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Kathryn Alessi

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THE RAINFOREST IS BURNING: TRIALS AND TRIUMPHS  
WORKING TOWARDS CONSERVATION IN RURAL  
MADAGASCAR

by

KATHRYN ALESSI

A master's capstone submitted to the Graduate Faculty in Liberal Studies in partial fulfillment of  
the requirements for the degree of Master of Arts, The City University of New York

2021

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The Rainforest is Burning: Trials and Triumphs Working towards Conservation in Rural Madagascar

by

Kathryn Alessi

This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in satisfaction of the capstone project requirement for the degree of Master of Arts.

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## ABSTRACT

The Rainforest is Burning: Trials and Triumphs Working towards  
Conservation in Rural Madagascar

by

Kathryn Alessi

Advisor: Elizabeth Macaulay-Lewis

### **Abstract**

In late 2019, I spent almost four months in Ranomafana, Madagascar, a region in the southeast that houses tropical rainforest. The research I conducted is not analyzed in this capstone. Instead, I decided to write about my personal experience through a series of reflections that explore the difficulties I faced, as well as the moments of joy. Much of the information presented in this capstone and white paper come from my own experience and copious conversations I had with other people in Madagascar. Several of these conversations were recorded in my diary and fieldnotes, but most were recounted from my own memory. In the white paper, I describe how my time as a graduate student led me to choose Madagascar for my final research topic in my master's program. I also describe the experiences of myself and my assistant through a theoretical lens pertaining to the insider/outsider perspective. Furthermore, I discuss challenges with top-down conservation initiatives in comparison to the bottom-up approach that I prefer to take. Finally, I explain my intentions for future community-based conservation work in Ranomafana, Madagascar.

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## PREFACE

Upon my return from Madagascar in December 2019 I was asked how my trip was by every person I spoke to for the next few months. It was a legitimate question to ask someone who just spent four months away in a country that most people know next to nothing about. At first, I gave a broad and upbeat description, like, “It was difficult, but amazing. I formed solid relationships with people and laid the groundwork for a future career in conservation. I’m building a house there; you should come and visit!” I recounted this broad, yet upbeat, snippet repeatedly which eventually became tiring and disingenuous. Now, when people ask me about it, I say, “It was the most difficult thing I’ve ever done. Physically, mentally and emotionally.” And if they would press me further, I say something along the lines of, “There were really amazing things that happened and really awful things too. It was all a lot.” The reason that I find it exhausting to say even a little bit about my time in Madagascar has much more to do with all the experiences that I am holding back rather than anything I choose to express.

Each time I think about Madagascar, I am forced to recall everything that happened and purposely leave out what continues to haunt me whenever someone asks, “How was it?” Honestly, the trip was difficult. Collectively, it was one of the most difficult experiences of my entire life. I do not know where to begin when explaining my time in Madagascar because everything is all so interconnected, which makes it difficult to fully avoid the exact part I do not wish to acknowledge, even if the exact details never leave my lips.

What I avoid sharing with everyone is that I fired my lead field technician because he raped a 14-year-old girl in my campsite on our first expedition while I was two tents away from him. I know it was not my fault that he did that, but my team was my responsibility. I can list an abundance of suspicions I had concerning him as well as solid reasons I had not to trust him from

the beginning. Yet, I still trusted him enough to let him get away with that. I should have done more, and I should have trusted my own doubts and instincts. Even with all my suspicions I never imagined that he would do that. I never thought for one second that anyone on my team would do that when I was always around and especially not with me physically in the same vicinity. I thought I was prepared for anything and everything to go wrong, but there is nothing in the world that could have prepared me for that.

This was my team. It was my responsibility to tell my lead tech that I did not like his behavior with the locals and how I felt it was inappropriate for people who did not work for us to hang around our campsite all the time. It was my responsibility to tell them to leave. It was my responsibility to delegate my worrisome thoughts into appropriate actions. I expected to mess up, but I never expected to fail on such an extraordinary level. I never expected to fail when it came to the physical safety of any woman or girl that I interacted with for the entirety of my life. I never expected to be responsible, even tangentially, for the rape of a child. This is something that I fight against with everything that I am and yet I trusted the wrong person to do the right thing even though I knew better.

I have trusted people I should not have trusted in the past, but each of those times I was the only one that got hurt. I was the one that had to suffer, and I have learned how to deal with that. To know that my decisions led up to the suffering of another person, another girl... a child; I did not know how to deal with that. I asked my team why the extra people were around all the time, I asked them why we did not switch one of the local workers when we arrived in the next village and I pointed out how the interactions between my lead technician and one of the locals seemed unprofessional, but I also trusted their answers. I do not know how to write this capstone without this reflection, and I do not know how to explain how my trip was without having to relive those memories every single time someone asks me, "How was it?"

## BACKGROUND

I first traveled to Madagascar in 2011 as an undergraduate study abroad student with Stony Brook University. For my independent research project, I surveyed four communities surrounding Ranomafana National Park (RNP) to gather data on forest conservation. The study concluded that while local communities recognize the importance of forest conservation, they are wary of pursuing new methods of agriculture in place of slash-and-burn, locally known as *tavy*.<sup>1</sup> Theoretically, if an alternative agricultural model proves to be easily adaptable and has a more bountiful harvest, the people would be willing to change. However, various organizations and researchers have come to Madagascar with the specific purpose of improving the current agricultural methods but have seen disappointing long-term results.<sup>2</sup> In my opinion, this is partly due to underestimation of the value of community within Malagasy culture as well as the vast divide between the intensity of everyday life in rural Madagascar and the enormous progression of the developed world.

Departing Madagascar in 2011 left me with motivation to return and continue community-based rain forest conservation, a goal I made reality as a master's student. From September through December 2019, I partnered with Centre ValBio (CVB), a research station adjacent to RNP, to further explore the lived realities of people situated near Madagascar's rainforest. My intention with this fieldwork was to connect with people through conversation about what they need and what they feel capable of doing concerning rainforest conservation. I constructed a community-based discovery project for my official research proposal that would gain more depth as I gathered insights from the communities I would visit. My hopes were to have deep discussions with families, women, and community leaders about how they want forest conservation to work for

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<sup>1</sup> Alessi, "Evaluating Community Reforestation and Conservation Education Sponsored by Centre ValBio."

<sup>2</sup> Moser and Barrett, "The Disappointing Adoption Dynamics of a Yield-Increasing, Low External-Input Technology: The Case of SRI in Madagascar."

them. Since they will be the ones maintaining any future project or initiative it is extremely important that the community members believe in what they are doing.

After I arrived at CVB, I joined an ongoing project called Participatory Ecological Monitoring (PEM) and was scheduled to visit six villages: Ambatolahidimy, Mangevo, Sahavanana, Amboasary, Ampitambe, and Ampitavanana. Just prior to leaving for my first field expedition, I was asked to take on a 70-question survey project since I would already be staying in the villages. While reviewing the questions of this lengthy survey I decided to add on a few more specifically focused on a future long-term community-based agroforestry plan to see if anyone would be interested. I became very focused on these three projects and did not take the steps I initially intended on to connect with the local communities in the way I had originally hoped. During my fieldwork I had several meaningful interactions with my team, community leaders, and non-profit organizations that began to shape the way I viewed conservation within the country and forced me to analyze my own leadership skills as well as my future in Madagascar.

## HOW TO HIKE IN THE RAINFOREST

Madagascar is a world of its own crammed into one island. Describing the area of Madagascar that I worked in does not describe all of Madagascar. There are deserts, beaches, deciduous forests, grasslands, and rainforests. Each is so beautifully unique. My fieldwork was done in the south eastern rainforest where the terrain is mountainous rainforest, and it is very difficult to travel through. Once you get off the paved road there are various communities settled along paths. I call them paths because you can only walk them. You can barely bike on them. The hikes can be very long, sometimes over seven hours and sometimes in pouring rain or direct heat. Most settlements or campsites are at the top of mountains which is most likely for drainage because of the vast amount of rainfall they get each year.

Many of the shorter hikes were simply one very large mountain. Walking up a mountain is incredibly exhausting; of course, not for the local people who do this every single day, but for me it was. Even some of my techs had a bit of trouble at a few points, but they are all avid smokers and were carrying heavy backpacks. The best way I could describe it is that when you feel you have pushed yourself so much that you cannot possibly go any further you are probably halfway there. Some of the longer hikes were spread out a bit concerning the terrain as the intervals between mountains were somewhat even. When you are under forest cover those are the easiest parts. I originally thought that downhill would be easier than uphill, but I was wrong. Uphill is incredibly exhausting, but downhill can be downright dangerous. The best weather for any hike is dry and cloudy, but most of the time you will be hiking in direct sun or rain.

If it is not raining, going downhill is walkable with precaution, I learned this firsthand by slipping many times in dry conditions. You are also using muscles in your legs to balance that, as an American, you most likely have never used before and you discover this the next day when hiking downhill is painful on top of being dangerous. In dry conditions you can do fine with

precaution. In wet conditions you will fall, many times, and because of massive deforestation there is nothing around you to hold on to. I am so grateful that my team members had more balance than I did because I held someone else's hand at almost every moment of venturing downhill and even sometimes when going uphill.

Everything I did there was the most physically difficult thing I had done up to that point and there was always more. While hiking I imagined what I would tell my friends about how incredibly difficult the hikes were and, as I tried to describe them in my head, I was confused about how I was still doing them in the moment. I hiked because I had to and when you know you must get somewhere within a certain amount of time, you just keep putting one foot in front of the other until you get there. A lot of my hikes were spent thinking about putting one foot in front of the other. If I focused on a long distance it would seem like forever and if I gave myself smaller milestones, I would feel even more exhausted thinking about how much farther I would have to go once I hit them. The best way for me to get through was to think about putting one foot in front of the other and keep going, just like that.

The worst uphill hike was to the Ampitavanana campsite and the worst downhill was coming back down from the Ampitavanana campsite. It was about one hour and thirty minutes straight up the steepest mountain I have ever come across. I stopped so many times on the way up because it was exhausting and, on the way down, because I am terrified of heights. However, the campsite was the most beautiful one out of all of them and it was absolutely worth the climb. Most of my time in the forest was spent in degraded secondary forest, but this was a real forest and the view atop the mountain was breathtaking. It was as if I was looking at a painting. Before lunch or dinner, the local guides would disappear for an hour or two and come back with edible wild mushrooms and other plants. They knew every plant and every animal; they knew what was poisonous and what was safe, so I felt comfortable in their judgement of what I could eat or touch.

This forest experience was by far my favorite.

The most difficult hike to endure was traveling from the Ampitambe campsite to the Ampitavanana village. It was incredibly hot that day and none of the areas were shaded due to massive deforestation of the surrounding areas. These villages were close to the main road and those tend to be the most deforested areas. Between the Ampitambe campsite and the Ampitambe village was a close-knit string of small mountains so the path was up and down, up and down, up and down, up and down, up and down in direct sun. Once we got to the village, we crossed a river, where I stepped on a jagged rock with my bare foot because I was advised to take off my boots and socks when crossing to avoid hiking with wet feet. The terrain from that point to the road was a mix between flatland and low hills. In dry cloudy conditions, this section of the hike would have been a breeze, but in this heat, everyone was suffering.

Once we got the road, the van that was supposed to meet us was not there, so we walked another 30 or 40 minutes down the road to eat lunch. We waited another hour or two for the van and then hiked from a different destination on the road to the Ampitavanana village. If we were not so tired from the morning hike, this one would have been much easier. While waiting for the van it began to rain, so even though the heat broke for the afternoon hike, fresh rain meant slippery ground and high rivers to cross. By the time we reached the Ampitavanana village I could not understand how we were all still walking around, but my team set up camp just the same.

The longest hike was to Mangevo, it took me seven hours straight once we got off the paved road. Everyone said this hike would be the worst as it took some people 10 hours, or more, to finish. It was a long hike and the mountain sizes and intervals between them varied. I left early in the morning with one field tech and my assistant, so we hit forest cover just as the sun hit overhead. There was one very tough section between Amboasary and Sahavanana in which I was so exhausted that I collapsed against a tree, but besides that, and two throbbing blisters on my feet,

my expectations for this hike were much worse than the reality of it.

All together it felt great to physically challenge myself in that way because this time I feel that I succeeded. In 2011, I could not take the brutality of the hikes and I did not hike nearly as much then compared to my 2019 trip. I was the one behind the slow group. I felt so ashamed and embarrassed about how out of shape I was, and it mirrored a similar experience I had climbing Kilimanjaro in 2009 which made me turn on myself even more. However, this time was different. This time I had a purpose and kept on going. My team even said I was a strong *vazaha* (meaning foreigner, specifically white foreigner) which, at first, I did not believe, but I still felt very proud to hear that.



