

QUESTION SET #1

1. First Impressions:

- **What are your initial impressions of your host organization/work site?**
- **Provide a brief overview and thoughts about the kind of work you've started doing.**
- **How does the work match your expectations, how does it match your goals?**

I am really impressed with the Smithsonian Tropical Research Institute (STRI). Everyone I have met from STRI, people I work with, live with, or eat lunch with, have been so kind. Most people at STRI speak at least some English and are very patient with me when I struggle with my Spanish. I am also impressed with the scope and quality of research that goes on at STRI. Panama is such an amazing place to be a biologist and I feel very fortunate to be a part of the institute.

At the Tupper Center, everyone is like a big family and I look forward to lunch with people everyday. The Tupper campus is also very beautiful, better than I imagined. On Tuesdays there are seminars that many of my friends from the STRI dorms attend. After the talk, everyone enjoys drinks and food and sometimes we go out to dinner afterward. The dorms are very nice and are close to the Tupper Center. They are also at the base of Cerro Ancon, a really nice hike that hosts a lot of wildlife. Overall, I really enjoyed living and working there in Panama City.

I worked here for the first couple of weeks of my internship. The work largely involved me sorting and organizing data so that it was ready for Dr. Batterman and I to use when we began our fieldwork. This required me to spend all my time working on the computer. I finished the work earlier than they thought I would, so I spent a lot of time researching nitrogen fixation and tropical forest succession, so I could understand the research I was helping with.

I enjoyed the work and I think it helped me gain some valuable new skills on excel. I wished there was a little more for me to do because I spent a lot of time just reading scientific papers and books. I will be back working at the Tupper Center at the end of my internship and I will likely be working with data again. This time, though, I will be able to analyze the data to answer a question of my own. This will allow me to have my own small project to work on while I'm here and will let me learn more about statistics. I am very excited for this and I think it will deepen my knowledge of ecology, prepare me for taking statistics next term, and will give me more responsibility within the overall project.

A few days ago we started fieldwork. I moved from Panama City to the tiny (but not quiet) town of El Giral. The field station house is *very* rustic. I spent two nights there, so far, and I am still adjusting to living there. It is so different from how I live at home or in the city, but it is more reflective of how most Panamanians live. There's no wifi/good reception, the water isn't always running, it's loud most of the time with either the neighbors' music or the roosters, there's not much to do when you're not working, and there is even a bat that lives in and flies around my bedroom. I live there with three German guys who I really like and make living in the field station easier. They will move out in a couple of weeks, which means I will likely be living there alone. This makes me feel nervous, but I will cross that bridge when I get to it.

The fieldwork here is very hard but amazing. Dr. Batteman and I go out into Agua Salud's secondary forest plots in the mornings where we have to hike through the dense forest carrying heavy backpacks in the Panamanian heat. We search for the trees we want to study and collect soil cores from around their roots. This involves hammering PVC/metal tubes into the ground to collect the

soil and then carrying all of the samples around, along with our equipment, for the rest of the day. When we get back to the field house, we must sort through all the soil to find tiny nodules on the tree roots where bacteria live and fix nitrogen. The work is really physically demanding, but it's so rewarding. We are producing data that few people are willing to go out and collect. The research is interesting and important, as it can help us understand how forests can help battle climate change by sequestering carbon from the atmosphere. We also see so many amazing plants, animals, and insects when we're in the field. I came to Panama to experience fieldwork and tropical biodiversity and that is exactly what I am doing. Overall, I am very happy with the work.

2. What stood out to you the most regarding your arrival?

In terms of the people and culture, it has really stood out to me how kind and open so many people are here. As I'll talk about later, I was worried about not making good friends while I was here, but I have met so many cool people. It feels almost easier to make friends here than back in the states. I feel that people are generally very nice at home in Oregon, but people here seem more open to moving past general pleasantries. Like in the states, you go to a café or a store and you may exchange small talk with people, but most of the time it ends there. Here, I've made friends while just wandering around the city. I feel like people from around Latin America want to actually talk more and get to know each other in a way that's different than back home. Lunchtime at STRI is an important time to enjoy taking a break from work to just talk with one another. In Panama, our lunch typically lasts an hour. At home, whether I'm in school or working, I take a fast lunch and I often work while I eat and it's not typically a time for me to be social. If I want to sit down with someone to just take a break and talk over food or drinks, we have to schedule that meeting in advance.

Also, the crazy driving has stood out. People can basically do whatever they want on the road. There is also more street harassment from men in cars here than in the States, which really bothered me when I first got to Panama. Now that I feel more comfortable here, I've learned how to deal with it better and not let it catch me so off-guard.

3. What was your greatest anxiety prior to departing and how do you feel about that now that you have arrived?

I was nervous about transportation and making friends. I was worried that I'd have a difficult time getting around the city, especially because I don't speak Spanish well. I also was feeling anxious that I wouldn't make any friends and that if I wanted to go somewhere I'd have to go by myself. I pictured myself just working and staying in my apartment, unable to explore Panama because I was alone.

Thankfully, this has not been my experience. I made friends right away that showed me how to get around the city and I am now able to do that on my own, when need be. My friends are also interested in exploring more of Panama and Panama City and we have been able to experience many new things together. Typically, at least one person I am with can Spanish and helps us to get around. I am also grateful that my friends push me to learn and practice my own Spanish.

