where after wading several rivers and night hiking through rainforest, I observed the secretive lekking behavior of Wallace's Standardwing, the bird of paradise discovered by ARW himself. Fittingly, I received the rejection of my first NSF fellowship proposal while at a remote research site in Borneo, helping a group of international primate researchers set up an ant-based biomonitoring program.

Throughout my career, I've strived to make a difference by engaging the public and promoting citizen science. In the military I taught other linguists, volunteered in my community, and gave lectures at a high school. Since then I've participated in 3 Breeding Bird Atlases, BioBlitzes in 3 states, a breeding frog survey, the Oklahoma Academy of Science, and 3 environmental restoration projects, and wrote a blog about my travels.

As a teenager I was pressured to choose from among my interests and specialize. I now know that diversity is my greatest strength. Ultimately, I aspire to be a research scientist, studying the interplay between biology and geography, and applying that knowledge through public outreach to global conservation. My experiences with leadership, decision making, planning and implementing long-term projects, and accomplishing missions in the face of adversity surpass most of my peers. My military experiences, international breadth, and language abilities allow me a potential for public outreach unknown to most scientists. By freeing me from financial and time constraints, an NSF fellowship would allow me to focus on exploration, discovery, and outreach, allowing me to reach a broader audience and have a greater impact.