# JAMES RENNIE BEQUEST

# REPORT ON EXPEDITION/PROJECT/CONFERENCE

**Expedition/Project/ Conference Title:** Operation Wallacea Madagascar

**Travel Dates:** 3rd July – 4th August 2014

**Location:** Mahamavo Forest, Madagascar

**Group member(s):** Siobhan Rice

**Aims:** To work as a research assistant, helping with surveys and field research in the dry forest of Mahamavo

## OUTCOME

My fellow research assistant and I spent our first week undertaking the "Madagascar Wildlife and Culture Course" in the satellite camp of Antafiameva. In the morning, we accompanied the main researcher doing ornithological studies in the area along with two Madagascan dissertation students. We would walk the two transects through the forest at this camp, stopping for 10 minute intervals to identify the species of birds we saw and heard, as well as estimating their distance from the path. This was the main teaching tool used to help us to become more familiar with the species in the area. I found it very helpful to learn as we went in a more practical setting. In the afternoon we received lectures on the biodiversity in the area, the culture of the local Malagasy people, how to make conservation of the forest viable in an area where its exploitation constitutes the main source of income for some, as well as lessons in basic Malagasy to better communicate with the local guides. We spent our evenings assisting the dissertation students collecting data about the herpetofauna in the area. We would walk transects or do opportunistic walks around the outside of the camp, recording species and GPS location of anything we saw. There were also a handful of nights where we collected invertebrates to be sent to Belgium for species identification.

Fig. 1. Uroplatus angelii. This is the smallest species of chameleon that we found in the area. They came in many colours, from mainly grey at night, to bright green, to this orange colour.

We spent our second week cycling between Antafiameva and base camp in the village of Mariarano. During this week I got to assist each of the research groups at least once. I was assigned a group to work with (eg. bird point counts, herpetofauna walks, lemur surveys,

lemur trapping, forest surveys etc.) and there was an opportunity to sign up to any other activities I would like to be involved in. This was a very interesting week. I got to experience everything Operation Wallacea was doing in the area. I learned many new skills in field research, like how to properly perform a bird point count, how to use a GPS to record locations, how to determine species and process mouse lemurs and how to undertake a behavioural study of primates.

Fig. 2. A member of a family group of sifaka that lived in the mango trees around base camp in the village or Mariarano. Often these lemurs could be seen in the camp and behavioural studies were carried out on this group.

In my third week I was allowed to choose the research project that I wished to assist in for the remainder of my time in Madagascar. I chose to work with four dissertation students who were trapping mouse lemurs and gathering morphological and special data, as well as stool samples (as one of the students was looking into parasitism of mouse lemurs in the area). This meant that I would stay at base camp. We would walk a transect in the evening, setting two traps filled with banana (one either side of the path) at 100m intervals. We would then set out early the next morning to collect the traps, recording how many were open or closed, containing a mouse lemur or not etc. as we went. The mouse lemurs we captured would then be taken back to camp to be processed. Processing each mouse lemur consisted of sexing them; measuring head length, lower leg length and weight; taking a hair and stool sample and cutting small notches into the ears as an identifier if they were recaptured later. We would then return to the transect we had trapped in the night before and release each mouse lemur at the exact point we had captured it. This was important as mouse lemurs have very specific microhabitats and rare stray far from an approximately 200m2 area of forest. This made recaptured mouse lemurs very common in our data collection. Towards the end of the week we walked to a section of forest, known as “The Grid” around camp, where a square grid had been marked out but there was little to no path cut through the area. This was the closest to undisturbed forest we were able to trap in. As it was quite a distance from camp we camped outside the grid, trapped that night and processed the mouse lemurs we captured then and there. This was an extremely enjoyable aspect of the work we did with the lemur group as it felt like real field biology, collecting data there in the forest.

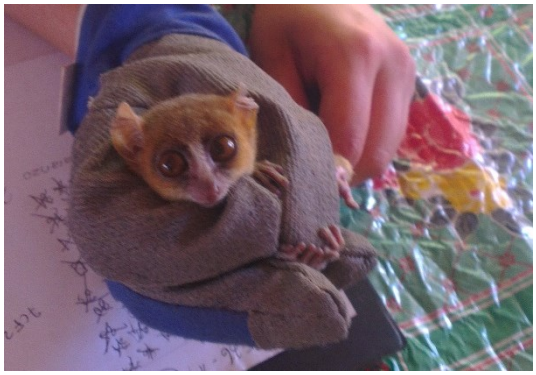

Fig. 3. Microcebus ravelobensis mouse lemur being processed. In this photo, a notch can be seen in one of the lemur's ears. This was therefore a recapture.

The final week was designated to data analysis, so my fellow research assistants and I carried on with our own bird, herpetofauna and forest surveys, collecting extra data for Operation Wallacea while the researchers were analysing their own data. This was a week in which we could put all that we had learned into practice and go out to collect our own data. During this week, I acted as co-leader of a group of research assistants asked to undertake a large number of forest plot surveys, as one researcher was still missing some data from the forest around base camp. We would walk along a transect and stop at specific GPS co-ordinates. Once there we would mark out a 20x20m plot, estimate canopy cover, measure the diameter of any tree with a greater diameter than 14cm and estimate sapling numbers. In my leadership position, I oversaw the completion of 17 forest plots in total. One of my final tasks of the week was to go through pictures taken by camera traps that had been set up along the transects. On these camera rolls we found many bush pigs, a small number of mongoose and, excitingly, a fosa. This was very interesting as there had only been rumours that fosa were presents in these dry forests before.

Fig. 4. Forrest plot. This picture illustrates what a typical forest plot looked like. These 20x20m plots were dense, untouched forest which could be used as a representative sample of the forest as a whole to estimate carbon storage.

Working with Operation Wallacea was an absolutely amazing experience. Not only did I gain hands-on experience in field research, learn so many new skills in data collection and observe wildlife the vast majority of which can't be found anywhere else in the world, but I also met some wonderful people, researchers, local residents and fellow students alike. Being assigned a leadership position provided me with some invaluable experience in working with a group and effectively carrying out a leadership role. These skills can be transferred to any group work I will do in university and later in my career.