QUESTION SET #2

1. Professional Goals:

- **How are things going at work now that you have settled in for a bit?**

Sydney Turner
STRI — Panama
Final Report

- **How does this work align with your professional goals that you set for yourself?**
- **What would you like to achieve in the next half of your internship?**

My work has been going very well. I have spent the last two weeks working in the field and it has been both challenging and rewarding. We have really gotten into a rhythm with collecting and analyzing soil cores and I have been gaining confidence in my role within the team.

I decided to come to STRI because I wanted an opportunity to not only work in the field, but to do so in a difficult environment. I set two professional goals for myself pertaining to fieldwork. The first was to finish the internship with a meaningful understanding of the ecological methods and analysis used in my assigned research project. I defined “meaningful understanding” as being able to take the research techniques I learn in Panama and apply them to future projects. I feel that I have definitely achieved this goal in regards to our field methods. Not only is the purpose of the methods clear to me, but I can also imagine other questions you could ask and answer using the soil cores we collect. We haven’t begun to analyze any of this data yet, so I will continue to pursue this goal in the second half of my internship. I will actually have the opportunity to complete my own small independent project. Using the data we’ve been collecting, I will be able to ask my own question and try to answer it through my own data analysis. This should be a good way for me to take some ownership within the larger project and learn more about statistics. Completing this smaller project will be my main goal for the last three weeks of my internship.

My second professional goal was to push myself to be able to manage working in potentially unfavorable conditions. There is no doubt that I have pushed myself to work harder physically than I ever have before. The fieldwork is really exhausting. We collect eight to twelve soil cores at each tree by hammering PVC pipes into the ground. We are constantly hiking up and down steep and muddy slopes through thick understory while carrying large our backpacks filled with the soil samples. Most days it is hot and humid and it will rain in the afternoon. There are also some mean biting ants. Once we recover by showering and eating lunch, we must sit for hours sorting through all the samples. While the work is exhausting, it does not disappoint. I’ve found I feel proud of myself after we finish working everyday. It’s difficult, but I see that I can not only handle it, but also genuinely enjoy it.

2. Personal Goals:

- **How are things going relative to your personal goals?**
- **In which areas have you made progress and where do you still have some room to expand?**
- **What do you want to make sure you address before you leave?**

My personal goal was to give myself the freedom to have fun and embrace my time abroad. I am a very serious student and employee and sometimes that can prevent me from having time to have new experiences. I aimed to change the way I view my time when I came to Panama. My free time should be a chance to explore, not to stress about school or work. I have been able to maintain my strong work ethic throughout my internship, but I have also never had such a fun five weeks before. I specifically wanted to get outside and explore some of Panama’s ecotourism, which I have achieved through hiking (and fieldwork!) and traveling to different beaches. I have also found time to explore much of Panama City and the small town of El Giral with many new friends. I wanted to practice being focused on school/an internship, while also acknowledging that that is not the only part of life that is worth putting time into. So far, I am very happy with how I have used my time in Panama and I don’t feel like I’ve wasted one day here.

Soon I'll be living by myself in my house in El Giral and I may have to start taking days off in the middle of the week, rather than the on weekend. This will make it more difficult to find time to spend with friends and to travel. My goal is to continue to make the most of my time here and not let myself feel bored or anxious when I must begin to spend more time alone.

3. Cross-Cultural Goals:

- **How are things going relative to your cross-cultural goals?**
- **What cultural experiences have stood out to you so far?**
- **What do you want to ensure to experience before you leave?**

I set a cross-cultural goal to be able to understand and use simple everyday Spanish expressions and phrases that will allow me to meet my own daily communication needs and interact with local Panamanians. This is the goal that needs the most work. Over the last couple weeks, I have really been noticing my Spanish improve. I am able to understand more Spanish when I hear it and I have learned to form some very simple sentences and use everyday expressions. That said, I really want my Spanish to be better. I am not yet able to meet all of my own daily communication needs, like asking for directions at the bus station. I am able to do things like give directions to Uber drivers or ask someone for water, but my conversations in Spanish remain shallow and I want to gain more confidence with using the language.

When I went to this small town on the Caribbean side of Panama I ran into a performance by a group of Afro-Peruvians. It was so fun to watch, as there were people of all ages (from probably five to sixty-five) dancing and singing traditional songs together. They all wore beautiful and bright outfits and brought people in from the audience to dance. I couldn't help but smile the whole time I watched. The performance went along with some beautiful photography of people from the community.

Another time I was at a museum and had the opportunity to speak with a Guna woman. The Guna are the indigenous people of Panama and are known for their art form mola. Mola (or molas) is the handmade fabric with elaborate patterns they use to make their clothing. The woman walked me through how she makes these patterns, which involves very strategic layering of fabrics and a lot of stitching by hand. It was amazing how much time and skill goes into making one design and I really enjoyed learning more about the Guna people.

Before I leave I would like to engage more with the food and music of Panama/Latin America. For having been in Panama for close to five weeks, I haven't eaten much true Panamanian food, outside of the STRI cafeteria. I would also like to learn how to make a dish from here that I can share with people back home. Also, all my friends from Latin America have told me about how great the dancing is here. They have attempted to teach me a few styles and I really want to go out dancing before I leave.