## LEADING WITHOUT EXPERIENCE

I returned to Madagascar understanding that I knew next-to-nothing concerning everything I was about to do. I knew little about the culture, the language, and the landscape. All I knew was that I had the least amount of knowledge and experience out of anyone that I would be working with; yet my job was to make all the decisions. As the person financing and leading the field expeditions I had to decide the type of equipment we needed, what questions would be on the survey, how long we needed to stay in each area and what each person's role would be. Being the control freak that I am, I felt fairly comfortable starting out, but I knew that every decision I made, most likely, would not be the best. I was confident that my team and I could figure everything out as we went along. My core team originally consisted of four field technicians, a cook, a research assistant, and myself. During our time in each village, we hired four local guides to help us navigate the landscape and an assistant cook. My team was helpful in magnificent ways when connecting with communities and in ways that could have destroyed everything I was there to accomplish.

Being the only woman and the only foreigner on a team that fluctuated between five and twelve people presented many challenges. Although I had an excellent translator, being unable to speak either of the two dominant languages (French and Malagasy) meant that I had no idea what was really being said. I could not know anything that my team did not want me to know. As I reflect on this, I could say that this presented my most complicated challenge, but the biggest problem was that even though everyone defaulted to my leadership, no one respected it. And why would they? I was an outsider coming into a group of people that have been working with each other for years, some of them decades. Two members of my team were best friends and related by marriage. Two other members of my team were born, and still live in, the same village and they were also related by marriage. Madagascar is a very small place when it comes to people and

relationships. I did not assume that my team would put their faith in me over each other, nor did I expect them to. However, I did assume that they would do the right thing – after all they were the experienced professionals. About halfway into my research, I understood that my lack of understanding the reality around me was the norm among foreign researchers. Outsiders generally have no idea what is really going on. Once I found out many of the things, I was not supposed to know I was hit with a huge reality check. It was around that time I became capable of understanding each mistake that I made and began to realize even more of how much I was unprepared for this. At that point, I doubted my ability to lead, and I felt that anything I said or did either had huge consequences or led to nothing.

## CONSERVATION THROUGH GREEN CHARCOAL

It is rare for homes in Madagascar to have running water let alone a gas stove or an electric stove, so charcoal is a very popular fuel source for cooking. Charcoal is primarily made of wood and it is a very labor-intensive process to make. There are farms dedicated to charcoal production that sell it on a commercial scale in cities and towns, yet many of the rural communities cannot afford to buy charcoal and are only able to use the amount of charcoal they can make themselves. Due to labor-intensity, men are usually tasked with harvesting the necessary number of trees, digging a very large pit in the ground, and burning the trees to create the wood charcoal. Women do not usually make the charcoal, but they use it every day to cook and heat their homes. This process of making charcoal contributes to deforestation, not unlike most of the items people use every day all over the world. Taking alternative, or “green”, measures to limit the environmental impact of humans is important for our collective future, but it is not always practical. Green Charcoal (*charbon maitso*) is made from various organic waste materials that rural communities create on a regular basis. This alternative charcoal is made by burning excess plant materials that accumulate during harvests such as beanstalks or non-edible leaves, which produces ash that can be combined with a binding agent such as boiled cassava, manure, or clay, and then molded into small bricks. Since green charcoal is made from waste products the process to make it does not contribute to deforestation and is much less labor-intensive.

Understanding all of that, green charcoal sounds like an excellent alternative to the way wood charcoal is produced and has motivated various projects centered around teaching people how to make green charcoal. Some have been successful, and some are still working on it. I had the pleasure of meeting one of the organizations working on a green charcoal initiative in Madagascar, specifically in the Ranomafana region. This organization set up demonstrations in several towns and villages to show communities how to make green charcoal in hopes that they would adopt the

practice as their own. One of the goals of this organization, like the goal of many other conservation-focused organizations, is to have the local people become responsible for the project and make it their own in hopes that it continues without long-term support. The leaders of this organization were very aware of their limited knowledge of the culture when they began and brought with them the best of intentions.

Green charcoal was promoted as a source of income to the residents in the town of Ranomafana rather than a home-based alternative for personal use. The organization I met with was very reluctant to step in on any business-like transactions as they wanted the local people to feel ownership over this business. I decided to make the first large-scale green charcoal purchase in Ranomafana because I believe in doing anything I can to support conservation in the region. I ordered 1,000 pieces of green charcoal at 250 ariary (Ar) per piece for a total price of 250,000 Ar (approx. \$65) which was to be split among five different producers. During the price negotiation, members of the organization that were encouraging green charcoal sales were present but did not want to provide me with any guidance on the transaction.

At first, the producers wanted to charge 500 Ar per piece, but even the producers knew that was too high of an amount, so after negotiating with my assistant they cut that in half. I planned to meet with everyone about two weeks later to purchase the charcoal once it was made. Not all the producers showed up; due to bad weather conditions not all of them had enough time to make and dry their pieces. Only 470 pieces of charcoal were in usable condition, so I bought 470 pieces at 250 Ar per piece. On my way back to CVB, a few local workers were in the car and began to ask me about the charcoal. After witnessing their roaring laughter, I immediately realized that the price I paid for the charcoal was unaffordable for any Malagasy person and highly inflated because I was a *vazaha*. I expected a price discrepancy because I am a foreigner, but I did not expect that it would be so far off as to have the locals laugh and claim they would quit their jobs and become rich by

selling charcoal to white people.

The ways in which people from developing countries interact with foreigners is a result of centuries of colonization. Every non-Malagasy person that steps foot into this region is considered rich beyond measure and asking local people, who usually live hand to mouth, to sell a product to an “extremely rich” foreigner will not produce a sustainable business model. With the best intentions I was under the impression that I was being helpful by purchasing so much of this product, and was encouraged to do so, but I now believe it was an unintentional capitalist trap that I fell into. Very few foreigners live in Ranomafana and the ones who do live there cook with propane rather than charcoal. The price point of the green charcoal needs to match the price point of wood charcoal, which, for anyone without a decent and stable income, is their own labor rather than money. With all the best intentions this green charcoal initiative began to introduce capitalist values into an economy that could not support them.

The best thing the locals can do with green charcoal is use it for themselves. There are several benefits for them to do so, however, in an effort to get this initiative off the ground in a big way they were encouraged to sell it. There is a cultural disconnect among conservation efforts in the country that can be understood through experiences like this. These ventures are expected to be trial and error to some extent, however, I feel the ingrained and, often subconscious, capitalist values we hold in the developed world should be decidedly removed from any conservation initiative before attempting to introduce it in Madagascar. After consulting with my team about our experience using green charcoal in the field and the price points of green charcoal vs. wood charcoal, I spoke with the organization I originally connected with concerning at the end of my trip about our thoughts and recommendations for the future of the initiative. I did not mention my thoughts on subconscious capitalism but recommended that they shift focus away from sales.

## BUILDING TRUST

The semester before I left for Madagascar, I took a class titled Community-Based Research and one of our assignments was to present our projects to the class for feedback and I, of course, presented on Madagascar. The whole time I felt that I was being judged for my “white savior complex” rather than being acknowledged for trying to take on a community-based project so far outside of my own community. I hoped to get advice on how to build trust but was given very little feedback. Near the end of my presentation, a girl who worked in South Africa spoke up about her own experience explaining that only after several visits back to work with the same group did they begin to accept her. Their trust did not come from anything that was specifically spoken about or done during one of her visits, nor did it help that they had the same skin color; their trust began when they recognized her dedication. At that moment I knew that if I began this project in Madagascar it would have to be forever or not at all.

A few weeks in my trip I realized that if I was going to work here long-term, I needed a place of my own. CVB has so many of the resources that I need, and I can continue working with them for as long as I work in Madagascar, but one thing they cannot offer me is privacy. CVB is a high-tech research station with high-speed internet, a lab, conference rooms, onsite tree-nurseries, showers, beds, flush toilets, and a dining area that serves breakfast, lunch and dinner every day. It is an incredible taste of home for researchers in a tropical rainforest. However, the researcher rooms only have bunk beds and there are up to four people in a room at any given time. The research station hosts multiple study abroad sessions and various visitors as well as researchers; everyone spreads out everywhere. If I am going to spend a portion of each foreseeable year in Madagascar, I am going to need some privacy, so I decided to build a house.

Madagascar makes it very difficult for foreigners to purchase land. As of 2004, a foreigner can purchase land in Madagascar if they invest up to \$500,000 USD in tourism, real estate or

banking sectors of the country or, if you don't have \$500,000, leasing land for up to 99 years is also an option. Unfortunately, bureaucracy within the country moves slower than most and by time I secure a lease I may be 99 years old. Instead of buying my own property I decided to make an agreement with a Malagasy researcher. He would buy the property and build a two-family house to my specifications, which means running water, a shower, and a flush toilet. His family would live on the first floor and I would rent the top floor from him for as long as I want. I was happy to collaborate with him because his family will also be living on the property and this gave me peace of mind concerning the construction and security of the house.

Collaborating financially with anyone you just met is not advisable. I understand the risks of the situations, but I also understand the importance of planting roots where I will be working. In Mangevo, when the *ampanjaka*<sup>3</sup> asked me why he should trust me and what makes me different from the other *vazaha*, I told him about my plans for a house in Ranomafana. This is a big deal. Although I will not be living in the villages with them, I will be close enough that they will know I am here for them. I made a serious promise to return to all the people I visited, which is highly advised against, as broken promises are the main reason for conflict between rural communities and foreign researchers and organizations. However, before I made this promise, I made serious plans to put down roots in Madagascar and before I made those plans, I made the choice that if I was going to step foot in Madagascar as a researcher it would be for a lifetime.

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<sup>3</sup> *Ampanjaka* is the Malagasy word for king in the Tanala dialect. The role is executed like that of a chief, but the direct translation is king.

## BAMBOO BANDITS

Ambatolahidimy village is very close to CVB, about a fifteen-minute walk down a paved road, and Ambatolahidimy forest is even closer. This close distance between the village and its forest is uncommon in rural Madagascar as most of the villages are no longer adjacent to the forest because of heavy deforestation. Since CVB employs many of the people who live in Ambatolahidimy there is not an outstanding need for the community to rely on *tavy* farming, hence the decreased deforestation. In fact, two of my field technicians, Donn  and Victor, live in this village. Illegal cutting and *tavy* still happens here, but this area has sustained less damage overall.

We began the PEM observations in Ambatolahidimy, and the first observation always takes place at night. My first time back in the forest after eight years was a slow, rainy, uphill walk in the dark. I was very nervous about getting back into the physical challenge of fieldwork considering how much I fell behind the last time I was in Madagascar. I actually remembered this exact trail, including how steep it was, so I was very happy to hear how slow the walk would be. Even with all the nerves of returning to fieldwork I was excited to feel at home in the forest again.

At first, I did not know what I was looking for during the observation walk, but everyone else did so I pretended to scan the trees and the forest floor like I knew what I was doing. Close to the top of the mountain we had to get through a very steep, very muddy patch on the trail. It took me a couple tries, but I managed to climb up with a helping hand. Once we stopped at the top, we took a five-minute break before walking back down. The forest was wet, slimy, and full of blood-sucking leeches, but all I remember is feeling enthused that these observations required walking at such a slow and steady pace as I could not imagine having to run up that mountain, especially in those conditions.

When in the field, it is important to trust your guides and when you are in a forest that belongs to a local community it is very important to trust the sense of the local guides. That is why,



on the way back down, when they heard a strange noise and began to run back up, we all followed. I did not hear anything so when I saw them running towards us brandishing knives, I was shocked, but immediately fell into play. On the way back up, suddenly, the steep muddy patch was not so difficult anymore. We got back to the top and waited quietly. I tried whispering to my team to get some information about what was going on, but no one answered me. Then my team began to rush back down the other side of the mountain and pulled me to go along with them. My heart was racing, and I was very fearful. I thought a group might be chasing us as there had been reports of bandits in the area the last few years. All I kept thinking was that if people were chasing us then it would be better for us to turn off our lights and hide in the forest cover, but I was at the mercy of the local guides' reactions. As we kept rushing down my frustration kept rising. No matter how much I asked, no one answered my questions and eventually the local guides were so far ahead of us that I could not observe their demeanor to gauge the seriousness of the situation.

