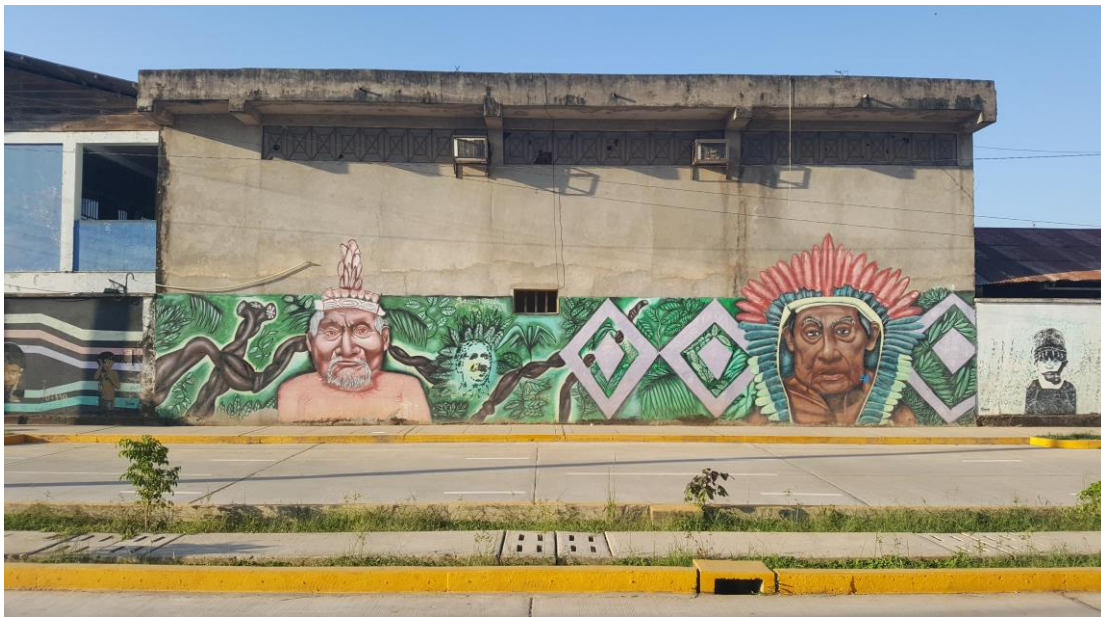


Zochonis Special Enterprise Award Fund Report

Soon after the January exam period, I started thinking about my summer, although not in a dreamy manner appropriate for someone who has just spent four weeks highlighting lecture notes. Conversely, I started looking into internships and work experience schemes. This year I finally found myself in a slightly better financial situation, to the point where I could part-fund a more ambitious trip. Specifically, as a zoology student interested in pursuing a PhD, I wanted to take part in a wildlife research programme.

Initially my search was rather unfruitful, but thanks to the power of targeted online advertising, an organisation called Field Projects International started showing up all over my suggested Facebook ads. After a few days of money-counting & educating myself on funding possibilities, as well as checking in with my boss and making sure a local pet sitter could take care of my rats, I decided to apply.

Fast forward through successful interview and many weeks of preparation. I left the UK on Wednesday 28th of June and three flights, or 27 hours, later arrived in Puerto Maldonado, a small town known as a gateway to Peruvian Amazon, capital of Madre de Dios region, situated about 40 miles west of Bolivia. Having never been to a developing South American country before, I was struck by the poverty, evident by run-down buildings and packs of stray dogs roaming the streets. Despite that, Puerto Maldonado was in many ways beautiful, and I was particularly appreciative of beautiful street art scattered all around the town, maybe because it reminded me of Manchester.



Street art just outside of the hostel I was staying at.