QUESTION SET #3

1. Describe a day in your life:

- **What is your work schedule like?**
- **Describe your work. What activities and tasks are you doing day-to-day?**
- **What do you do after work?**
- **How do you balance your time between work and exploring life outside of work?**

Sydney Turner
STRI — Panama
Final Report

I go back and forth between a couple different daily routines, depending on if I'm working in the field or the city.

When I'm living and working in the field house in El Giral, I start my day around 6:45 am. I wake up and eat a quick breakfast while packing my field backpack. By 7:30 am, Dr. Batterman and I start our drive to the field site. We must then hike and find our first set of plots. Once we locate a tree we want to sample, we take measurements on features like its coordinates within the plot and its crown size. Then we use hammers and PVC pipes to take twelve soil samples from around the tree. Once we visit all the trees, we must hike out all the soil in our backpacks and return to the field house. We shower and eat lunch before returning to work. Between 2:00 pm and 3:00 pm, we start to sort through all the soil samples we took that day. We are trying to collect nodules from the tree roots to measure the nitrogen-fixing activity of the trees. We do this until at least 6:30 pm, when I'll break to eat dinner and spend time with my roommates. Depending on how quickly we worked in the afternoon, I may continue to look through soil for another hour or two before bed.

When I'm living in the city and working at the Tupper Center, I start work around 9:00 am and end at 5:00 pm. My work here has varied over my internship, but I have mostly worked on organizing data on excel to prepare for our fieldwork. I would also read journal articles related to my project. Between 12:00 pm and 1:00 pm, I would take a break to eat lunch at the Tupper cafeteria with other STRI scientists/staff. If it's a Tuesday, I end work at 4:00 pm to attend the seminar, which is always followed by food and drinks. After work, I come home and maybe I'll go to Albrook mall to buy groceries. I'll make dinner, work on my Spanish, chat with friends from La Jaula (the nickname for the STRI's Ancon dorms), call home, and relax.

I feel I have achieved a very nice balance between work and personal time to explore. I do something different and new every Saturday and Sunday. I've found friends in both my roommates in El Giral and in the other residents of La Jaula. Regardless of where I'm living at the time, if it's the weekend, I am likely to be traveling to the beach, exploring Panama City, or enjoying a hike with friends. Even within the small town of El Giral, there's a great waterfall to visit and hiking on the ridges near our field sites. On Friday or Saturday night, if I'm in the city, we normally go out to eat and dance in Casco Viejo.

2. Housing:

- **What is your living situation like?**
- **Knowing what you know now, are there other options you would have chosen instead?**
- **If you can provide some resources for future interns, that would be most helpful.**

Right now, I live primarily in Agua Salud's field house in the small town of El Giral. I used to live with three roommates, but I have been temporarily living there alone. Dr. Batterman will be moving into the same house as me as we start to finish up our field work.

As I've talked about before, the house is *very* rustic. There's not always running water, no wifi, no air conditioning, loud neighbors (including roosters), and there's a mouse/bat/cockroach problem. That said, I have adjusted to living in the house and I feel more comfortable there now than I did initially. I do, however, enjoy a break from El Giral when I have time in the city.

When in the city, I stay at either a hostel or at La Jaula. I had never stayed in a hostel before I came to Panama and I wasn't sure what to expect, but I have found a couple reliable hostels that I know I

Sydney Turner
STRI — Panama
Final Report

can stay at comfortably when need be. La Jaula is STRI's apartment building or dorm near the Tupper Center in Panama City. I really enjoy being in La Jaula. Although its name translates to "The Cage," the rooms are very comfortable and there's a strong sense of community between all of the residents. It's also in a relatively safe area, close to the bus stop and fruit market, and provides easy commutes to most STRI facilities, including BCI.

I also lived on BCI (Barro Colorado Island) for a week and found it similarly very comfortable. It may be a little difficult to live for a long period of time on an island, but you could coordinate time to get off the island to visit the city or other parts of Panama.

I am very happy with where I am living. This works well for me since there aren't many alternative options to living, especially in the field. The only alternative housing I can think of would be if you rented a non-STRI apartment in Panama City, although I wouldn't recommend this unless you couldn't get housing in La Jaula. Make sure to email about housing early, as La Jaula can fill up quickly. The housing organizers can be slow to respond to emails, so email them early, even before you finish your visit request to STRI.

3. Finances:

- **How is your budget working out for you?**
- **Are you spending more or less than what you expected?**
- **How much do you typically spend on food, recreation, travel, etc?**
- **What would you do differently knowing what you know now?**

So far I feel my budget is working out well for me. To meet one of Panama's entry requirements, I took out \$500 in cash before I arrived. I made sure to have only smaller bills (\$5, \$10, and \$20), which has been super useful and I haven't had to worry about using ATMs since I've been here. A lot of the time cash is more convenient than using a card, so I try to pay with my credit card when I can to save on my cash.