We continued hiking down the slippery mountain, at first very fast, then a little slower, then a little faster, then slower, and then even slower until finally we reached the bottom of the other side. At this point everyone was there, and I needed some answers. As it turns out the local guides heard a loud noise and assumed it to be gunshot, so they hightailed it back up the trail fearing for their lives. All I am thinking at this point is, "My first time back in the forest and I am chased by bandits with guns". I walked back to CVB in tears as my technicians apologized for the scare. They assured me I was safe but could not explain exactly what had happened on the mountain as they were next to me and did not hear anything either. Later, it was worked out that some people had been illegally cutting bamboo during the night and the presumed gunshot was most likely the snap of a bamboo stalk.

## GREETED WITH HOSTILITY

The second village on our list was Mangevo. This community is located about 16 kilometers from the main road in Morafeno, which is a four- to nine-hour hike depending on weather conditions. On the way to Mangevo we passed Sahavanana and Amboasary but decided to stop at those while traveling back for efficiency purposes. That morning, I left ahead of my team with my assistant and one field technician at 7:00 am to beat the midday sun as much as possible. We arrived in the Mangevo village around 1:00 pm and were joined by the rest of the team around 4:00 pm. Everyone was exhausted. Our priorities each time we arrived in a new place were to greet the present community members, set up camp, cook dinner and go to sleep. While waiting for the rest of the team the *ampanjaka* of Mangevo stopped by the village to greet us. It was now planting season and many people lived in their field houses rather than in their village houses. We greeted him and discussed when and where we would meet the following day. After agreeing on a 9:00 am start, we shook hands and he headed out.

The next morning, I woke up in good spirits. I expected to explain what I would like to do during my time there, participate in the ancestral blessing (a tradition required prior to the start of any field work) then get started on the lengthy surveys. CVB has worked with Mangevo for about three decades, there is even a permanent research site set up in that section of rainforest to study black-and-white ruffed lemurs. The people of Mangevo are used to working with CVB and they are familiar with *vazaha* coming by their village. The meeting began once the *ampanjaka* joined us and after listening to my assistant translate what he was saying, I transitioned from a state of eagerness to a state of disbelief. He said that he does not want to work with us and that yesterday, before meeting me, he decided that he would automatically reject our proposal. After meeting me, he decided that before rejecting my proposal he would explain all the reasons he does not trust *vazaha* like me and then reject my proposal.

Due to my association with CVB I did not expect to be met with any animosity. The communities chosen for me have worked with CVB for years and many have ongoing projects that include medical care and education for children. Having multiple projects and/or research requests with the local communities can be a good thing. If you show up regularly, follow their rules and do not make any promises you cannot keep, it is likely that you will build a strong rapport with the community. However, if different foreign researchers continually show up and never come back nor keep their promises, it is likely to erode trust between the community and anyone those researchers are affiliated with. These communities have similar issues with their own government falling short on promises and acting in their own benefit with little regard for the people living near the forest.

The *ampanjaka* was rightfully angry. He explained that many researchers have come to his village with CVB, and other organizations, only to never return as promised. The permanent research site in Mangevo provides very little direct contact with the village which further encourages the implication that lemurs are more important than the local people. I explained my intentions and my projects and after they were translated, I was met with even more hostility as things can very easily be lost in translation. The *ampanjaka* thought my future agroforestry initiative required taking land away from his people, which I had no intention of doing. I asked if anyone in the village had land that is currently unusable for planting and if those owners would be willing to use that land for agroforestry that I would help them with. This was translated as I wanted unused land from them for my agroforestry project. I quickly added this to my list of wake-up calls that prompted me to review my intentions with my team again.

The *ampanjaka* went on to express how his people felt judged because they have nothing compared to me. They think outsiders automatically see them as unintelligent and lazy because they have very little education. They expressed how eager they are to learn from me, but do not

want to be judged. After clarifying the translations, expressing my concerns about the environment as well as my intentions to come back, and having my team stand up for me I was cleared by the *ampanjaka* to work in the area. In retrospect, I believe that he had every intention of working with me, as this is one of the only opportunities for his people to earn income all year, but first he wanted to make his stance clear: We may welcome you to our community, but we do not trust you.

It was interesting to see how the community came together at the whim of the *ampanjaka*. What he says goes, but he must be careful not to make such rash decisions that his community is inclined to turn against him. Once he allowed my team to work, every person participated, but I was reminded by a few of the community members that it was only at the direction of *ampanjaka* that they have chosen to work with me. One of them even directly communicated his distaste for our environmentally conscious approach to the future of farming in the area. Such a direct comment is very rude in Malagasy culture, but I genuinely appreciated his feedback, nonetheless.

## LAHISOA

The first time I cried in the field I thought I was being chased by bandits and my guides understood, but the second time I cried in the field was when we reached the degraded secondary forest in Mangevo and my guides were thoroughly uncomfortable hiking alongside a crying woman, let alone one who they had to take orders from. As we walked the transects, my guides mapped the deforested areas and told me how much land they had mapped. Not fully understanding the implications of what I was standing in, I thought it was good that they mapped so much land. I think my assumptions were based on what I knew of Malagasy law. National law states that the forest is owned by Madagascar and not by any one person. I thought the land I was standing in had been deforested long ago. Later I found out that much of the land I was looking at had been cleared within the last year, some of it within a few weeks. When we reached the transect areas, I expected to see forest with evidence of deforestation, but what I saw was deforestation with evidence of forest. It was that realization that caused me to understand the full extent of what I would be dealing with and that my optimistic plan to form a career around conservation in Madagascar had to start at that very moment.

After talking with my techs and the local guides I decided that we should talk to the people who were responsible for deforestation of this particular area. As it turns out, most of it had been cut by one person and most of the remaining portion had been cut by one other person who lived in a neighboring village. Deforestation as far as the eye can see was done within the last year by two individuals, I could hardly believe it. We did not have to look far to locate the first individual as he was at the bottom of the hill, we were standing on tending to his rice fields. His name is Lahisoa. Out of outrage and an incredible sense of urgency flooding through me I struck a deal with him that I would later understand to be very problematic. I agreed to give him rice, a lot of rice, as a measure of good faith in exchange for him to discontinue his *tavy* practices.

Although national law states that no one person owns the forest, it is very difficult to enforce national law in remote areas that are difficult to travel to. Because of the lack of oversight, the remote areas still follow ancestral law and following that means almost every single piece of land, including forest, is owned by someone. The forest has been claimed by ancestors long ago and has been passed down through the generations. If, by chance, there is a piece of land without an owner, that land will soon be claimed as agricultural land, especially forested land, as it is a very hot commodity.

CVB was very unhappy about the deal I struck with Lahisoa. They actively discourage researchers from getting involved with local politics because, as a Malagasy institution, they follow national law. But, when I saw all the cleared land, the burned trees and the trees marked to be cut down in the coming days I could not bring myself to leave without at least trying to do something. The national law states that if you see someone cutting or burning a forest you are supposed to report them and then they will be arrested. However, if the *gendarmes*<sup>4</sup> do want to go to these difficult to travel to areas or if the perpetrator has close connections to the local officials, then the report will just be filed away if not put in the trash.

As it turned out, Lahisoa was not a standup person to deal with. When I spoke to him, he explained that he cleared so much land because he has over eleven children and he needs to feed his family. This is true. This is true for Lahisoa and it is the main reason for the heavy use of *tavy* in remote areas of Madagascar. People need to eat so they cut down forest because that is where the good soil is. There is little access to birth control or proper education, so people have large families, and they start having children at very young ages. Although Lahisoa was not directly rude to me and he did not lie about his intentions he was nonetheless a very difficult person to deal with.

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<sup>4</sup> Many French terms are commonly used in Madagascar either in place of the Malagasy word or if no Malagasy word exists to describe it. *Gendarmes* is the term for Madagascar's police officers.

He was rude to my team and they did not trust that he would stick to our agreement. We drew up paperwork that was signed by my team as representatives of CVB and Lahisoa stating that if he continues to use *tavy* in the area he will be arrested, and we arranged a check-up visit two weeks later. The check-up went well, but I have a feeling that when I return to Mangevo, there will be more deforestation and Lahisoa will be in hiding.

I do not believe that having people arrested for doing whatever they can to feed their families is the right thing to do. I made an oral agreement with Lahisoa, but the written agreement was made with CVB and they follow national law. Fortunately for Lahisoa, Mangevo is such a remote location that the Gendarmerie will not go out there for one person. Defending the forest and acting in the local people's best interest is a difficult balance to attain. If they keep cutting down their forest they will run out of water and viable land to plant on. Along the eastern rainforest line there are vast areas of abandoned dry land that you can see when driving from the capital, Antananarivo, to Ranomafana. This used to be a lush, vibrant, life-giving rainforest until it was all cut down. As much as I feel the rainforest should be defended for the long-term well-being of the people, I do not have any immediate solutions for them.

## GREETED WITH RICE

After Mangevo we traveled to Sahavanana, a village about an hour away. I was a little nervous about meeting with the *ampanjaka* because of my previous encounter. However, upon meeting him, we were welcomed with big smiles and he even began cracking jokes. His humor focused on the horrible infestation of parasy (fleas) in his village, which was a problem in most of the places we visited, but Sahavanana, by far, had the worst infestation. The *ampanjaka* was incredibly kind and welcoming. He was not very concerned with what we were doing there; he was just glad to have us visit.

Before I explained my work, he said that they would collaborate on anything I was doing and then he gave me a bag of rice. Rice is life to Malagasy people. They eat rice every day for breakfast, lunch, and dinner. If they eat anything without rice it is not considered a meal. They believe every Malagasy would starve without consuming rice every day. As required, my team ordered a lot of rice for each expedition and his community does not even harvest enough rice to last the entire year, yet he gave me a bag of rice just for showing up.

It was such a different experience from Mangevo that I was confused at what my assistant was translating to me. I do not believe many people visit Sahavanana because there are no ongoing research projects near that village. The local people live scattered in their respective field houses rather than their village because of the parasy infestation so they do not usually have a chance to even see *vazaha* as they pass by. It was a pleasure and an honor to meet with them. The kindness, generosity, and humor of the *ampanjaka* of Sahavanana will never be forgotten.



## VAH

I first met Vah after his grandfather, the *ampanjaka* of Sahavanana, asked if I had any antibiotics. He said his 6-year-old grandson fell and his face became infected. I told him that I had antibiotics at the campsite, but I wanted to see the boy first if he was around. Even looking at him from a distance, I could see how incredibly swollen one side of his face was. Up close, his expression seemed to be a mix of pain and fear as I tried to speak to him. I asked them to come to our camp later that day for me to clean and bandage the wound properly. Understanding that Madagascar has flesh-eating bacteria which Neosporin agitates, I brought a stronger antibiotic ointment in addition to some in pill form. The story I was told was that two days before I met him, he was playing with sticks and fell. One of the sticks scratched his face and it became swollen. His family was scared to touch the wound and did nothing to treat it, not even to clean it with soap and water. I am not a medical professional, but it looked as if a stick had pierced his cheek more than two days prior.

Medical help is a five- to six-hour journey from Sahavanana and would cost the family money for transportation, food, and any other overnight expenses. These communities barely have any monetary income and they do not have money for emergencies like this. Some locals are employed by foreign researchers that come to their area, but it is not regular work in Sahavanana. This community mainly relies on items they can grow or take from the forest. Many bring surplus items to market for trading or selling. I did not want to ask the *ampanjaka* why the wound was not treated with soap and water as I did not want to offend them, but I was curious to understand why everyone was fearful of touching it at all.

Vah came to my camp around 2:00 pm that day. He seemed nervous and timid, but overall, he was willing to let me help him. He is a strong little boy. The infection alone must have been painful, and portions of the treatment were not pleasant to sit through. Vah never made a noise.

After washing my hands, I mixed hot water with soap and poured a cup or two over the wounded area to soften the scabs around it. With sterile cleansing wipes I removed as much dirt and buildup as I could then I applied the antibiotic ointment along with a band aid. I asked him to come back every day to replace the bandage. Each day the wound looked better, and the swelling went down, but the wound was very infected, and I knew I would need to treat him for longer. I did not want to hand them pills and leave because they were strong antibiotics for such a young boy, and I am not a doctor.

