JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/ Conference Title: Operation Wallacea – Madagascar expedition

Travel Dates: 6/07/2012 – 6/08/2012

Location: Ifotaka, Mandrare Valley, Madagascar

Group member(s): Rebecca Bushell

Aims: To participate as a Biological research assistant on an Operation Wallacea expedition

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OUTCOME (not less than 300 words):-

Madagascar is just one of the locations in which the organisation Operation Wallacea organise biological and conservation research expeditions. This July I was fortunate to travel as a biological research assistant to their site in the Anosy region of the Mandrare Valley, south Madagascar. After a five hour bus ride to the commune Ifotaka, we had a further two hour walk to the expedition camp set over a dry river bed in the spiny forest, a habitat unique to Madagascar. Ifotaka is one of 19 areas in the Mandrare Valley with temporary protected status and data from the surveys conducted will hopefully help to support a proposal to combine these regions into a Biosphere reserve, a living laboratory.

Our first full day in camp started with an orientation walk of the area we would be surveying, led by the Ombiasy (witch doctor) from a local village. This took in the iconic Baobab tree, one of only three in the valley, our first sighting of the Verreaux's sifaka lemurs and an introduction to the multitude of spiny vegetation that gives the forest its name and which we got to know very well over the following month. During our stay we lived along side the Antandroy people who were our guards, cooks and guides during the expedition. I learnt a great deal about their culture including their fadys (laws), their livelihoods, and a little Malagasy including 'misaotra' (thank you). The Ombiasy also invited us to a party at his village, 7km from the camp, for which we had to prepare our passports (a stick in which we put money) and gifts including rice, sweets and a sheep, take part in a welcome dance and were performed to by the village children. We were also invited into the Ombiasy's hut to witness him contact the spirit and make predictions about the future. It was wonderful day and a privilege to be welcomed so warmly and be allowed to experience their culture.

Back in the camp, for the first few days we were given a series of lectures by survey leaders, giving us a background to the area, its conservation, the local people and the surveys we would be conducting. Following this we were split into groups of five to rotate around the different project groups, birds, vegetation, herpetology and lemur behaviour.

Birds: Our first three days were spent doing bird surveys, data from which was supporting a dissertation project determining the effect of habitat type and

disturbance on species abundance. As most birds were active in the cooler hours of the day this involved breakfast in the dark and an early start at 6.00 am setting off to one of the 12, 300m transects in the survey area. Abundance was estimated using timed species counts which involved recording every species heard and seen during an hour whilst walking the transect. Fortunately, Sama, a Malagasy lecturer and bird expert was on hand to help with identification. A mist net was also set up, primarily to determine its practicality as a survey technique in the forest, and whilst it didn't appear to be very effective it did allow a closer inspection of some rarer birds including the Stripe Throated Jery (fig 1).

Figure 1: Sama holding the Stripe throated jery

Vegetation: Our first day on the vegetation rotation was spent collecting data on the four invasive plant species for the World Wildlife fund. One of these is the Kitohi vine and happens to be restricted to sacred forest designated by the local Antandroy people. As such we were unable to survey for it but due to its status this area of the forest already has invaluable protection, emphasizing to us, the importance of local knowledge to support conservation efforts. The other three we did survey for were the Sisel, Raketa and Raketa mena. Sisel was introduced by the French during their occupation of Madagascar and is now extensively farmed on prime growing land, limiting the use of the land for edible crops. This has in part necessitated the Hatsake (slash and burn agriculture) of the farmers to grow their food, but the land cleared has limited use, generally less than two years. Raketa and Raketa mena are prickly pear species, which, whilst invasive, are used by the zebu owners as cattle fodder and also act as a habitat to the endangered Radiated tortoise. Surveying involved the group spreading out every 5m and walking a 1km transect into the forest to the west of the riverbed. Due to the nature of the vegetation this was at times a gruelling process but did discover that the invasive species were restricted to the river bed and hadn't spread further into the forest.
Further vegetation surveys were carried out at the transects and areas of the forest in which other projects groups were working, to provide data to support their findings. This was particularly useful for the birds surveys in order to support definitions of habitat as disturbed or undisturbed. This involved marking a 50m line and recording along this line canopy cover every 5m, canopy height every meter and the types and sizes of trees within one meter of the line. As our guides were helping us with identification this enabled us to learn a lot of the Malagasy names for the plants but did make finding the corresponding scientific name fairly difficult.

Herpetology: During our time on the herpetology project we performed a variety of surveys to maximise the number of species found. The tree and ground cover objects were not particularly successful, but both the transects and pitfall traps were effective. Transects of 50m were completed in the day and night to survey for both diurnal and nocturnal species, my personal highlight being the discovery of the Mimophis mahaphalensis (figure 2), this was the most common snake to the area. Probably the most strenuous activity of the entire expedition were days digging pitfall traps. These consisted of 100m of plastic sheeting buried partially into a shallow 100m trench and sinking a bucket every 10m, the idea being that creatures in the surface soil would come up against the plastic and follow it to one of the buckets.

Whilst this caught a variety of reptiles, the most common proving to be the skink Trachylepis elegans, we were also lucky to catch the rare long eared Tenrec, one of Madagascars endemic rodents (fig. 3).
We also helped a dissertation student with iguana behavioural studies, at three locations specimens of two species had been caught using dental floss nooses, then marked using tippex with identifying codes. The studies required us to observe one specimen for 30mins recording their behaviour, including head bobbing, basking and occasionally jumping off rocks. They were so engaging that the 30mins went by so quickly. Unfortunately they often disappeared before the 30mins and the recorded behaviour discarded.

Figure 2: Mimophis mahaphalensis

Figure 3: Long eared tenrec

Lemur Behaviour: There are five species of lemur inhabiting the spiny forest. Three of these are nocturnal species and sightings of them are therefore rare, but we were fortunate to see the White footed sportif lemur during the day whilst on bird transects and one of the mouse lemurs in a survey trap. The diurnal species were the iconic ring tailed lemurs, a troop of which often visited the cliffs above camp (fig. 6), and the Verreaux's sifaka lemurs, the subject of the behaviour studies. Prior to our arrival, two of the many groups in the valley had been habituated for 2 months so they would be comfortable being observed. Our days with the lemurs involved finding one of the groups before they woke in the morning and staying with them till they went to sleep. During the day we did either focal sampling (following a specific lemur all day) or scan sampling (recording the groups behaviour every 5mins). To begin with, telling the lemurs apart was quite challenging, but became easier as we learnt their distinguishing features and behaviour. A particular highlight for me was the birth of a lemur christened Wally, after Operation Wallacea, which we were able to see and follow at just one day old. It was a great privilege to spend time in such close proximity to these animals and is something I shall never forget.

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Figure 4 & 5: New born wally and mother

Figure 6: Ring-tailed lemur by camp

Overall the expedition was more than I had hoped. I have gained so much knowledge and experience in field research, Madagascan wildlife and conservation in general. The location and not least the Antrandroy people made the experience all the more special and I would like to thank the James Rennie bequest for their invaluable help in making the expedition possible for me.