

2017 Graduate Awards for Research & Training Report

Duke University Center for International and Global Studies

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Location: Madagascar

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Duke University Nicholas School of the Environment

Master of Environmental Management Candidate

All species of lemurs have declining populations, and face great risk of extinction. They are likely the most endangered mammal group. Knowing I wanted to dedicate my professional career to the protection of this vulnerable group led me to Duke to study Environmental Management. My biggest goal was to study lemurs in Madagascar for my Master's Project, which I was able to accomplish thanks to the support from alumni donors and DUCIGS.

Ranomafana National Park, a valuable habitat for 12 lemur species, was my home for 2.5 months. Half the time I stayed at a research station called Centre Valbio where I could mingle and collaborate with other researchers. The other half of the time, I camped in the forest while leading research expeditions for two weeks at a time. My goal was to look at how diurnal lemur species relationships with their habitat change at multiple spatial scales (i.e. the microhabitat and landscape scale). I took GPS coordinates of each location where I found lemurs, or found a major sign of anthropogenic disturbance. I also compared primary forest characteristics with a previously logged secondary forest to better understand humans' effect on the environment, and a lemur's habitat.

Before leaving for Madagascar, I prepared a detailed research plan. However, I created the project having never seen my research site before. Once I arrived, I realized I would have to adapt and revise my project based on what was feasible for the time I had allowed. A lot of the research site points I randomly generated with GIS were completely inaccessible due to dense vegetation and mountainous terrain. I skyped with countless Duke staff, faculty, alumni, professors, advisors, and coworkers at the Duke Lemur Center until I came up with a plan that would work. I owe a large part of my success to my Duke support system who helped me when I was on my own in an unfamiliar country.

Two and a half months would have been plenty of time for what I needed to have done, though we had a few logistical issues along the way. In the first two weeks, I was still waiting on my research permits to be approved, and in the third week I was too ill for field work. When we were finally able to begin work, I collected data with two Malagasy guides, and a Malagasy masters student. As we were preparing to go on expedition, one of my guides fell ill as well, and was hospitalized for a brief period of time. Shortly after, his brother passed away. While giving him time off, we had to adjust and train a new temporary guide. On the first expedition, the assisting masters student twisted her ankle and was unable to complete any further field work. While she was at physical therapy, we again had to adjust and train a 4th guide. I have worked in leadership roles before, but this was the first time where I was on my own with solving problems as they arose. By doing independent research, I was able to gain extensive experience as a project manager.

I was glad I had previously studied French, as one of my guides spoke French as well. However, most of my team didn't know English, and only spoke Malagasy. This allowed me to get creative with

communication. To describe different parts of the project I would draw pictures, and use hand gestures. To bond with my team, I taught them a card game that helped me learn my Malagasy numbers 1 through 10. And most importantly, I found that laughter is understood in any language.

If I've learned anything about doing field work, it's that it's never easy, and something will always go wrong or unexpectedly. However, to me, I find that every second of field work is rewarding, despite its challenges. While on expedition I was lucky enough to see a plethora of wildlife. I came across at least 8 lemur species in the wild, countless chameleons, the Malagasy civet, the ring-tailed mongoose, and a handful of interesting bird species. I have read countless research articles on this particular forest, but by doing field work I was able to put those papers into context and truly understand how lemurs operate within their environment. I was completely immersed in nature, which made my appreciation for this forest grow immensely.

As I've completed my project, been typing up the data, and met with my advisors, I learned that I have collected more than enough data to complete my masters project. All in all, the project went by incredibly quickly, but ended up being a success. I am incredibly grateful to have had this opportunity, and I hope to use what I've learned in my future professional career in wildlife conservation.