I asked the *ampanjaka* if I could take Vah with us to our next campsite to continue treating the wound. I explained that one of his relatives was welcome to come with us for support. They accepted my offer but said they would join us the day after my team left for Amboasary. The day after arriving Vah and his grandfather did not show up. I was worried, but my team was not surprised. It was a long walk from Sahavanana (over two hours) and many of the villagers do not take medical issues seriously. Malagasy people, in general, do not take medical needs as seriously as Americans do. I was sad and hoped he would be okay because I knew that the infection would only worsen without treatment. As it turns out, I was right, and a day later Vah and his grandfather showed up.

Vah's face was again swollen and the band aid I put on him had fallen off. I thanked them for coming and immediately treated his wound. From then on, I treated the wound twice a day as we only had two more days left before we left the Amboasary village. The swelling went down again and the small crater on his face shrunk a little more with each treatment. At the final treatment I put on a little extra ointment along with two very strong bandages. Knowing that it was not healed, and I would not see him for at least another year I left him with six of the antibiotic pills and instructed his grandfather on how Vah should take them. My doctor would not approve of this and I am pretty sure it is illegal to do that, but I wanted to do the best I could for him.

Two weeks later there was a big celebration in Ranomafana for Lemur Day and the *ampanjaka* of Sahavanana was there. I was extremely excited to see him and tripped over my own feet as I ran to greet him. He said that Vah's face was healed! The antibiotics worked, the wound was gone, and Vah was feeling very well. I may have squealed a little out of pure joy as he thanked me for helping his grandson. That was one of the best moments of my entire trip. Most foreigners who come to Madagascar want to make a difference and help Malagasy people as much as they can. Working in development, you learn that lasting impacts take an enormous amount of time and effort as there are usually many failures before something takes hold. Interacting with Vah was a moment in which I felt a sense of pride in what I was doing there. It was a small win that I can now look back on and know that if everything else I do here fails at least I was able to help this strong, vibrant, curious little boy.

## FEUDING FAMILIES

In Amboasary we first set up camps next to the school, which is a small concrete building large enough for a single classroom. Aside from the invasive poisonous spider that was camped out at the entrance of the toilets, this part of the expedition was unproblematic. We played games with the children, I gave extra school supplies I had brought from home to the school director, the meeting with *ampanjaka* went smoothly, I treated Vah's wound, my team worked and relaxed as expected; everything seemed to be going well. Then came the day to move to the forest and as we arrived at the campsite, we noticed that the forest part of it was completely missing. Amboasary is visited frequently by CVB and this amount of deforestation was a devastating surprise to my team. Not only did they cut down hectares of forest, but it was the forest next to CVB's regularly designated campsite. We looked around, took in the scene, and began to set up camp.

The campsite itself was not part of the protected forest and it was surrounded by a sea of freshly chopped longoza, which grew wildly throughout the area. There was a lone dying tree in the middle of the campsite that was the home of a biting ant colony and a stream that ran through next to it separating the designated toilet area. The forest surrounding the toilet was also cut down which was uncomfortable to say the least. As a woman, especially a *vazaha* woman, in the field, you need privacy anywhere you can get it. Setting up camp started with burning the ant colony and erecting our tents on top of the thick layers of chopped longoza that made a loud rustling noise with every step. Some members of my team were visibly upset because not only was it wrong to cut down this much forest, but to dismantle one of CVB's regular campsites was disrespectful.

To understand this a little further: politeness and respect are held in the highest regard in Malagasy culture. Relationships are extremely important. Even if a grave crime is committed, and you have knowledge of what happened, it is considered wrong to speak out against your friends or family to police or authority figures unless your life is in danger. Even then, people may still

believe that you could have found another way to protect someone close to you. Community ties are strong here because that is how everyone survives. When one family runs out of food, it is their neighbor who feeds them. When someone is in trouble with the law, it is their community who protects them. And these favors are returned because that is how everyone pulls through the toughest of times; they rely on each other. Amboasary is regularly visited by CVB; they have a community garden program, a reforestation program, and an education program, just to name a few. Showing this level of disrespect to a community organization that regularly visits your community by cutting down their campsite inevitably set the tone of opposition for the rest of our time in Amboasary.

My team was disappointed in their people, but all I wanted was to find out who did this. I only wanted to talk to them. I did not want to put anyone in jail, which is something these communities feared I would do, but I did want them to understand the consequences of their actions concerning their own wellbeing. Some of my time in the field was spent explaining the water cycle to people in the rural communities. As I explained how the trees create cloud cover and therefore produce rain, some were astonished to find out that by clearing vast amounts of trees there will be less and less rain. Ranomafana still has rainforest and a lot of rainfall, so, understandably, people who have lived in this region their whole lives could not picture a future without rainfall. Although the communities are experiencing changing weather patterns and precarious harvests, they do not necessarily believe that burning the forest is contributing to it. I wanted whoever was responsible for cutting down all the vegetation and forest near the campsite's stream to understand that once they irrigate that stream to fill their new rice paddies it will contaminate all the downstream water that the village uses for everything, including drinking water.

Every day, my team and I went out to search for those responsible for this deforestation and

every day, we found more deforestation. I cried and pleaded with my local guides to tell us who was responsible, but they claimed they did not know. For days, every local Malagasy person I saw claimed they did not know who did this or when they would be back. My local guides even explained to me how this was so sad for them because without the forest the researchers and CVB will not come back to hire them and this was their best, and sometimes only, employment opportunity. What pained me was, they all knew who was responsible, and yet would sooner run away from the work I offered rather than turn on one of their own. The day before we were scheduled to leave, I discussed with my team that I did not want to leave this area until I spoke to the people responsible and that I wanted to extend our expedition until we found them. Thankfully, I only had to extend it by one day, because after over three weeks of living in the forest, I was yearning for a real shower.

After overhearing us talk of extending our stay, one of the local guides came forward to tell us about the man who owned the land our campsite was on. He explained that this man was furious that his land had been deforested because of a long-time feud between him and an individual in a neighboring village. I immediately instructed my team to find this man and bring him to our campsite as quickly as possible. It took about a day to track him down and bring him over, but once he sat with us, he explained everything. It was simply out of the fury from the injustices committed against him and his family that he was willing to tell me everything. It did help that he was actively trying to get the people responsible for the deforestation arrested so telling me anything could not hurt his crusade or the already tattered relationships from this long-time feud.

This man's late wife inherited this land from her father. Unfortunately, she died in childbirth, giving birth to their 13th child. In his mind, since they were married and his wife had heirs, the land should be passed down to him and his children, but he did not have the paperwork to prove this at the time of her death. Another man in the neighboring village of Ampasipotasy had a

long-time feud with this family and did not agree with this logic. I never did find out why the long-time feud started, but that was not something I could focus on at the time. Apparently, the feuding person in Ampasipotsoy told others that this land is free to anyone who claims it because the owners died. Forested land is such a valuable resource in Madagascar that the *ampanjaka* of Ampasipotsoy joined forces with the feuding man from the same village to claim the land in Amboasary for their own without any regard for the actual owner. In words of the late conservationist Alison Jolly, “Heaven help those who try to sort out land tenure [in Madagascar]”.<sup>5</sup>

The amount of land that was cleared by these individuals was far greater than what was owned by the grieving man from Amboasary. The teacher’s husband in Amboasary also collaborated with the people from Ampasipotsoy to claim some of the forest for himself. Although the schoolteacher and her husband reside in Amboasary, they are not originally from there. Teachers are randomly assigned to villages by the government and often receive no salary to teach. Since the teacher nor her husband were born in Amboasary, they did not own land to cultivate in the area, which they needed to feed their two young children. On the day of our departure, I visited the teacher’s home to meet with her and her husband. Because of my arrival, the teacher’s husband was hiding out in Ampasipotsoy, but returned after I requested his presence. Surprisingly, the *ampanjaka* of Ampasipotsoy joined him. We had a long, honest discussion. I expressed my disappointment because they were high status and educated compared to most people in their communities; they knew the consequences of their actions. But my disappointment was misdirected. Although they knew the consequences, they were in the same position as everyone else around them. They admitted everything they did was wrong, but they needed to feed their growing families and land was scarce. The owner of the cleared land has every right to fault them for clearing land that did not belong to them, but it was wrong of me to fault them for surviving.

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<sup>5</sup> Jolly, Bradt, and Jolly, *Thank You, Madagascar: The Conservation Diaries of Alison Jolly*, 179–80.

## A CIRCUMCISION CEREMONY

Arriving in Ampitambe everyone was welcoming, but not in a state of fascination as they are more regularly visited by *vazaha* and other Malagasy organizations. We arrived a day or so before a very big event, a circumcision ceremony, and this year there were three boys to be circumcised. This is a huge event for Malagasy and, not wanting to pull them from their roots, I agreed to stay longer in the village to accommodate the three-day long celebration before beginning the field work in the forest. This event mainly consisted of drinking and dancing for three days and two nights, but there were two ‘must-see’ events during this celebration. One is the actual circumcision and the other is the zebu sacrifice. During the circumcision everyone crowds around as the boys are held down and circumcised, one by one. These boys are little, I assumed about four or five years, but most likely old enough to remember some part of this for the rest of their lives. It was very uncomfortable for me to watch because the boys are fully awake and in an incredible amount of pain. I took pictures as requested, but I could barely focus my camera because I could not watch it.

I was not present to witness the zebu sacrifice. I wanted to see it, but I went to visit a nearby village that morning to observe an active tree nursery. My team and I returned to the sight of a large pool of blood draining down different crevices in the earth. At first, I was not sure what it was, but that was quickly clarified after seeing the carved animal. Zebus are cattle, most like oxen, and are very common in the rural areas. Zebus are very dangerous and the tradition of killing a zebu for celebration requires someone to hold it by its horns while it is killed. Many people performing this ceremony are drunk and tend to get hurt, if not killed, by the zebu so, in that respect, it is good that this does not happen often. The meat from this celebration is very important. For the local people attending the celebration this is one of only a handful of times they consume meat during the year. Protein is scarce in rural Madagascar and most people cannot afford to eat



their own animals.

These celebrations feed people from many villages and provide a level of connection and hospitality that is needed in these areas. This area is closer to the road and therefore slightly wealthier than the very remote communities. They are fortunate to eat meat a handful of times in a year as some people I encountered only ate meat once a year. Having meat from this celebration is extremely important for relationship building. I did not understand this until the wife of the *ampanjaka* asked if we got any meat and I explained that we had not. She was very surprised and maybe a little embarrassed that no one set aside meat for us. I explained that we needed to work in a neighboring village, and it was not the fault of anyone in her community. However, that would not suffice as their relationship with me was extremely important to them. The next morning, right before we were about to leave for the Ampitambe forest, the *ampanjaka* along with other council members brought us meat for our journey and gave us the traditional ancestral blessing.

## PLAYING GAMES

On the first expedition, I made the error of not bringing anything to pass the time when we were not working. The PEM hikes were at 5:30 am and 5:30 pm. so the middle of the day was pretty laid back. And during the village surveys, the best time to catch people was after they came back from the field which was in the late afternoon. On the first expedition, the guys played cards and sometimes I would take walks with my assistant to explore the area, but I mainly studied Malagasy. The walks were great, but I could only go so far from camp so there were various points when I was looking for anything to do. My assistant, Manda, suggested I buy Dominos in town and bring them with me on the next expedition. Dominos is a popular game in Madagascar; my team and the local guides were very happy to hear that I had bought them. I enjoyed playing, but watching my team play Dominos was like watching a short film about rural Malagasy culture.

The game can get very competitive, and everyone knows the rules. There were no arguments about what rules apply or sentiments of 'that is not how we play here'. Each player was on the same page no matter where we went. The men would slam down the tiles with such enthusiasm I thought they would break. In the villages only a few people have their own Domino set that they share with others. During the circumcision celebration in Ampitambe, I watched as the games rolled on: interchanging players and counting points without skipping a beat. One community member stood out as the clear winner of multiple games and he threw those tiles down with precise determination as if he just bet a year's worth of food. It was fun to watch them enjoy it so much. You could almost feel their sense of pride with each win.

Malagasy people, especially rural people, do not have an abundance of games to choose from like Americans do and they do not have any of the technology that we have here. While the adults played Dominos, the kids played their own games, one of which is Canelly. To do this, they made an indent in the ground and took a small round object, usually marble if they had one, and

they made attempts to push the ball into the indent. That is the whole game. I understood imagination on a different level as I watched them. To feel so much joy for something so simple is something anyone can do, yet most of the kids I know would laugh at me if I gave them a marble, told them to make a hole in the ground and play a game.