I typically spend \$25 to \$45 on groceries each week, depending on where I'm living. When I'm working at Tupper, I buy lunch everyday, which adds up to another \$30 (\$4.50 to \$6.00 a plate) a week for food. While it would be cheaper to pack a lunch, I really enjoy the convenience of buying a lunch and it ends up being my biggest meal of the day. This last week I've been spending more money than normal because I've been going out to dinner and drinks with friends for different special occasions. We typically go to Casco Viejo, which is a more expensive part of the city, but worth it for the good food and environment.

Transportation here is much cheaper than in the states. For example, I can get back and fourth from El Giral and the Caribbean for about \$7. When I'm in the city, I rely on the city bus (\$0.25 a ride) and Uber (\$2.50-\$3.00 a ride). Uber or taxis rides can add up, but it worth it to avoid having to walk or take the bus in potentially unsafe times/areas. Recreation can be really cheap as well. It typically doesn't cost much or anything to hike or swim once you've made it to your destination. You may have to pay a couple dollars for a park pass or a boat ride, but it can also be free. In the city, it can vary. For example, I've paid anywhere from \$0.75 to \$11 to go to different museums in the city. (I've found I can get discounts at many places by having my Oregon State student ID with me!)

During the week, I don't spend much money other than buying groceries and phone data (when I'm in El Giral without wifi). I normally have to pay for at least one night at a hostel a week, which is only \$15. I spend the most money on the weekend, but with relatively cheap transportation, it's

Sydney Turner
STRI — Panama
Final Report

easy to plan inexpensive trips throughout Panama. Most of my money goes to buying food out. I'm spending about what I expected to. The STRI housing rent (\$220) is about half the cost of my rent in Corvallis, so I'm feeling like I'm saving money in this area.

I feel satisfied with how I've been spending money in Panama. I wish I could've saved some money when planning for my trip. I just did not know what to expect when I got here, so I think I over prepared and over packed, despite how hard I tried not to. I feel I could've bought more items in Panama as I found I needed them instead of buying them all before hand. For example, I am not really using all the bug spray or the laptop lock or the bottles of hand sanitizer I bought and crammed into my bags.

4. Travel and Transportation:

- **How do you typically get around town and to work? Are you satisfied with that choice?**
- **Would you recommend other options?**
- **Do you have time to explore the surrounding area on time off? How do you manage that?**
- **Where do you recommend exploring?**

In El Giral, I get to work with Dr. Batterman who has a STRI truck. I got around the town with my roommates, who also had a truck. We can get a taxi to nearby bus stops to either catch a ride to the city or other parts of Panama, like the Caribbean.

When in the city I walk to work. Otherwise, I take the bus, when convenient, or Uber. When you're in a group, it's actually easy to walk to some of our favorite location in Panama City from La Jaula. It's also easy to get a bus from Albrook mall to go anywhere you want in Panama. Overall, I'm satisfied with the transportation. I'm used to having my own car at home, so sometimes I feel frustrated that I can't just take my own car and drive somewhere whenever I want.

I know past interns here have said they liked to use taxis. This is how I expected to get around, but when I got here almost everyone recommended Uber. It may cost a little more than taxi, but taxi drivers can rip you off when you're not a local and they may expect you to help navigate, which is difficult when you're in a new city and you barely speak the language. Taxi drivers also have a reputation for not always being polite to women. I would also recommend using the metro. While I haven't actually had a reason to use it yet, I've heard from friends it's convenient, nicer than the buses, and still cheap.

I have practically my whole weekend open to exploring. I made sure to have a conversation with my supervisors when I first arrived about what was expected of me in terms of work hours. The nature of my work means that I can only work when in the field or in Tupper, so I don't have extra work that follows me home and into my personal time. Our field schedule changes frequently and requires me to be flexible. Sometime I'll have to work in the field on a weekend, but then I normally am given a weekday off.

In the city, I recommend visiting Casco Viejo. It's a really beautiful and old part of town. It has great restaurants and museums and is very safe. Cerro Ancon is a nice piece of the rainforest in the middle of the city that hosts good views and wildlife. Amador is also a fun area. You can start at the Biomuseo and then take a nice walk on the causeway out to the cute island of Naos. I haven't been yet, but I heard the Canal museum and nearby locks are a must-see.

Sydney Turner
STRI — Panama
Final Report

Out of the city, I recommend going to the beach. Portobello national park/beach has been my favorite so far. It's on the Caribbean and offers beautiful beaches with snorkeling. There are also these amazing ruins from when the Spanish used the town as port to ship out gold from Central America. The Spanish just left behind all their cannons there that they once used to fend off pirates. There is also a beach where the Rio Mar comes into the Pacific. It is beautiful and warm with some of the best beach combing I've ever seen. I think it is also worth going to Gamboa, which is just north of Panama City and hosts many STRI researchers. You're likely to see some cool wildlife there. If you're living in El Giral, you have to visit the local waterfalls.

If you can afford it, I've heard Bocas del Toro and San Blas islands are just amazing. Both are a series of islands in the Caribbean. I've also heard the village Boquete hosts some amazing hiking.

QUESTION SET #4

1. Professional Learning:

- **How well did your coursework prepare you for your internship? What knowledge of your field has been most important so far?**
- **What parts of your work have you enjoyed the most? Is there any part of your work that you find particularly challenging?**
- **Describe a professional accomplishment that you are proud of- be specific.**

I feel that the coursework I have taken has prepared me well for my internship. I am about halfway to receiving my bachelors in biology, so there are still classes I will take in the future that I'm sure would've been useful to have already taken when doing this internship, like statistics.

