JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/ Conference Title: Operation Wallacea Biodiversity Research Expedition

Travel Dates: 13th June – 12th July

Location: Based in Labundo, South Buton, Indonesia
Hoga Island, Wakatobi National Park, Indonesia

Group member(s): Jack Cunningham

Aims: To help monitor the long term biodiversity of both the Buton rainforest and the Wakatobi National park region

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OUTCOME (not less than 300 words):-

Introduction

Indonesia has the highest deforestation rate in the world with more hectares being cut down than in the Amazon despite the Amazon being four times the size. Incredibly, with just 1 percent of the Earth's land area, Indonesia's rainforests contain 10 percent of the world's known plant species, 12 percent of mammal species and 17 percent of all known bird species. The coral reefs in this region are known as the 'Coral Triangle' and are some of the most biologically diverse places in the world. 147 of Indonesian mammals, 114 of its birds and 91 of its fish are currently classified as endangered. The continual destruction of this ecosystem will cause irreversible damage to the planet and subsequently effect the human population. Operation Wallacea carry out research in the area to identify how biologically diverse the region is, and why it is so important to conserve it. The data collected by scientists here is recorded and used to justify government funded grants (such as the REDD+ scheme) to help protect the unique ecosystems in this part of the world. A key aspect of the expedition is the exposure to the local cultures of the country; helping students to understand the compromise between protecting the planet, and getting out of poverty.

My Expedition

I flew from Edinburgh airport to Jakarta (via Abu Dhabi) and then onwards to Makassar before flying to Wanchi airport on the northern part of the island of Buton, Sulawesi. I then took a 4 hour car journey through the island and arrived in the village of Labundo Bundo. This was to be home for the next week whilst we learned basic jungle survival skills, species identification skills and how to survey them. In my group there were 7 other research assistants with 2 PhD students as our team leaders. We were given a host family to stay with, and were quickly thrown into Indonesian culture with Bahasa lessons, 5am prayers and intense heat to contend with. Spending time with the local people and guides gave us all an appreciation of life in the region and the challenges that these people face. It was also good to get a ground level understanding of how protection schemes work (and don't work) due to issues such as corruption etc. The first week consisted of a mixture of lectures and

practical skills, with 2 days of jungle survival at the end. We performed a few practice surveys and identified species such as a knobbed hornbill, and spectral tarsiers (an endangered species that live in hollowed out tree trunks) on a night survey. On the final days we hiked 5 hours into the jungle and set up our own camp, with the help of the Indonesian guides. Along the way we were taught how to identify poisonous plants, catch dinner and start a fire/build a shelter. It was inspirational to see how well these people understood the nature around them, simply from generations of knowledge that have been passed down to them. Although conditions were extremely physically demanding, it was an unbelievable experience and I relished both the educational experience and how challenging it was.

In the second week my group hiked to one of three jungle camps set up by Operation Wallcea called Bala. Here there were researchers that specialised in habitat surveys, herpatofauna, megafauna, birds and butterflies. There were 5 transects set up; all extremely physically demanding. Because so much of the rainforest in Indonesia has been cut down (only 10% remains) the remaining forest is in very difficult to access regions. We were taught how to catch and measure species safely and how to recognise the subtle signs of megafauna presence, as you rarely see them. My favourite of the surveys was the herpetofauna surveys as there was so much variation in species and we also had the most success in catching and identify things. On one transect we managed to catch, identify and record 5 different snakes and a few other species such as geckos. We also performed night time stream surveys in an attempt to capture information about multiple species of frogs. In the latter part of the week I volunteered to help out with the habitat surveys as part of the REDD+ scheme. Both days were extremely tough but I was asked to help lead the survey as there were only a few staff and there were many school students from a school in Thailand. I helped organise and co-ordinate the survey and contributed what knowledge I could from doing similar work on University field courses, reinforcing knowledge that I have gained from my time at Edinburgh.

At the end of the terrestrial part of the expedition my group travelled to the island of Hoga by boat. Grouped in twos, students were assigned a small wooden hut on the beach. Each day started with breakfast at 5am and then a briefing before going diving at 7am. We would then have a second dive at either 11am or 3pm, with dive theory lectures in between. The first week was spent learning the basics of how to dive; how to manage your buoyancy, dive signals, setting up equipment and performing an underwater obstacle test. At the end of the week we sat a test and I received my PADI open water dive certificate. It was also EID at the end of the first week and we all helped in preparing a meal for the local Indonesians who had the day off. In the second week I took part in a Reef Survey Techniques (RST) class. We had our usual 7am and 11/3 dives but we also now had 4 lectures a day. They were all focused on species identification on the reef and had a dive associated with each lecture. This was great as we got to reinforce our knowledge in a practical setting as opposed to always learning from theory. The reef dives were amazing and I got to see many species such as sea kraits, lionfish, stingrays and clown fish. The coral reef was spectacular but at the same time poignant, as there was a lot of signs of coral bleaching appearing in some areas. I also got to learn about the local culture of Sampela and Kaledupa. The tribe that live there, the Bajau, never come

on land, and sustain themselves mostly off of fish on the reef. Due to climate change, fish numbers are declining but the Bajau refuse to change their fishing methods that they have passed down through generations. Operation Wallacea are working with them to help develop a more sustainable approach to their fishing. Presently, due to a lack of education, things such as dynamite fishing go on in the region (where locals literally drop sticks of dynamite into the coral reef and collect the fish that float to the top). At the end of the week we sat a 100 question test. 70 of the questions were species identification from a picture, and they had to be named in Latin. The pass mark was 80 so it was extremely tough but I managed to pass and received my RST certificate.

Conclusion

The 4 weeks I spent working and studying in Indonesia were truly life changing and would not have been possible without the James Rennie Bequest fund. It enabled me to gain an insight to conservation practices and to further my practical understanding of wildlife habitation surveys. I also received my PADI open water license in the process, allowing me to explore options on marine projects in the future, and gaining an insight into an ecosystem that I haven't studied in much depth at University. The knowledge that I gained from the scientists and students I worked with will prove invaluable in the future, as I begin to carve a career in the environmental sector. Working beside local people gave me a great appreciation for the culture and outlook of the people living in that region of the world and made me a more rounded individual. The expedition has given me a deeper appreciation of ecology, and the social/political factors that come into play with understanding climate change.