## BEING A VAZAHA

The remote villages do not get a lot of attention from *vazaha*, so when one visits, all eyes are on them. At first, many of the children were afraid to go near me but, at the same time, did not stop watching me. In most places it took a few days for the children to get close enough to touch me, but after that they touched me very frequently like I was a figment they needed to authenticate. Except for one instance, it was the children who touched me without permission, frequently trying to run their fingers over my arms. In the town of Ranomafana, a little girl passed behind me and touched my butt. I looked her dead in the eye and said *tsia* (no) in a stern voice, she seemed a little surprised that I addressed her, but overall unaffected by my irritation. In Amboasary, I decided to wash my hair in front of my tent with a bucket and a cup. When I began, I was alone, once all my hair was wet there were about three children staring at me, when my hair was filled with soap there were about ten children staring at me and by the time, I finished there was a group of about 25 children sitting in front of me.

In Ampitavanana, there was one girl who liked to push boundaries with everyone and after a day in her village she began hanging on to me. I never corrected the distance as I did not want to say the wrong thing and offend anyone. However, later I was told that many people in her village repeatedly scolded her actions towards me and instructed her to leave me alone. Some of the other kids followed her lead but took notice of my cues of irritation unlike she did. She was a stubborn and manipulative little girl. She even fake-cried when I asked her to leave me alone for a bit so I could pack. Americans have a clear sense of personal space that does not exist in a cultural sense in Madagascar. However, politeness is held in very high regard, so if someone shows you a hint of irritation it is prudent to respond accordingly otherwise you are considered a very rude person. Taking into account that it is illegal to yell in Madagascar, picking up on social cues is very important.

It is normal for people to share things with you in Madagascar and, in many cases, it is rude not to accept the offer. On the first day she asked me if I wanted *garana* (small passion fruits) to which I said yes. A little while later she returned with a few friends and a large basket full of *garana*. As she set it down, she said it would cost 5000 Ar. Three thousand five hundred ariary equals about one US dollar and her father's wage per day from working with me was 5000 Ar (this is the standard wage of a local guide working with CVB on a temporary basis). Not only was this rude, but I felt horribly awkward paying that much for fruit as it was insulting to her father. I did not know whether it would be worse to say no after I said yes so, I reluctantly accepted to pay for the fruit. After that she asked if she could get us water and a few other things, but after the incident with the *garana*, I politely declined every offer. This girl followed me everywhere and even bothered my cook while he was working just to be next to me. One of my techs said that she became friends with all the *vazaha* that come to Ampitavanana. This girl was not my friend. She was incredibly disrespectful, and I did not feel comfortable being around her.

During my last night in the Ampitavanana village, after my team finished dinner, I spoke with her about her future. She wants to continue going to school. Every child I met there wants to go to school because school is the only way to live a life outside of their own village. We talked about my interests in Madagascar and what work I have been doing since I arrived in the country. Her tenacity is hard to ignore. She recognizes powerful people, and she sticks to them because she knows that is her best chance for a better life. I hope she continues going to school and I hope she keeps believing in her ability to get things done. I hope her plan of action changes in that sense, but her drive is something to be admired.

## PARASY

There are a lot of creepy crawly things in Madagascar, especially in the rainforest, and leeches are inevitable. They fall from the trees like rain, and I have heard stories about them falling into people's eyes or people waking up with them inside of their mouths. It is incredibly gross to think about and I can only imagine how awful that experience would be. However, you get used to the leeches. You learn how to remove them, how to kill them and how to avoid them as best as possible. You cannot feel them biting you and the itching/bleeding only lasts for a short while after. The worst part about the leeches, for me, was feeling them slither on my skin, but after a while you do not even notice them on you. When heading into the forest I gear up with thick socks, boots, long sleeves, and a hat to avoid leeches as much as I can, but I would take leeches over fleas any day of the week.

There are nine species of fleas in Madagascar, and I encountered two of them which I know of as sand fleas and black fleas. All are colloquially known as *parasy*. I was warned about the sand fleas and how they bury into your feet to lay eggs until you dig them out. That sounds a lot worse than it is. They primarily burrow into harder skin textures like the palm of your hands or soles of your feet. I never felt them enter my skin, but once they began setting up camp, I felt slight pain in the location of their nesting. Once located, either I would dig them out with the tip of my knife or one of my team members would use a needle to remove them well before they started to do any real damage. Sand fleas only seem to cause a problem if left in the skin for two weeks or more, but after a day or two of living in my skin I always felt them and removed them immediately. The removal was relatively painless and only occasionally would bleed a little. Those bites did not itch, they just left little holes that I had to make sure to keep clean. Every wound should always be kept as clean and dry as much possible while doing fieldwork. The sand fleas, the treacherous demons I was warned about at CVB, were not a big deal.

On the other hand, the black fleas were the worst insects I have ever come across in my life. Black fleas bite your soft skin and leave small, slightly raised, red marks that are itchier than any mosquito bite I have ever had. For context, when I was a child, my nightly routine consisted of rubbing my body with bug spray because mosquitoes were so attracted to me that I would be covered in new bites almost every morning. The itchiness of these flea bites consumed me. I would wake up multiple times in the middle of the night to frantically reapply anti-itch powder to calm it down enough to close my eyes. These fleas bite in clusters and they have a curious habit of forming a ring across the hip area. I had a very large band of flea bites across my hips. I also had clusters on my thighs and lower legs as well as my upper arms. I itched my body so much that I left the country with little scars in the shape of the flea bites.

I completely understand why the people of Mangevo and Sahavanana do not live in their village, but rather in their field houses for much, if not all, of the year. Sahavanana is so overloaded that they never live in their village houses and the village is pretty much abandoned. Mangevo is also infested, but the people will spend a small amount of time during the year living in their village houses. Amboasary, Ampitambe, and Ampitavanana are moderately infested, but they are more of a nuisance than a health crisis in these areas. Thankfully, Ambatolahidimy does not have fleas, but they also have more wealth and better access to insecticide than any of the other five villages. There is a pink liquid insecticide used to kill parasy that is quite expensive for the rural communities, it is also toxic to humans and land if used regularly over a long period of time. The sand fleas are attracted to dry conditions and leeches are attracted to wet conditions, so if you have fleas then you are not likely to have leeches and vice versa. Dogs are the primary carrier of black fleas and most of the villages have dogs that serve a vital security purpose for the locals so suggesting that they do not keep dogs is out of the question.

After arriving in one of the villages and talking about how awful the parasy were, I was told

by a few locals that I should have brought insecticide with me. The way I was told was more of a demand for supplies rather than a suggestion for next time. I understand that parasites are a huge problem for them as they pose a dangerous health risk as medical treatment and pest prevention are not easily available in these remote areas. However, bringing an insecticide that is toxic to people and further hurts their agriculture is not an appropriate action for me to take. I am working on a plan to kill current infestations using a safer method of distribution of this insecticide together with a separate, earth-friendly, way to prevent fleas from entering villages and households.



## PEOPLE > PETS

Animals, specifically cats and dogs, are viewed differently in Madagascar in comparison to the United States. We have many stray animals in the United States, but we also have organizations dedicated to caring for these animals. We personify our pets and often, treat them as family, like our own children. We take them to a specialized doctor if they are sick and some even purchase pet health insurance just in case, they get sick. We have cancer treatments and emergency animal hospitals dedicated to pets in the United States. Our society believes that animal abuse is inexcusable, many even believe that the abuse of an animal is a more horrific event than starving a child. Imagine a place where the American ideology concerning cats and dogs was completely turned around; that is what you have in Madagascar. We are very lucky that we can afford to keep pets in the manner that we do – it is such a luxury that can easily be taken for granted.

The areas of Madagascar I spent time in had many dogs, but very few cats. One theory for this is the lack of protein available in the region. There is not enough protein available for all the people to eat, so supplying protein-rich food for cats is out of the question. Some of these animals are pets and many are strays. Out of all the villages I visited, I saw one cat and in the town of Ranomafana I saw two cats, but there was at least one dog everywhere I went. Some of the dogs were strays that roamed around looking for food, more than a few on the brink of starvation. Other dogs were owned by people and some of them were also on the brink of starvation. The treatment I witnessed of these animals would easily be labeled as abuse by any American standard, but here, that is just the way it is.

Cats are scarce but are believed to be good at mitigating the rat population, so they are not unwelcome. Dogs were in every area and most often used for security. Animals sleep outside and live off the little available food scraps in the villages. In the town of Ranomafana, many tourists feed the cats and dogs, which is considered unacceptable behavior for a Malagasy person unless

you own the animal. A lot of leeway is given to tourists in this manner, but at any point, if a person values an animal over a human that is completely unacceptable. In areas where most people are malnourished and consistently use up their crop yield before the next one can be harvested, is it beyond rude to share your food with an animal when the person next to you is most likely hungry.

My team would give the animals scraps and bones, sometimes as a game to watch them fight each other. I did not approve of this behavior. I believe that animal abuse is just as bad as child abuse. It broke my heart to see these animals on the brink of starvation scavenging for any bit of food that might be around. Some were skin and bones and could barely manage to stand up. Watching this I had to remind myself that it was my job to prioritize the people over all else. Many of the communities already feel neglected because everyone wants to come to Madagascar to study the unique wildlife and I was not about to validate these judgements by giving some food to a hungry dog. My team and I shared some of our food with one of the cats we saw. It climbed into our kitchen for dinner and would not stop howling until we gave it something. Again, just scraps of protein, bones from a zebu and scales from a fish. Funny enough, the cat preferred to eat the rice grains that dropped from our plates, proving how truly Malagasy these animals are.

There are veterinarians in the wealthier parts of the country. Their clientele is few, but also wealthy, further reiterating how much of a luxury it is to believe that animals are just as important as human beings. Madagascar knows how precious its lemurs are. The world visits Madagascar just to tell them so. Lemurs bring them tourism and research, which brings them employment opportunities. Lemurs bring the wealth of other nations into the Madagascar economy. Madagascar loves its lemurs, even if they may resent the people who come there to see them. Dogs and cats do not bring any wealth to Madagascar, if anything they take food resources away from people as a trade for security or pest control, but this is seen as a decent trade, so they are allowed to hang around.

## THE RICE PADDIES

Rice paddies are easily the worst part of doing field work in Madagascar. The rice paddies, when in use, have a thick suctioning mud that will take your shoes right off. A few times I had to fish out my shoe after I fished out my foot. Outside of Asia, Madagascar is the largest consumer of rice per capita in the world and almost all the low land has been converted into rice paddies.<sup>6</sup> The amount of rice they consume in one meal would feed me for a couple days. As previously mentioned, rice is considered the lifeblood of the Malagasy people, they treasure it and cannot feel satisfied without it. All farmers plant rice. It is the number one crop grown throughout the country and these paddies are everywhere.

The best way to navigate the paddies is barefoot, but with the prevalence of schistosomiasis and flesh-eating bacteria, I chose to always wear shoes. In some areas the mud is thigh-high, and, in some areas, it is very low and dry enough to walk steadily on top of. The biggest problem I have with the rice paddies is the deforestation and water contamination they cause. Rice grows in flooded fields that use water from nearby fresh water sources for irrigation. The integrity of these very important fresh water sources is compromised to properly irrigate the paddies leading to further spread of disease in the area. One of the main problems being that flooded rice paddy fields are a great breeding ground for malaria-carrying mosquitos.

I do not want to take their precious rice away from them, but I would like to see them decrease their dependence on it. Although it does not provide them with balanced nutrition, it does keep them full, which for hungry people with limited food is a good thing. In my eyes, rice causes more destruction than good. If you want your kid to be healthy there, you feed them lots of rice, but rice will not make a child healthy, it will just keep them from starving. The continued deforestation

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<sup>6</sup> Minten et al., "Rice Markets in Madagascar in Disarray: Policy Options for Increased Efficiency and Price Stabilization. Washington, World Bank."

created to grow rice is astounding. These fields take the longest to fallow and once a freshwater source is used to irrigate paddies the negative effects cannot be undone. Natural barriers between freshwater and its environment, such as rock formations, valleys, and riverbanks, have evolved over centuries. Once you dig that up to irrigate rice paddies you cannot replace them as it has taken nature millennia to create.

There are alternative ways to grow rice that will increase the yield significantly per paddy. One is called System of Rice Intensification (SRI), and it seems to have been well adopted in other countries, but it has had a hard time sticking in Madagascar. NGOs have tried to implement this in various areas of the country, including the Ranomafana region, but local people tend to revert to their old ways because that is what they know and that is what they are comfortable with. Even if SRI were adopted, it would not solve the problem of deforestation. Used land needs to fallow and the population continues to grow, meaning that with a clear dependence on rice as their main source of food, deforestation will continue.