I only got to spend one night in Puerto, as the day following my arrival I had to wake up before dawn and travel to a nearby village, where I would undertake the last part of my journey. The village, Laberinto, was grey, with dusty roads, cement buildings and public toilets in the form of cubic holes in the ground (50 céntimos, or 12p a go). It serves as a travel hub and resource post for local illegal gold mining businesses. Madre de Dios region has a large problem with illegal gold mining operations, which hugely impact local biodiversity through deforestation and mercury contamination. The mining is in no way covert – during the 4 hour boat trip up the river I saw plenty of miners at work, and even more previously used, now abandoned mines.



Laberinto as seen from Madre de Dios river.

The Los Amigos Biological Field Station was built on a high terrace between Madre de Dios and Los Amigos rivers. In order to get to it one must climb up over 250 stairs with all their gear on their back (a rite of passage of sorts). The site is surprisingly large, with 3 common buildings (dining area, library and laboratories), multiple administrative structures and various smaller houses and dorms for researchers and staff, all surrounded by rainforest.

Upon arrival I was very quickly introduced to all the researchers and research assistants (RAs) on site and within a few hours went out for my first hike in the jungle. I did not really know what to expect, and to my surprise I realised that the Amazon, is, well, just a forest - made of wood, leaves and soil, like any other forest. This is not to say that I found it underwhelming – to the contrary! I was full of questions and interested in every single noise I heard. The rainforest is extremely loud... Birds sing and call, insects buzz, animals move in the canopy brushing past rustling foliage. On that first hike we heard, then saw, a huge group of squirrel monkeys – thirty, maybe more, just moving past us in the trees. I have never seen anything like it. I was in awe.



Squirrel monkey

During my first week I was trained and taught about the research project I was to help out with, the topic of which was focused on colour vision in tamarin monkeys – small, tree-dwelling primates. I was working with two species: emperor tamarins and saddleback tamarins. In these monkeys, all males and some of the females are dichromatic (have 2 types of colour-detecting cells in their eyes, with vision comparable to red/green colour-blindness in humans) whilst the rest of the females are trichromatic (3 types of cells, much like people with standard vision).



Saddleback tamarin (left) and emperor tamarin (right).

The close ratio of both types of vision in tamarins is puzzling, because in most primate species only one type of vision is prevalent, like in humans where colour-blindness is rare. One of the theories explaining this issue suggests that both kinds of vision are useful for spotting different foods – specifically, that trichromatic animals are better at finding ripe fruit once it changes colour from green to a shade of yellow or red, whilst dichromats are better at making out the shapes of camouflaged insects or hard to spot fruits.

The researchers who lead this project wanted to find out whether trichromatic colour vision assists the monkeys with making decisions about which fruit to eat, and this is where I (and numerous RAs before me) come in. My job was to prepare daily experiments at observational stations placed at different points in the forest. Every morning before dawn I would hike to these stations, set up the experiment which consisted of various combinations of ripe and unripe bananas, then sit in a little tent made of mosquito net and wait for the tamarins to show up.

The monkeys that I worked with are wild. They are caught every year at the beginning of the season for health assessment, measurements and application of collars with colourful beads and re-bleaching of tail patterns, which allow for individual identification. When they are close to the experimental set up and see the bananas, they perform a specific type of call to inform the rest of the group about it. For me, that was the signal to jump out of my tent and turn the cameras on. I would then observe the monkeys for the entire period they spent at the site – usually about 15 minutes, and record all of my observations.

