

William Kish

Personal Statement

Shortly after turning in my ecology and evolution final exam, Dr. Sujan Henkanathgedara followed me outside of the room and asked to conduct research with him the following semester. Throughout the summer I was trying to figure out what type of research that we would possibly be conducting. Fast forward to our first research meeting in the fall, I came into a room with other students who were equally as confused as I was. Dr. Henkanathgedara soon enters our meeting room and asks if everyone is ready to access the biodiversity of Longwood University's local floodplain. Through the course of the meeting we discussed a potential research project studying spiders, with me as the lead. That's the day that sparked my obsession with studying spiders.

Throughout the fall semester I spent many hours a week going out in the field and learning how to identify spiders using field guides and identification keys. After two semesters of learning the basics and honing my skills, I published my preliminary findings in the Virginia Journal of Science. Shortly after, I decided that it was time to standardize my protocol and develop a repeatable project. I applied for research funding with the University and from the Virginia Academy of Science (VAS). I received both sources of funding and was able to purchase more up to date equipment and identification guides. With new equipment, I continued to study spiders, but now testing the effects of urbanization on the spider community and diversity. I set up plots in different habitats representing various gradients of urbanization. This project provides concrete data that could be used to test the intermediate disturbance hypothesis. Shortly after obtaining a semester's worth of data, I presented my findings at the university wide research symposium and then the annual spring VAS meeting at Old Dominion university. After two years of researching spiders, I now have identified over 100 species of spiders in my study site and manuscript published in the Virginia Journal of Science.

During the first spring semester of doing research, Dr. Henkanathgedara would introduce the topic of citizen science and BioBlitz to us. After reading through many papers and watching a few videos on the topic, I thought that this was the perfect blend of science for none scientists. He told us that Longwood holds an annual BioBlitz every April and that we would oversee and participate in it. The first BioBlitz that I participated in was a blast and encouraged me to learn more about other organisms so I could help and find more species each year. As of now, I have participated in three BioBlitz at Longwood University. I have identified over 200 species of plants, fungi, vertebrates, and invertebrates. Not only do I identify different species, I take photos of them with either my macro-lens on my phone or my camera. I post all my photos to iNaturalist, an online species repository where people post their photos and other people can comment and help identify species for people. Starting my junior year, I fell in love with birds because of my ornithology class. I would go out to various places around the county to submit checklists to eBird, an online citizen science checklists keeping track of bird species and counts for all over the world. In my first year, I have over 150 species of birds reported and photographed from the east coast from the Blue Ridge mountains to the Outer Banks.

During the time that I was studying spiders, Dr. Henkanaththegedara came to me with a new research opportunity. The program was called the Perspectives on Research In Science & Mathematics (PRISM) program which allowed for a professor and a student to conduct research over the spring and summer. Our project was to examine the macro-invertebrate and amphibian community composition of vernal pools in High Bridge Trail State Park and how different physiochemical parameters affected the community composition. Throughout this research, I worked with many different experienced professionals in the field of conservation and ecology and local master naturalists. I also led public educational outreach programs for vernal pools that allowed me to share my love of biology with many different types of people. With the local master naturalists, I taught the protocol for collecting and monitoring vernal pool data so that they would be able to continue this research. At the end of my research, I presented my findings at the University's campus research symposium and at two of the annual spring VAS conferences at Longwood and Old Dominion University.

In terms of a career, I see myself working as a conservation ecologist researching the effects of urbanization on wildlife communities. A position in your lab and the Ecology program would provide me with the experience to broaden my horizons on the topics and field ecology and conservation. Further, earning a Ph.D. in Ecology would advance my career goals by adding skills and experiences need to succeed in a ecology and conservation field. Ultimately, I see having a Ph.D. as a stepping stone to achieving my goals of furthering my skills and interests in ecology and to be able to share my love for nature with citizen scientists.