## A NEVER-ENDING BATTLE

I cried a lot in Madagascar. I cried because I felt hopeless, and I cried every time I realized I made a grave error I could not fix. Many times, I cried because of what was happening in front of me. From the burning forest to the malnourished children and the abused animals. I came to Madagascar to figure out a better way to protect the forest and to stop the heavy reliance on *tavy*. I want to figure out a surefire way to preserve the rainforest without blocking the local people's access to it and to create more forest without diminishing any of their food supply. That is why every conservationist comes to Madagascar. And, like every other conservationist in Madagascar, I can and will try, but most of the decisions made to cause these tragedies are outside of my circle of influence.

There are a few national parks in Madagascar, all of which are threatened, but these parks are designated protected areas that should not be touched. A national law in Madagascar says that all forest belongs to all of Madagascar, and it is illegal to cut down any part of the forest without government permission and permission to cut protected forest is never granted to the local people. However, the people who live closest to the forest follow a different set of rules. Rules that stem from their own traditions and ancestry. Rules that hold a much greater standard when you venture into the forest. In the government's eyes, no one person can own an area of forest, but in the people's eyes they have every right to use the land their family has claimed for generations. Due to incredible corruption, lack of access to proper resources, the rough terrain, and threats from gangs the national laws are rarely enforced. Even people who have been given power from the government to oversee the rural areas will not go against the local rules and traditions out of fear of being attacked by their constituents.

Every time I entered a degraded secondary forest; my techs would tell me how the bare area that we were standing in was a full forest only two years prior. Some places were cut down only

weeks before we arrived, and some places were marked to be cut down as soon as we left. With all of this, I just cried. I cried because I was too late, every single time. I cried because I felt my soul die a little more with every tree that was cut down and with every piece of land that was burned. Most researchers come to Madagascar for the lemurs and some change to conservation because they learn that the only way to save the lemurs is to focus on forest conservation. I came to Madagascar for the trees, and I knew before I arrived that forest conservation, or conservation of any kind, starts with the people. It starts with the people who need to feed their families.

I spoke to every person I could find that was cutting and burning forest and each time they asked me what they are supposed to do if they cannot cut and burn. I did not have that answer and I was not even ready to be asked that question. Who am I to tell them what they should be doing? Who am I to say that they cannot cut their own land? Yes, I had the national law behind me, but that means very little to people who are on the brink of starvation. I cried even more because I could not give them an answer and I could not give them anything more than my words.

Conservationists in Madagascar consistently come to the same conclusion: for the forest to be preserved, farming methods need to be improved and contraceptives need to be free and easily accessible to women. The forefront of this is education, education about conservation, healthcare, family planning, and agricultural alternatives. I can point you in the direction of every organization that has made and continues to make great strides in these areas and yet Madagascar cuts and burns its forests faster than any other nation. I cried because every time I arrived in a different place, I felt like I lost a battle I did not know I was participating in.

## HOW TO GROW A RAINFOREST

Although more research is needed on this topic, it is generally assumed that much of the world's rainforests, including in Madagascar, have extremely poor soil composition which is naturally acidic and low in minerals and nutrients.<sup>7</sup> Rainforests can regenerate thick vegetation because of rapid nutrient cycling that takes place within a closed system. The hot, damp conditions on the forest floor allow for the rapid decomposition of dead material, which provides an abundance of nutrients that are easily absorbed by plant roots. However, because these nutrients are quickly used by many fast-growing plants, they end up staying close to the surface soil.<sup>8</sup> When the forest is cleared, such as with deforestation, the soil itself is unable to generate a lush rainforest environment on its own. Furthermore, because nutrients are packed into the soil surface, when it is converted to farmland the land quickly loses almost all its nutrients after the first harvest.

Due to extensive deforestation throughout the eastern rainforest of Madagascar, much of the land no longer benefits from this type of nutrient cycling and is exposed to intense sunlight, further contributing to the decline in soil nutrition. When reforestation efforts occur without added fertilizers, the newly planted trees experience a high mortality rate. Other factors contribute to the success rate of the trees, such as limiting sunlight exposure and maintaining the land to ensure there is enough space for the new growth, but soil nutrition is the first obstacle faced when planting young trees. Compost is a good solution to the soil nutrition problem in reforestation efforts, but it is time-consuming and can attract even more unwanted pests. Therefore, reforestation efforts, although theoretically ideal for regrowing rainforest, are practically very difficult. On top of the naturally occurring issues of intense heat and poor soil composition in the areas, the important task of regularly maintaining reforestation efforts falls upon rural communities who constantly worry

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<sup>7</sup> Proctor, "Nutrient Cycling in Primary and Old Secondary Rainforests."

<sup>8</sup> "Rainforest Water and Nutrient Cycles - Tropical Rainforests - GCSE Geography Revision."

about when they will run out of food for the year.

The survival of Madagascar's rainforests depends on alternative methods of economic livelihood for the local people that reduces the need to clear vast areas of the forest. Slashing and burning large swaths of forest creates an excellent carbon fertilizer because the ashes raise the soil pH from acidic to neutral. However, using this method of farming requires the land to fallow anywhere from three to ten years after just one harvest for vegetation to regenerate and the land can be burned again to fertilize the soil for another harvest. Due to food shortages, many people cannot wait the necessary three-year period and end up burning the land after one year. The first harvest after clearing rainforest is the most prosperous, even fallowing for three years will not bring the same result, so allowing the land to fallow for one year draws a minimal harvest. The needed fallow period, coupled with a rapidly growing population, causes the continuous deforestation of rainforest as more and more land is needed to grow food.

This reflection is included because I want my readers to understand that a rainforest does not automatically regenerate after you cut it down. The vegetation that sprouts up in its place is spiny, dry and thrives directly under boiling hot sun, which is the exact opposite of a rainforest environment that is protected by a centuries-old tree canopy. Rainforests provide a living space for a multitude of insects, animals and plants that are extremely useful to people. Some of our most cutting-edge medicines have come from plants and animals that only inhabit rainforests. Without a tree canopy, an area will lose cloud cover, rain, and shade, and is on its way to becoming a desert. On top of deforestation, the irrigation of rice paddies converts incredibly important fresh water sources into tinier and tinier streams until they dry up completely into a bed of rocks. There are vast areas of Madagascar that used to be vibrant, lush rainforests; you can drive right past some of them on your way from Antananarivo to Ranomafana and would never know, because today they are arid, dry, and mostly dirt.



## DONNÉ

Madagascar is worlds behind the United States, and many other countries, when it comes to pretty much everything. Healthcare is an area that Madagascar is so severely behind that it continuously shocks me. When I met Vah, he was in desperate need of medical attention, which I was able to give him, but so many people, just like Vah, get infections or become ill and it turns into a death sentence. In four months, I attended two funerals. The first funeral was for the brother of one of my technicians, Victor. It was presumed that Victor's brother suffered from gout, but no one knows his actual cause of death. A week after Victor's brother died, his wife died. She was feeling sick one day and the next day she felt worse, so she went to a local hospital. She died the next day. We do not know why she felt sick, and we do not know what caused her death.

Many hospitals in Madagascar do not have regular supplies of gloves and some do not have electricity, so advanced diagnostic equipment like x-ray machines or MRIs are a dream in most of the country. The most advanced hospitals are in the capital city of Antananarivo, but even there everything moves slowly. Emergencies in Madagascar are not treated the same as an emergency in the United States. The saddest part of this all is that if you are a *vazaha* or if you are Malagasy with a lot of power or money, you probably will not die of gout or a mysterious illness because you can pay to be transported out of the country to access better healthcare. Private doctors and hospitals in the country are a little better than public ones, but they are also unaffordable for most of the population. Madagascar is so behind on modern medicine that it still deals with consistent outbreaks of typhoid and plague.

Donné had the most experience out of any technician on my team. Not only was he on the PEM project from the beginning, but he was with CVB from the beginning. At first, Donné did not interact with me because he thought I was just another *vazaha* researcher who would leave Madagascar without giving him a second thought. I was determined not to be that kind of

researcher. I was determined to show my team that I respected all the knowledge they held and that if they were on my team, we would treat each other like a team. On my first expedition, Donn  had a birthday. I did not know this beforehand as I did not know much about my team before the first expedition. Upon finding out this information, on the day of his birthday, I bought some local moonshine and after our work was finished for the day, we toasted to Donn  and shared some chocolate I brought with me as well as sugarcane I bought locally. That was our turning point. At that point I learned Donn  had worked for CVB for 28 years and had only spent one birthday at home. No one ever acknowledged his birthday in the field prior to that day. He was 47 years old.

As we continued working together, he brought that up to his friends and his family. He told them that he would never forget it and how much he enjoyed working with me. Little by little he opened up to me. He told me about his family, introduced me to his wife, and brought me into his home. He told me why he no longer interacted with *vazaha* and how he hoped I would come back to Madagascar so we could continue working together. He even hugged me towards the end. After I realized how much experience and knowledge Donn  had about everything we were doing, it felt wrong to not have known this before. If I knew more about my team and CVB, it would have changed everything I did from the moment I met them.

On Tuesday, November 3rd, 2020, Donn  fell from a distance of 1.5m coming down from a mountain-top funeral at night. He lost feeling in legs and feet and was essentially paralyzed. On Wednesday, he checked into the hospital in Ifanadiana, but they could not do much for him, so he was sent to a better hospital in Fianarantsoa. That hospital could not do much for him either, so he was scheduled to go to a better hospital in Antananarivo. Early Saturday morning, in Fianarantsoa, Donn  died. He died from his fall, but that is all we know. We do not know exactly why he was paralyzed; we do not know how his spine was damaged, we do not know if he was internally bleeding. We just know that he died four days after his fall. Four days. Maybe I did not have a right

to be angry when I heard about his death, but it was how I felt. For four days my friend suffered from the lack of infrastructure and healthcare that is afforded to me every day that I am alive. My friend could have lived. Maybe he would be paralyzed, but my friend could have lived; he could have lived to see me back in Madagascar, he could have lived to celebrate another birthday, and he could have lived to grow old with his wife. My friend could have lived if he did not live in Madagascar.

## WHITE PAPER

## INTRODUCTION

This capstone is a compilation of personal reflections from my trip to Madagascar between September and December 2019. Each story explores an event that was either a challenge, lesson, and/or meaningful experience that contributed to this journey. Although my main objective for traveling to Madagascar was to collect data that could perhaps be used to take community-based rainforest conservation one step further, I came to understand that development and conservation are much more complicated than creating a plan from data. Everywhere I went I discovered more about the people I worked with, my team, and myself. I want to highlight the challenges and rewards of my journey with the utmost respect for everyone with whom I interacted, while being as honest and transparent as possible. Overall, I would describe my trip as a success: I went there to connect with people as well as to begin building relationships, and I was able to do that.

When I initially entered the Master's in Liberal Studies program (MALS) I did not intend to end up in conservation. Originally, I applied for the Cultural Anthropology Ph.D. program, but was not accepted, and wound up as an interdisciplinary master's student. In this white paper, I will explain how I came to focus on conservation in Madagascar from my beginnings as a MALS student. I will also describe my own struggles working in a developing country as an outsider using theories concerning the insider/outsider perspective. The position of insider or outsider is not self-positioned by the researcher, but instead decided on a transactional basis by the participants.<sup>9</sup> The insider/outsider perspective also affected my assistant, an indigenous researcher, but in a dissimilar manner to my own. Although this perspective is highlighted in research among indigenous communities, it is not always centered in conservation research. Many conservation-focused researchers tend to emphasize wildlife rather than people, due to their respective backgrounds, and this carries over into the drawbacks seen in many conservation initiatives.

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<sup>9</sup> Kwame, "Reflexivity and the Insider/Outsider Discourse in Indigenous Research: My Personal Experiences," 1.