The most helpful class that I have taken was BI371: Ecological Methods. This class does a great job to expose you to different ways that research is conducted in the field and teaches you what makes for a good ecological method, like the importance of taking samples randomly and avoiding pseudoreplication. It also exposes you to using some statistics and the program *R*. These are all things that I have incorporated into my understanding of my project at STRI and my work on that project. The class also gives you time to actually be outside working in the field and using specific equipment, which can be a good preview for what someone's work may look like at STRI.

The BI370: Ecology course has also been very useful in my internship. This course teaches you many of the principal and emerging ideas within ecology. The background this class gave me in biogeochemistry/nutrient cycling, ecological succession, and climate change has been crucial for me, as these are subjects my project is addressing. This class is also helpful when you are trying to understand a colleague's projects or when you are just chatting about biology/ecology, as they are often the topic of conversation with friends and colleagues at STRI.

Both my favorite part of work and the most challenging part of work are being in the field. Working in the field means that I get to spend most of my working days hiking through tropical forests of different successional stages. Everyday I'm in the field I learn something new about the nitrogen fixing trees we are studying or I see a new animal/plant and often I can observe something interesting about their behavior or physiology. For example, noticing how certain ants have learned to line up in rows to create paths for other ants to follow or noticing the sharp spines on many of the plants that are likely remnants of a changing ecosystem that was once filled with large herbivores. In this way, my observational skills as an ecologist have grow and I find I can teach myself about an ecosystem just by spending time there and being observant.

Sydney Turner
STRI — Panama
Final Report

The actual work involved in being in the field is very challenging. The work requires a lot of hiking on steep and muddy plots with thick understory growth. We must collect many soil samples by hammering tubes into the ground. The collected soil must be carried out of the plots in our backpacks, which increases the difficulty of navigating the plots as the day progresses. It is humid and either very hot or pouring rain. Our lab work then continues when we get back to the field house, which can be, at times, tedious. The living conditions of the field house can be very taxing, as well. For example, the last week and half of field work, we barely had running water.

I am most proud of myself for completing days in the field that were especially tough. For example, normally we'll be able to sample 9 trees in field in a day in Agua Salud. We had one day where we really had to push ourselves to sample 15 trees. We first had to hike out around 40 minutes to a site where we sampled 7 trees. We then carried all the soil back to the car and headed out a second time to another plot around 15 to 20 minutes away, where we completed 8 more trees. This day was exhausting and came at the end of an already long work week. I don't think I would have been able to complete such a difficult day of work toward the beginning of my internship. I feel that I really grew in my strength and endurance when it comes to field work and I am proud of myself for that.

After I finish entering all the data from the field, I will be able to do my own data analysis to test a few hypothesis we (my supervisor and I) have developed on where on a tree's root system is it most likely to be fixing nitrogen. This will require me to use statistics/ *R* and will let me take some ownership within the project. While I have not begun my data analysis yet, I think this smaller project will be something I can be proud of after I finish my internship.

2. Cross Cultural Learning: • Describe an event where you misunderstood something due to cultural differences. • What did you do? What would you do next time?

I still don't completely understand what happened in this interaction, but I think cultural differences came into play. So, at the field station, there are a few houses full of people who work on different projects for Agua Salud. A Peruvian woman I am friends with asked if I, and my German roommates, would like to join her on this beach trip. I agreed to go, but my roommates had to work. Another Panamanian guy and girl also agreed to go. I had become especially good friends with one of my roommates and he was also friends with the two other girls who were going on the trip. He found a way to get off work for the day so he could join all of us at the beach. Late on the night before we were going to leave, my roommate told me that he was no longer invited to go to the beach. I was disappointed he wasn't going to go and I didn't understand why, since he was also friends with the people planning the trip. One of the girls came to our house that night and tried to explain to me that it was something cultural and the Panamanian guy who was going to drive us all didn't want another guy to also be going on the trip. It struck me as an odd explanation and made me, and the girl, feel weird about going on the beach trip. We decided to not go.

I am not really sure what we could've done differently in this situation. I don't totally understand why the guy had felt like this, it seemed to me to be very immature. I also don't know if I understood the whole picture, as I never heard his side of the story. The girl tried to explain to me it was a pride thing and I know there's more of a "macho" culture here. I am also not sure if it actually was a cultural thing, or more of a personality thing with this one person. Maybe next time I would try to better understand why someone acted the way they did, but this became an uncomfortable situation and I don't know how I would've gone about that in this case.

3. Personal Growth: • What are the most important things you have learned about yourself

Sydney Turner
STRI — Panama
Final Report

thus far through this experience? • What has been the greatest personal challenge? What has been the greatest reward?

