Research Interest:
My research focuses on understanding the environmental and biological drivers that control biogeochemical cycles in humid tropical forests. In particular, my dissertation focuses on the impact of fluctuating oxygen availability on soil carbon pools and fluxes and interactions with microbial processes and iron redox transformations. I have carried out manipulative field experiments investigating the impact of rainfall variability on these processes and have also conducted large-scale gradient analyses across multiple humid tropical forest ecosystems. I am currently investigating controls on carbon stabilization across environmental gradients using radiocarbon dating, and conducting laboratory incubations using isotopically-labeled compounds to tease apart relationships between soil iron and carbon transformations. Aside from biogeochemistry, I am broadly interested in plant and microbial ecology, agroecology, and human-environment interactions and enjoy collaborating across disciplines.

About Me:
I plan on pursuing an academic career at a teaching and research institution and look forward to continuing to work in tropical ecosystems and pursuing international collaborations. In addition to basic research, I have a strong interest in applied science and the application of ecological research to policy and management questions. I view teaching as a critical component of the scientific enterprise and am interested in learning about and developing new pedagogical techniques to better incorporate scientific problem solving and applied issues into undergraduate education. Apart from science, I am an avid outdoors-person, musician, and tinkerer.