Other researchers, primatologists, and conservationists have documented their own experiences working in Madagascar, and I believe these memoirs provide insight into important, and possibly overlooked, aspects of conducting field research in a foreign country, especially in a tropical rainforest. Primatologist and conservationist, Alison Jolly, wrote countless diary entries and letters to her family during her trips to Madagascar. These have been arranged to complete her last book, *Thank You, Madagascar: The Conservation Diaries of Alison Jolly*, that was published after her death in 2014, to highlight her lifelong determination to look after Madagascar and its people. Dr. Patricia Wright is a primatologist, and professor, turned conservationist because of her discovery of the Golden Bamboo lemur and her rediscovery of the thought-to-be extinct Greater Bamboo lemur in Ranomafana, Madagascar. Her book, *For the Love of Lemurs: My Life in the Wilds of Madagascar*, explores her transition into conservation by creating Ranomafana National Park. Spanning across 161 square miles of dense mountainous rainforest, the park is home to 12 species of lemurs, over 130 species of frogs, 62 species of reptiles, 30 species of birds, 8 species of bats, and 7 species of tenrecs.<sup>10</sup>

My journey in rural Madagascar, including my own perspectives and challenges, are unique to me, but overall, not uncommon. On top of adding my contribution to the mix of others, this compilation of reflections is also for my own benefit. This is my reflection on the events that I encountered in Madagascar. It is a space where I can reevaluate what I learned during my trip and reflect on how I can further my focus to better serve the people I want to work with. I believe analyzing my experience through these reflections will drive me to continue community-based conservation initiatives with the goal of bringing the Malagasy people to the forefront of their success.

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<sup>10</sup> “Ranomafana National Park.”

## COURSEWORK TO CONSERVATION

The coursework I completed at The Graduate Center, CUNY (GC) focused on social inequality and environmental psychology, which related to my chosen concentration of Social and Environmental Justice. However, there was little centered around environmental justice in relation to the natural environment, where much of my interest lies. There are a few programs at the GC that offer more environmental science-based courses, and because my program was interdisciplinary, I was encouraged to enroll, but each time I tried I was unsuccessful. Either my full-time work schedule conflicted with the course time offered, or the course required program-specific preliminary courses that I did not take because I was in a different program. After finishing all my required coursework, I created an opportunity to conduct community-based rainforest conservation field research in Madagascar. This was a perfect way to complete my degree and gain valuable experience in my main area of interest: environmental conservation through the lens of social inequalities.

I was enrolled in the Master's in Liberal Studies program, which is an interdisciplinary master's program with over fifteen concentrations. The coursework requires a seminar in interdisciplinary studies, concentration-specific core courses, and electives.<sup>11</sup> The social and environmental justice program is run in conjunction with the environmental psychology Ph.D. program, therefore combining the core courses of a master's program with the initial courses of a Ph.D. program. Most of my classes were Ph.D. level classes, which was one of my favorite parts about attending a master's program at the GC, even though it was challenging because I worked full-time while attending the program.

All my classes encouraged the students to write final research papers or projects that were their own, the only stipulation was that the research had to relate to the topic of the course. I took

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<sup>11</sup> "Prospective Students."

this as an opportunity to dabble in various research areas I was interested in. Many students will continuously use their main research topic for the final paper. For example, if a student's Ph.D. is focused on the interactions of queer-identifying students in study groups, then they will likely research a different facet of this topic as it relates to each course. I was unsure about the research topic I wanted to ground myself in when I began my program, I had many different interests and I wanted to figure out which one I was most passionate about.

In my first semester, I wrote a research proposal concerning NYC's Long-Term Control Plan (LTCP) initiated by the NYC Department of Environmental Protection. Their main action plan is designed to reduce the wastewater flowing into city waterways by implementing more water absorbent ground cover in place of the vast amount of concrete and asphalt that currently covers the city. As I researched the LTCP and its potential effects on communities, I realized that economic and social service-based policy changes targeted to support low-income communities were integral to mitigate displacement during the rollout of this environmental initiative that would essentially beautify areas and drive-up rent prices. I also wrote a research paper concerning Central American migration where I conducted primary research by interviewing three people who immigrated to the United States (US) as minors. I obtained first-hand accounts of why they left their homes to travel to the US to build a new life; moreover, whether life in the US has lived up to their expectations. As it turns out, the constant and immediate threat of death and gang violence in Central America is enough for anyone to take the perilous journey over the border to a country where their lives are not threatened every time, they leave their homes.

My other research projects have included a short presentation on my fear of heights and falling, a self-study on my medical disability with chronic migraines, theorizing the impact and value of consumption according to Daniel Miller through the evolution of the housewife, exploring the value of unstructured space using the book *The Accidental Playground* while considering



theories from Kurt Lewin, Roger Barker and John Dewey on the topic, and a targeted recycling reform initiative involving Coca-Cola's influence on the beverage market. After exploring all these topics, I realized I was most excited about environmental initiatives, like recycling reform, but when deciding what to do for my master's capstone I still was unsure.

In the fall of 2018, I began to organize the revival of a conference called Nature, Ecology, and Society that took place in March 2019. This student-led conference previously ran at the GC for over ten years, and I thought it would be an exciting project relating to my interest in the natural environment. One of my first steps was to reach out to Dr. Patricia Wright, Founder and Executive Director of Centre ValBio, to be the keynote speaker. Dr. Wright runs the Madagascar study abroad program at Stony Brook University, which is how I met her as an undergraduate student in 2011. I have always been impressed by Dr. Wright's achievements and, as I have come to know her personally, it is her unwavering opportunistic outlook that makes me understand how she accomplished so much. Reconnecting with Dr. Wright and my interests in Madagascar while organizing this conference confirmed the topic for my master's capstone: I wanted to return to Madagascar.

Grant seeking was the most difficult part of preparing for this experience. From my previous jobs, I have experience with logistics, and I was prepared to handle that challenge. However, I have very minimal experience with grants and as a master's student there is very little funding available. I began grant seeking in March, and, by that time, many of the grant deadlines for that year had passed. I spent weeks emailing every scholarship and grant program I could find to ask if they had funding available for my project and timeline but was largely unsuccessful. Thankfully, the MALS program had funding opportunities available to its students and I was able to receive \$3,500 from my program to help with any expenses associated with my research. At the end of August 2019, I packed up my apartment, left my job, and got on a plane to pursue a research

opportunity in Madagascar in conjunction with Centre ValBio, a research station I had not worked with in eight years.

## INSIDER V. OUTSIDER

Most of the interactions, especially in the field, were governed by an innate insider/outsider perspective between myself, as a foreign researcher, and all the Malagasy people I interacted with. As the leader of my team, that divide went further than foreign/indigenous, but with the support of my assistant and translator, along with my unwavering persistence to interact with my team on a deeper level, we were able to chip away at this obstacle. The divide in the communities was often felt when I was given a sense of power I did not deserve, but as the wealthiest person in every community I visited I understood it. There were many factors that could be used to label me as an outsider: my skin color, education level, language limitations, gender, financial superiority, nationality, clothing, or status as a researcher/leader. However, my ranking as an outsider changed situationally depending on how I was viewed by others. Being labeled as an outsider by the rural communities was an expected challenge and it was with my fluctuating status as an outsider among my team that mattered most.

The insider/outsider perspectives concerning fieldwork are unlike the ethnographic emic/etic approaches. None of the views I held or reflections I wrote were written from an inside point of view because I was not, at any point, an insider. Furthermore, I did not conduct any ethnographic research specific to the culture or history of the Malagasy people. Both the emic and etic approaches are based on an outsider's perspective when one is conducting ethnographic fieldwork, most often as a foreigner, in an indigenous population.<sup>12</sup> The emic, or inside, approach

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<sup>12</sup> Morris et al., "Views from Inside and Outside," 1.

focuses on exploring the culture and history of a society from an inside viewpoint<sup>13</sup>, but it does not necessarily address the significance of outside people taking up space in the community. The role of outsider was a position that was provided to me by the people I interacted with and not an approach I took to describe my fieldwork. A researcher does not necessarily need to be a foreigner to be considered an outsider either, even indigenous researchers conducting fieldwork in their own communities “can occupy an insider status in one moment and an outsider [status] in another”.<sup>14</sup>

My assistant and translator, Manda, is Malagasy; he is from a poor family near central Madagascar, but he is lucky enough to study at a university in Antananarivo (Tana). Coming from Tana to work in Ranomafana with me, Manda was an outsider in most situations even though he is fully Malagasy. At the research station, he worked with me as a researcher, but there was a social divide between the *vazaha* researchers and the Malagasy researchers. There was also a divide between the Malagasy field technicians and the Malagasy researchers, as the researchers were more adept in English and stayed in the same quarters as the *vazaha*. When Manda was with the other Malagasy researchers, he was considered an insider, but in all other situations at the research stations he was an outsider mainly because he was not from the local area.

Once we set out on our first expedition, Manda was the most extreme outsider, second only to me, because the rest of my team had worked with the rural communities before, so they were familiar with each other. But Manda was a stranger. He was also educated in Tana, which holds its own degree of contextual discrimination for many rural people. In situations where my team wanted something but was too afraid to ask me, Manda automatically became an insider, a trustworthy companion who could campaign for them. As time went on, Manda developed a more trusting relationship with the team, but in many respects, he was still an outsider, especially in

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<sup>13</sup> Morris et al., 2.

<sup>14</sup> Kusow, “Beyond Indigenous Authenticity,” 592.

relation to the rural communities. When I asked for coveted information from Manda, that I instructed him to tell me as a condition of his employment, my team was shocked that Manda would go against his Malagasy roots and betray his friends. In that moment of disloyalty, his previous status as outsider was retroactively repealed, essentially designating him as an insider from the time of his arrival up until that very moment.

There were moments, especially towards the end, when my team brought me closer to their homes and themselves. However, at the end of day, not only was I a *vazaha*, but I was also their boss, which added a power dynamic to solidify my outsider status.<sup>15</sup> It became emotionally difficult to comprehend my role as an outsider only when confronted with everything that went on in front my eyes, but without my knowledge of it happening. For example, I immediately began learning Malagasy when I arrived and my team was supportive of this, but in the field, they switched to the local dialect, Tanala, to purposely make sure I would have no knowledge of their conversations. I was unaware of this until halfway through my trip, but, again, I was the outsider, so I was not supposed to know at all. The changing role of insider to outsider took more of an emotional toll on my assistant. He was just doing the right thing; he was being a dutiful employee, but apparently, in that situation, doing the right thing meant being a disloyal Malagasy. It would be counterproductive to any fieldwork to “see insider/outsider identities as predetermined roles [instead they should be seen] as a result of the nature of the [...] topic under investigation”.<sup>16</sup>

## CONSERVATION CHALLENGES

Conservation initiatives around the world tend to rely on the protection of natural resources as opposed to sustainable co-living arrangements with humans because, after all, it is humans who

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<sup>15</sup> Kwame, “Reflexivity and the Insider/Outsider Discourse in Indigenous Research: My Personal Experiences.”

<sup>16</sup> Kusow, “Beyond Indigenous Authenticity,” 598.

are responsible for the destruction. This ideology led to the creation of national parks that accommodate human visitors, rather than inhabitants. These national parks are wonderful concepts that have benefited the natural wildlife, but at a cost to the people that originally lived inside of these protected areas and used the resources to survive. In the case of Ranomafana National Park, the indigenous people who once used the forest's resources are now forever banned from taking anything—although this does not stop everyone. In her beginning conservation journeys to Madagascar, Alison Jolly, posed a question at an international conference about these parks: who benefits and who pays?<sup>17</sup> The country's economy benefits, as jobs are created and revenue from tourism is collected, however, the people that lived in or near the now protected area, and relied on its resources for survival, receive very little from this top-down conservation approach.

Ranomafana National Park (RNP) employs over 55 tour guides in addition to other administrative positions and Centre ValBio employs over 50 field technicians in addition to many other administrative and maintenance positions. Over 98% of these positions are filled by Malagasy people.<sup>18</sup> The creation of RNP was an absolute success for Madagascar and the town of Ranomafana, but top-down approaches like these do very little to uplift the remote communities. Consider the people of Mangevo, who are a six-hour hike from the main road. Some of the community members are employed occasionally as porters or to help with forest navigation by CVB or foreigners. Otherwise, the community as a whole does not benefit from the success of the park. Unfortunately, they do feel the hurdles. They experience the financial and physical burden of having to travel to a faraway village, then to a faraway town, only to pay for a permit they cannot afford to cut down trees in their own backyard.<sup>19</sup> They feel the shame of committing a crime against the forest because they need to feed their growing households.

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<sup>17</sup> Jolly, Bradt, and Jolly, *Thank You, Madagascar: The Conservation Diaries of Alison Jolly*, 5.

<sup>18</sup> "Home | Centre ValBio."

<sup>19</sup> Wright, *For the Love of Lemurs: My Life in the Wilds of Madagascar*, 39.