I have learned that I am a little braver than I thought I was. People I met here are often impressed that, at only 20, I was willing to travel by myself to another country where I'd never been and don't speak the native language and take on some difficult work at this institute. Looking back, that wasn't an easy thing to do and I'll say that I am impressed with myself, as well. I found I can be brave in smaller ways, too. For example, I historically do not handle spiders well. Even if they are really small, I can't be the one to catch and release one when I find it in my house. One of my biggest anxieties about coming to Panama was, honestly, how I was going to handle the bugs. I wasn't sure how I'd react if I saw one in my new house or in the field. Since I've been here, I've had many encounters with big bugs, even a tarantula bigger than my hand. I have actually managed to stay calm in these situations and even began to enjoy seeing the new insects, in the right conditions. While here, I learned that it was actually the snakes and bullet ants that you need to be afraid of while in the field. Sometime, I would feel anxious about getting bit/stung by something and I had to tell myself to just keep working and continue to be careful. I love the field work, but it can feel very intimidating at times and I'm proud of myself for working through my anxieties and being a little brave.

While challenging, the field work has rewarded me the most. As I mentioned, I think it has made me both physically and mentally stronger, while also allowing me to explore biology up close.

Aside from fieldwork, the most personally challenging part of being in Panama has been the loss of some of my independence. I like to be able to do things on my own. While I don't mind asking for help when I need it, I prefer to be able to do things by myself and on my own terms. Here, it can be difficult to move around alone. There are areas where you shouldn't walk by yourself at night, or even the day, so sometimes you can't go to the grocery store because other people aren't around to go with. To get to the store you have to also depend on buses and ubers and it makes me miss being able to just drive myself where I need to go. With my limited Spanish, I often have to ask people to help me with communication and solving certain problems and I don't like to have to depend on other people as often as I do here. I am very appreciative of all the friends I have made here who are willing to help me when I need it, but sometimes people start to assume I need help all of the time and it makes me feel frustrated and eager to be home.

QUESTION SET #5

**1. Professional: Have you learned about any new possibilities for career paths?
• Have you done any informational interviews (formal or informal) to learn about the field?**

I have done quite a few informal interviews with graduate students and staff scientists about their research and what they did to get to that stage of their education or career. It was interesting to talk to other students in different stages of their careers from all over North America and Europe. It gave me some perspective on how the style of education, opportunities for funding, and positions within academia can vary between countries.

While I haven't learned of any brand-new career paths, the conversations I had made me consider staying in academia more. Before, I was feeling pretty sure that I wanted to go for a Master's and then try to stay in research by working at a non-profit or government organization. Now, I'm contemplating what type of work I could pursue with a PhD, like becoming a professor. Everyone has told me that it's a good idea to take a year off of school after you finish your

Sydney Turner
STRI — Panama
Final Report

Bachelor's to work more in your field and have time to consider/apply to different graduate programs. I'm feeling less sure, now, of what I want to do after this year than when I started my internship, but I think that's a good thing. While I never ruled out getting a PhD before I came to Panama, I did feel intimidated by it and was letting some self-doubt push me towards a Master's. Now that I have more experience in my field and have talked with so many other scientists, I feel that I've gain some confidence in my abilities as an ecologist and I feel more open to considering other career paths for myself.

My main supervisor, Dr. Batterman, was especially open to discussing career paths with me. We discussed her educational background, the types of experiences she had going into graduate school, and different job positions she's held since completing her Bachelor's and PhD. We also discussed how competitive it is to land a job as a professor, how that job can vary by country, and what the job demands of a person. She was always telling me about different potential advisors and interesting research projects she knew of and I think she can serve as a good resource for me as I begin to make more decisions about my future plans.

2. Cross Cultural: Looking back at your pre-departure journal or notes, how have your impressions of the host culture changed?

• What is the most frustrating aspect of your host culture? What is the most rewarding aspect?

Before I came to Panama, I had a pretty basic understanding of the culture. For example, I knew that family was really important and approached differently than in the States, I had heard of Latin American Time, and I knew to expect more stray animals in the streets and houses with bars on the windows.

One thing I was nervous about when first coming to Panama was the potential for crime, like someone in the street trying to steal my purse. Before I left, I tried to remind myself that there are many places in the States where you have to be similarly as careful as you do in Panama. I knew that it's just part of being in a city or traveling and that most people I'd meet would be friendly. I think I was so nervous about this because a lot of what you go over in orientations of different kinds are safety and that became what I thought about the most before leaving. I feel so much more relaxed in my host country now than I did initially, although I am still very careful with myself and my belongings. When I am traveling somewhere new, people often will do small things to help me without expecting anything in return, like translating the cost of a bus ticket or pointing me in the direction of a local hike.

I see now that Panama is a very small but very proud country. In Novemeber, especially, you can feel this. There are like four or five holidays relating to Panama's different independence days from various other countries. The president even declared an impromptu holiday when Panama qualified for the world cup for the first time ever. People's love for their country also comes across in the way they talk about the canal or the natural beauty of Panama. I feel that Panama is a resilient country and you see that in the people and I enjoy the patriotism that comes with it. I think I enjoy it because it is in contrast to my home country, where the political climate has made it difficult for me to connect to a sense of national identity or pride in my country.

