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Summer 2016

Last summer I was immersed into a well-established research project based in the mountainous Central Plateau region of Haiti. Zamni Kafe (Partners in Coffee) was a project started in 2008 by Dr. McGrath of Sewanee's biology department in partnership with an NGO known as Zamni Agrikol (Partners in Agriculture). Zamni Kafe has been implementing a new form of payment of ecosystem services (PES) with the express purpose of beginning to reforest the denuded landscape of Central Haiti. The PES program hinges on the distribution of coffee and necessary shade-bearing plants to isolated mountain villages. Despite its relatively small size and small budget, this organization has an impressive track-record of planting thousands of coffee plants and economically beneficial tree seedlings over the past eight years. Last year I was tasked with measuring the photosynthetic outputs of nascent coffee seedlings dispersed throughout the rugged zones that we worked in. I remember feeling daunted by being in a new country: climbing rural mule-roads, attempting to contort my tongue to form alien words, meeting stranger upon stranger. On top of that, the photosynthetic research we were doing was abstract and difficult to articulate to farmers, making it hard to impress upon them the possible benefits of our aid.

Creole was not any easier to speak this summer, nor was the Haitian culture suddenly more accessible. Familiarity made the discomfort and anxiety of the past summer seem like an afterthought this time around. It is interesting to note that I was not fully aware of the extent of my uneasiness last summer until I noticed the lack of it this time. While I do not claim to navigate Haiti with any sense of mastery, coming back felt like similar to entering the gates on

41A again. The Central Plateau, like Sewanee, has a very tangible connection between memory and landscape for me. Seeing the grassy mountains and hazy skies reminds me that I have place within the story of the land.

This summer I was able to work more directly in the dynamic rolling mountains of the Central Plateau. We spent most of our week working in two remote zones, Morne Michel and Bois Jolie. Morne Michel was new territory for us as it is a newer area in which we hope to spread Zamni Kafe's PES program. In both zones I helped to conduct a carbon sequestration survey with a fellow intern. We were collecting base-line data in order to create a GIS system with accompanying allometric equations that will allow us to essentially map how much carbon is being offput by trees on Zamni Kafe partners' land. Data such as tree species, tree age, tree height, and diameter are needed in order to create an accurate picture of the relation between carbon and the farms that we work with. Carbon output is critical for our type of PES project, hoping to create an agroforestry system that sequesters carbon. This sequestered carbon can then be sold on the international carbon market, diversifying the income of the Zamni Kafe partner-farmers.

I was responsible for measuring all trees above 1.5 m on Morne Michel and Bois Jolie farms. Using a height pole and DBH tape day after day would seemingly make research mundane, but it became a way in which I was able to explore and familiarize myself with individual Haitian farmers and their farms. Through this research method I was able to develop an appreciation for the land in a new and more personal way. By measuring every tree on a farm I was able to walk the entirety of these farmers' livelihoods and better understand their approach

not only to farming, but the basic rudiments that made up their lives. Last summer my photosynthetic survey only focused on a small sampling of the farmers' coffee plants and, thus, only on a small fraction of the farmers' land. The abstract nature of the photosynthesis study also became another obstacle when communicating with farmers. This summer's survey included questions regarding tree species and age, fostering dialogue and partnership between us and the farmers Zamni Kafe partners with.

The data that we collected this summer will hopefully allow for Zamni Kafe to launch into its next phase of development. An established GIS carbon output system will allow the project to better organize and eventually market the project on the burgeoning carbon market. Any additional data gathered in coming years can be plugged into this system, organizing the raw data in an efficient manner. The mapping component of the GIS system will also allow current interns and future interns better ways in which to comprehend the scope of the Zamni Kafe allowing us better tools in which to improve the project. A more efficient view of the project will hopefully encourage growth and financial stability of Zamni Kafe, allowing it to work with more Central Plateau villages and farmers. The more farmers that are brought into our project will help to improve the quality of life of our partner-farmers, while also contributing to a healthier and more diverse ecosystem.

When I returned to the Central Plateau this summer, I had no solutions to the dilemmas and questions that I had last summer. In fact, after this second summer of interning in Haiti, I have come away with more probing questions concerning the nature of NGOs, aid-based projects, academic scientific research in developing nations, etc. While I did not come away with

a feeling of mastery of this difficult country and its problems, I felt grounded. I felt as if I could move fluidly in places new and remote to me. A feeling more akin to peace of mind replaced the frantic anxiety of last summer.