In Alison Jolly's last book, *Thank You, Madagascar: The Conservation Diaries of Alison Jolly*, she summarized her awareness of the need for bottom-up conservation approaches even as she helped organize a top-down international aid package for Madagascar with philanthropy giants such as UNESCO, WWF, and the World Bank. She highlighted her own efforts to contribute direct-response aid and she was transparent about the reality of the situations she confronted. She recognized that a multi-million-dollar conservation aid package for Madagascar will not touch the women in the rural villages who need it most<sup>20</sup> and she recounted the extreme difficulty faced when dealing with anything in Madagascar: from its high-positioned politicians to the landscape itself. Her book of diary compilations is joyful and appreciative, but not without the sting of reality when working in conservation; as opposed to Dr. Wright, whose steadfast optimism is held up by her persistence to seek a brighter future.

Dr. Wright's book, *For the Love of Lemurs: My Life in the Wilds of Madagascar*, details the creation of RNP and the desperate need for conservation and development in Madagascar. The park was created because Dr. Wright discovered logging companies causing massive destruction to a remote area of forest that housed three rare and endangered species of lemurs: the bamboo lemurs.<sup>21</sup> Many foreign interest groups hire local people for very small amounts of money to illegally log or mine forests. In my own experience, I saw how gold mining destroyed landscapes and contaminated water sources. The process itself is also extremely labor-intensive and always regarded as a second choice for the locals if any other job is available. Creating the park created alternative jobs and stopped the foreign interest logging, but it did not solve the vast number of problems the Malagasy people face every day. Dr. Wright implemented community programs with the creation of CVB, but her main focus was the park and its lemurs. The creation of 200 jobs as a

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<sup>20</sup> Jolly, Bradt, and Jolly, *Thank You, Madagascar: The Conservation Diaries of Alison Jolly*, 125.

<sup>21</sup> Wright, *For the Love of Lemurs: My Life in the Wilds of Madagascar*, 38–39.

result of the park had the incredible ability to help 200 families but cannot bring an entire region's population out of poverty.

Researchers, primatologists, conservationists, and tourists come to Madagascar for the lemurs. They come for the cute, furry, odd-looking creatures, that are kind of like monkeys but are absolutely not monkeys, that only live on one island in the whole entire world, outside of captivity. Madagascar is home to an innumerable number of endemic species of flora and fauna, most endangered and all incredible, but it is the lemurs that bring the largest amount of interest as well as the largest amount of money. Every primatologist and scientist that conducts research in Madagascar quickly learns of its problems with infuriatingly inefficient bureaucracy and *tavy* that makes their research even more difficult than it already would be. *Tavy* is so widespread that it poses a serious threat to the existence of any type of endemic plant or animal that can be studied in any forest area in the country. Many primatologists, such as Dr. Patricia Wright and Alison Jolly, came to this wondrous island for its lemurs, but they stayed for the forests and became conservationists. I, however, did not come to Madagascar for the lemurs. In 2011, I came for the challenge, as well as the anthropology credits, and I chose to return for the forest and its people.

## NEXT STEPS

At the beginning of my journey in Madagascar in 2019, I was set on creating a foundation for a long-term community-based agroforestry project in at least six villages. As I continued, I held steadfast to this goal and collected data to directly support this project. However, after several grant rejections and reflecting on my time there I realized that I need to think smaller in some ways and larger in others. The ultimate project goal will be sustainable agroforestry, but, right now, the Malagasy people have other more urgent matters that they need help with. Working with these communities on smaller scale projects and following through on the plans we discussed will build

the kind of trust we need to take on far greater measures together. My approach is considered bottom-up conservation as opposed to much of the conservation methods implemented around the world by philanthropies and governments. Even if successful, these top-down approaches rarely reach the people who need the most support.

Madagascar's rainforest survival depends on alternative methods of economic livelihood for the local people which reduces the need to clear vast areas of the forest using *tavy*. One such alternative is agroforestry, which can be applied in a variety of ways, but simply put, it is the integration of agriculture into a setting that involves active forest management. The long-term plan for agroforestry that I would like to implement evolved from a series of discussions with people who are on the ground in Madagascar and are actively involved with reforestation, conservation, and integrated farming. The base timeline for sustainably prosperous agroforestry is seven to ten years, until all the various spices and fruit trees have reached a first harvest. The selected land plots would include a variety of native trees, fruit trees, and spices in addition to bottom crops such as cassava, corn, and different types of beans.

The native trees are the rainforest trees, the fruit trees will feed the lemurs and the people (although there is a concern for competition here), the spices could provide additional income if the farmers sell them at the market, and the subsistence crops would be used mainly to feed their families. Various kinds of spices and fruit trees grow best under shade which the native trees will eventually provide. Native trees also contribute to cloud cover, which increases rainfall. If this system of agroforestry is incorporated as a slightly tiered system on a mountain with native trees at the top, the drainage from the rainfall, that is filled with nutrients from the forested area, will fertilize the subsistence crops at the bottom. Theoretically, this could absolutely work, but practically, waiting seven to ten years only to begin reaping full benefits from a project that takes away the land people need to ensure their survival to the next year, its success is unlikely.



There are many ongoing reforestation initiatives in Ranomafana, most of which are unsuccessful because of the fragility of reforestation efforts in a cleared landscape, which is explained in one of my reflections, and if the local people need to use the land they will cut and burn as they see fit. On my first trip to Madagascar, I was told a Malagasy proverb that translates to “It is better to eat today and die tomorrow.”<sup>22</sup> I think of this every time I hear of setbacks in conservation efforts. The rural communities are just trying to survive to the next day, or the next year, in the best way they know how. As much as I worry about their future, ten or twenty years from now, it is in their best interest for conservation and development efforts to focus on the issues they worry about today. One of these issues is the infestation of fleas in the remote areas. This is not only a health concern, but also a conservation issue because if they are not living in their village houses, then they are taking wood from the forest to build new houses far away from the fleas. In rare cases the *ampanjaka* may choose to completely abandon the current infested village and build an entirely new one, which requires a lot of forest wood.

Another issue that came up frequently was food insecurity, specifically that they continually run out of rice months before the next harvest. Malagasy people correlate the lack of rice at a meal to starvation even if they are not actually starving. The cultural significance of rice in Madagascar manifests as an unwavering devotion that attributes to their existence as people. They begrudgingly eat cassava when they run out of rice and I willingly trade my plate rice for their plate of sugared cassava; they think I am crazy, but I am *vazaha*, so I am allowed to be crazy. When it comes to food insecurity, I am more concerned with their nutrition levels as I did not encounter anyone who was starving, but I did encounter a lot of malnutrition. However, if they feel their main issue is a lack of rice then that is what I need to focus on.

There are several reasons why they exhaust their supply of rice prior to the next harvest,

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<sup>22</sup> Alessi, “Evaluating Community Reforestation and Conservation Education Sponsored by Centre ValBio.”

such as crop raiding by animals and poor storage systems, but the main reason given was poor harvests. I wish to avoid getting involved with rice cultivation because improvements to the traditional way have been previously unsuccessful in the region, but if this is what the people want then I will work with experts to bring it to them. One of the lessons I learned from listening to all the village elders is that it is not up to me to tell them what they need and if I help them with their self-proclaimed immediate needs, they will be much more inclined to trust and collaborate with me going forward.

One of the larger overarching issues I encountered was the way young girls were viewed. This did not only apply in the villages. Madagascar is a more egalitarian country, especially when compared with many mainland African countries. Women are allowed to own and inherit land. There is nothing legally or culturally barring them from attending meetings or going to work or school. Education is valued in Madagascar, and in poorer communities it is more common for boys to be taken from school to work for the family while the girls can continue their education. However, patriarchy runs deep and there is no escaping it, even in the far wilds of Madagascar. Young unmarried girls are extremely vulnerable, especially if they are without male protectors who value their futures. I will not ignore this violence because it is unimportant to the people I work with.

In the remote villages, it is common for older male relatives to trade sex with young girls for money or work opportunities from an outside party. There are prostitutes in Madagascar, but these girls are not considered prostitutes even though they are being pimped out. It is also common for young girls to be molested or raped by other members of their community and it is only considered a serious problem if the older male relatives of the girl are upset by it. Unmarried female teachers who are sent to remote villages by the government are especially vulnerable to this kind of violence. During the four months I spent in Madagascar, I spent most of my time with

Malagasy men and there were only two who also thought that this violence against unmarried young girls was heinous, heartbreaking, and completely unacceptable. Usually, I spoke about this to men, and even some women, the responses were either that this is just what happens in Madagascar or jokes about how you can get away with it if the girl is poor.

Every day I spent in the villages I saw breastfeeding girls that were maybe 15-years old with babies of their own and no one around to claim paternity. For context, it is illegal on national level to have sex with someone under 18 years of age, but rural communities do not follow the national laws in other regards, so I should not expect this to be different. It is these young girls in the rural communities who must raise these children without any help from the biological father. In cases where unintended pregnancies happen, the girls usually stop attending school and, if they are lucky, they will be married to a man who can provide for them and their child. Otherwise, it is the girl's relatives who help raise and provide for the child. There are also instances where young girls are married off early because a family is unable to provide for all their children, but this is usually done because it is in the best interest of the daughter rather than out of neglect.

All the information I gathered on this topic was from my personal experience in the villages and many conversations I had with various people during the four months I was in the country. Approaching this topic as an environmental conservationist in the rural communities will be very challenging. Melinda Gates has done a lot of on the ground community work in isolated areas in foreign countries, and her advice for people in development is to start with the people who are the most vulnerable, the most isolated and who hold the least amount of power.<sup>23</sup> I hope to approach this from a professional lens rather than a cultural one to avoid overwhelming the rural communities with change. I want to add women to my team, including when we hire the local guides. The women know the forest just as well as the men and they can do the work just the same.

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<sup>23</sup> Gates, *The Moment of Lift: How Empowering Women Changes the World*.

My concern is making sure they are safe when they are working with me because, as it was proven before, if my guides do not want me to know something, I may never find out about it.

## CONCLUSION

Since 1990, it is estimated that 420 million hectares of forest around the world have been lost through conversion to other land uses, and agricultural expansion continues to be the main driver of deforestation.<sup>24</sup> Madagascar's main cause of deforestation is *tavy* farming and its main cause of water pollution is the irrigation of rice paddies. Over 90% of Madagascar original eastern rainforest cover is gone.<sup>25</sup> Rainforest cannot automatically regenerate, we need rainforest to grow more rainforest because it is a closed nutrient cycling system. There is a pervasive ideology that persists in the western world where people think nature will automatically regenerate without human presence, but this is not true for decimated rainforests. "Of the people living in extreme poverty, over 90 percent are dependent on forests for at least part of their livelihoods."<sup>26</sup>

Rainforests also support the world's water cycle by adding water to the atmosphere through transpiration.<sup>27</sup> We need to start caring for our forests like our lives depend on it because they do.

Working in conservation is difficult and working in foreign countries is complicated, and together, it is extra challenging. The connections I made are the reason I want to return. In my reflections I described several of the connections I made with people, but I also connected with the forest itself. Mountainous landscape pushed me to my limits, but all I wanted to do was keep moving forward. Looking out on a certain spot on the rooftop at CVB is an uninterrupted sea of green treetops, old growth rainforest treetops, and it is inspiring to say the least. Whenever I wanted to give up, I went onto the rooftop to look at the forest and remind myself of why I was

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<sup>24</sup> "The State of the World's Forests 2020."

<sup>25</sup> "Eastern Madagascar | Ecoregions | WWF."

<sup>26</sup> "The State of the World's Forests 2020."

<sup>27</sup> "Why Are Rainforests Important?"

there. I know that I cannot save the world's rainforest, but if I can do some good in a few of the villages in Ranomafana, I will be okay with that.

Collaborating with people is always challenging. There may be differences in our language, cultures, lifestyles, economic status, education level, nationality and more, but people are the same everywhere. There are people I know I can trust in Madagascar and there are people I learned never to trust again. Sometimes people will do the wrong thing when given the opportunity, and other times those same people will do the right thing when given a second chance. Doing the right thing will not necessarily make the people I need to work with like me but showing up even if I have nothing for them will take me very far. Attending to their immediate needs is a much better approach to community-based conservation than creating a plan of my own and asking them to lead it. Navigating personal politics in a foreign land as an outsider meant that I was unsure of what to do most of the time. Leading a team, I had only just met, into places I have never been caused me to doubt my decisions and constantly think about the consequences of my actions. However, reflecting on my journey in Madagascar has brought me quite a lot of clarity that I can use to refocus my actions in the future.

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