The most frustrating aspect of my host culture would be that things here don't always feel as organized as they do in the States, which makes completing some everyday tasks difficult. It is especially challenging when you're limited by language, but I know Spanish speakers who also get frustrated. For example, it can be very convenient to take the bus somewhere in or outside of Panama City, when you happen to know someone who knows about the specific bus you need to take. If you don't have that resource, there's no easy way to make sense of the bus routes, where they stop, or when they come and go. The mall is the main place to go shopping, but it's absolutely

huge and it can be hard to find a map. There aren't really address in Panama, streets are poorly marked, and maps of the city aren't always correct. Sometimes Uber drivers will ask you for directions when they pick you up, often when they already have a map with directions open on their phone, and it's frustrating when you're in a part of town you don't know how to navigate. It can be difficult to walk around town since there aren't many crosswalk and people can park on the sidewalks if they want. While getting around gets easier once you've been somewhere a couple times, it can still be stressful.

The most rewarding part of Panamanian culture has been living a more relaxed life style. While hard work is very obviously valued here, work doesn't take up as much of people's lives as it does in the States. People make more time here for enjoying lunch, listening to music while relaxing on the porch with family/friends, or traveling on the weekends. When I'm home and I'm taking classes and working, most of what I do is focus on that. Things like enjoying meals and time with friends really come second for me. I have been wanting to adjust the balance of work and free time in my life back home, but it's really difficult. I feel so much healthier with my work-life balance in Panama and I hope I carry some new attitudes toward how I spend my time back with me.

3. Your Culture Curve: The period of cultural adjustment is often represented by a "W" curve with various peaks and valleys: Honeymoon (peak); Initial Culture Shock (valley); Cultural Adjustment (peak); Further Culture Shock (valley); Further Adjustment (peak); Re-entry Shock (valley).

• Outline your personal W Curve or cultural adjustments starting from when you arrived in your host country to the present-marking the highs and lows with approximate dates and descriptions of events that represent some of these phases (recognizing of course, that you are still in process of adapting to life back home).

My very first thought when I arrived in Panama (Sept. 20th) and got to my apartment in the city was "what have I done." I arrived at night, so I had no idea what it was like outside of my apartment building, I barely knew how to get to work, and I didn't know how safe the area was. When I finished my first full day at work, I wanted to get to the mall to buy food and a SIM card. I was going to try to get a taxi, but I was being harassed by a lot of men in passing cars, so I gave up and felt very lost. Thankfully, I met a roommate that night who showed me how to get to the mall and accomplish what I needed to. A day or so later, I made some more friends and we went exploring in a couple of really beautiful places in the city and I started to really like Panama. This peak lasted the first couple weeks when I was living in the city, as I was constantly exploring new parts of the country.

Once I moved to the field house (Oct. 5th), I fell into another valley. As I've described before, the living conditions in the field were really challenging, although I heard it was still a relatively nice house compared to what some people in El Giral live in. My first day in the field made me feel stressed and a little overwhelmed and I had a hard time imagining how I'd spend six weeks there. I felt relieved to go back to the city the following weekend and I worried about returning. Once I come back, though, I became better friends with my roommates and I saw how much I enjoyed the field work.

Over the next couple weeks, I was able to travel to some beautiful beaches and explore waterfalls/hikes within El Giral. At this point, I felt comfortable again with where I was living. Then my roommates moved out, which was difficult for me because I became especially good friends with one of them and I was having to adjust to living on my own. Another week later, my supervisor moved into the same field house as me, which made me relax again, as being by myself in the field house made me uneasy.

Sydney Turner
STRI — Panama
Final Report

While we worked on our field work, I also spent a lot of time moving between the field station in El Giral, different parts of the Panama City, and Barro Colorado Island. During this time, I got to explore a lot of Panama and had some really great experiences with traveling and with friends, but it was also a lot of time living out of a small backpack and not settling in one place.

By the end of our field work, I was starting to feel worn down by the living conditions and had a couple of moments where I really ached for some of the comforts of home. On Nov. 17th, I moved back to the city, which has let me rest and appreciate living in a nice apartment again.

While I'm still enjoying Panama, I have started to feel like I am ready to go home soon. This last weekend, I was able to visit a really beautiful part of the country that reminded me of how much I have loved exploring Panama and how grateful I am to be here. I am looking forward to enjoying my last couple weeks in the country, but I am also feeling excited to be home.

4. Articulating your Experience: Please write one paragraph to sum up your experience, touching on the professional, the cross-cultural and the personal. Discuss your learning, the rewards and maybe challenges of the program. You may think of this as a summary you might give in an interview, or to a fellow student who was asking you about your internship.

My internship in Panama was incredibly rewarding professionally, cross-culturally, and personally. The main objective of my internship was to gain work experience in ecology through the Smithsonian Tropical Research Institute (STRI). I was involved with the Agua Salud project and I helped to study the importance of nutrient availability in secondary forest recovery and carbon sequestration. My involvement in the project ranged from organizing plans for the field work, collecting samples, completing lab work, and finally analyzing the data. The field work was the most professionally rewarding part of my internship. I was able to learn new ecological methods and use them in challenging environmental conditions. Working in the field was very difficult, but it pushed me to grow as a scientist and I am proud of what I was able to accomplish. Field work was also rewarding as it allowed me to witness the amazing biodiversity that Panama offers first hand. Through data analysis, I was able to answer my own question within the study and gain experience with statistics. This internship has also lead me to more strongly consider pursuing a PhD in ecology, rather than a Master's. Doing this research in Panama and working at STRI allowed me to connect with other scientists from all over North America, South America, and Europe. Not only was I exposed to Panamanian culture, I was able to hear about life in countries like Peru, Columbia, Costa Rica, Germany, and the U.K., to name a few. Living in Panama required me to adjust to a new way of life, as navigating the country and living in certain housing conditions proved to be challenging. The balance between life and work in Panama is a lot more relaxed than what I am used to and I adjusted easily to this part of the culture. I was able to spend a lot of my evenings and weekends spending time with friends and traveling throughout the country. Overall, I am very satisfied with the relationship I built with people within STRI and how much of Panama I was able to explore. I hope to continue to find more time in my life as a student for family, friends, and travel when I return home. I am also looking forward to continuing to perusing graduate school and a career in ecology.