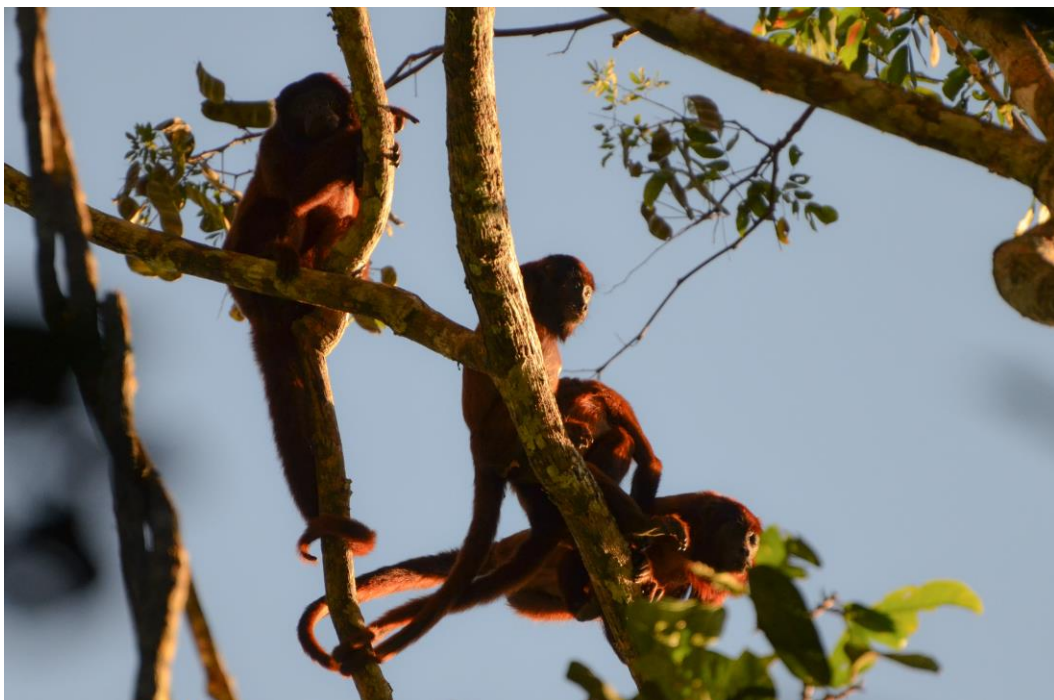
Most of my days were spent like this, with 8 hours of observations in the morning, followed by data input and analysis in the afternoon. On my days off and free afternoons I would often go hiking with other RAs or on my own to various parts of the field site. There was a beautiful palm swamp to the west of the camp, and oxbow lakes to the east. I saw an amazing diversity of wildlife, including some animals which have been on my animal bucket list for a while, such as the hoatzin birds whose babies

hatch with thumb-like claws at the far joint of their wings to help with tree climbing. I saw, among others, snakes, caimans, a wild tapir, groups of flying macaws, hummingbirds, a moth the size of my head and six different species of primate.



Hoatzin bird seen on Cocha de Lobo ("Giant Otter Lake")

Perhaps my favourite memory was of the last day before leaving, when I decided to accompany a disease ecology group to a sleeping tree of howler monkeys. We arrived well below dawn, with the monkeys still asleep, then listened to the male's intimidating call as the sun was rising. We were able to track and observe that group for many hours, off-trail. I felt like I could do just that forever.



Howler monkeys, basking in the morning sun. The leftmost individual is the male, the remainder being his females and offspring.

The list of skills I obtained during my three week stay at the station is much too long for the remaining word count. Having completed my research assistantship and had time to reflect on my stay, I believe it helped me grow not just as a scientist but as a person in general. Apart from excitement, I was full of doubts and fear the day I set out, worried that I would find being in a new country, so far from civilisation and surrounded by scary wildlife too difficult for such a long period of time. This was not the case. I met great people from a variety of backgrounds and had a chance to see what life is like outside of my comfort zone. I had a fantastic time, and definitely improved my confidence, both in myself and the choices I have made so far.

I would like to thank the Zochonis Special Enterprise Award fund for helping support this trip. It was a wonderful experience that I am incredibly grateful for.



Author, observing the pictured above group of red howler monkeys

Sources of funding

Zochonis Special Enterprise Award Fund	£650
Work Experience Bursary (University of Manchester)	£250
FPI crowdfunding effort	£782.32
Total	£1683.32

Expenditure

Flight tickets	£748.79
FPI research assistantship fee	£1048.27 (\$1350)
Travel insurance	£32.59
Hostel	£33.48
Vaccinations	£250
Antimalarials	£85.96
Clothes, cosmetics, medicines, equipment	£640.69
Subsistence and expenses in Peru	£210
Total	£3049.80