QUESTION SET #6

1. Looking back at your pre-departure journal or notes, how have your impressions of the host culture changed?

Before I went to Panama, I had heard of “Latin American Time” and I heard that Americans live more high-stress lifestyles than other cultures. I saw a more relaxed lifestyle in Panama. I saw a culture of people who work hard, but who also know the importance of enjoying free time and friends/family. While work is valued, it doesn’t take up as much of people’s lives as it does in the States. November is a month when there are a lot of holidays in Panama and everyone takes advantage of the long weekends to get out of the city and enjoy vacation. I also noticed that Panamanians are generally very happy and welcoming people who like to have a good time. I hope to continue to practice a more relaxed lifestyle in the States.

When first coming to Panama, I was nervous about the potential for crime, like someone in the street trying to steal my purse. While I remained careful with myself and my belongings, I became more comfortable in my host country over time. I found most people were very kind and willing to help me. I saw that you do need to be careful in Panama, but safety is something you need to consider wherever you travel and Panama can be a great place to live and explore.

As I mentioned before, I saw that Panama is a very small but proud country. In November, especially, you can feel this. There are like four or five holidays relating to Panama’s different independence days from various countries. The president even declared an impromptu holiday when Panama qualified for the world cup for the first time ever. People’s love for their country also comes across in the way they talk about the canal or the natural beauty of Panama. I feel that Panama is a proud and resilient country and you see that in the people.

2. What words of advice do you have for future interns as they prepare for this internship and living in your host country/culture?

I would recommend that future interns prepare for this internship by learning some basic Spanish, like greetings and giving directions (this is very helpful when taking taxis/Ubbers). It is helpful to keep a notebook of Spanish words or phrases you learn that you can use to practice.

It is important to prepare for having some free time and possibly unreliable access to the internet. Make sure to have a book or other hobbies to keep busy. That said, it’s hard to be bored in Panama. Work will be hard and the city is busy, so when you have down time it’s easy to enjoy.

If you are going to live in Panama City, I recommend living in the Ancon housing. While the building is nicknamed “La Jaula” (“The Cage”), it’s a great place to live. The apartments are nice and relatively safe. While there have been some issues with crime in the area, STRI has security guards there from the evening to morning. Living in the apartment building is also nice because it’s a great way to meet and become friends with other STRI employees. It’s great to get to know whom you’re living with so you can travel and run errands together and hang out in the evenings.

If you are living in a field station, expect the living conditions to be difficult. Make sure to talk to your supervisors before you arrive in Panama about what you should be expecting. It can be useful to bring your own bedding (twin bed) or towels with you if you can find some space in your suitcase. When I arrived to the field station I worked at, I was told there were newly clean sheets, but I did not want to sleep in the ones they provided. There was a mouse/bat/cockroach problem in my house, so I was happy to set up a bed that I knew was clean. Don’t be shy to contact the STRI housing department if/when you have issues with the water/power/etc, even if you have to do it often.

Panama is a really beautiful place, especially if you’re interested in biology or a related field. The biodiversity is absolutely amazing and it was exciting to explore new ecosystems. I think future interns should also take advantage of the beauty of Panama and the cheap transportation. Some of Panama’s gems, like Bocas del Toro or the San Blas Islands, can be expensive or time-consuming to visit if you’re living in Panama City. While these destinations would be worth the trip, there are

Sydney Turner
STRI — Panama
Final Report

many beautiful places even within a couple hours of Panama City that can be easily reached by bus/boat. I would recommend exploring the beaches west of Panama City, Taboga Island (a short boat ride from Panama City), El Valley de Anton (west of the city, great hiking, museums/zoo/gardens/etc., and thermal pools), pipeline road (by Gamboa, great bird/wildlife watching), the Metropolitan Park or Ancon Hill (good hiking and wildlife in Panama City) and Portobello (a town/park on the Caribbean with nice beaches and amazing Spanish ruins). The transportation system may seem confusing at first, but if you go to the terminal in Albrook mall you can get nearly anywhere in the country. It helps to have at least one Spanish-speaker with you if you do decide to travel.

Take advantage of free events in the city, it can be a great way to explore the culture of Panama or other Latin American countries. For example, there are often events in one of the plazas in the area of Panama City called Casco Viejo. I went to one event that was a mix of traditional Panamanian music/dancing and public figures reading Panamanian poetry. There was also traditional food available to buy. It's important to take advantage of cultural experiences when you can. You could spend your whole internship working at the one of the STRI campuses, speaking in English to co-workers, and passing time in your apartment. To get the most out of the experience, take advantage of your weekends and free time in the evenings to explore the country and the culture.