JAMES RENNIE BEQUEST

REPORT ON EXPEDITION / PROJECT / CONFERENCE

Expedition/Project/ Conference Title: Operation Wallacea – Honduras research expeditioon

Travel Dates: 11-6-2018 to 12-7-2018

Location: Cusuco National Park and Utila Island, Honduras

Group member(s): Fung Yu Yan

Aims: To gain first-hand experience on fieldwork skills and collect data contributing to conservation in the Neotropics.

OUTCOME (a minimum of 300 words):-

I spent my first two weeks in Honduras in Cusuco National Park, a cloud forest situated at an altitude of 1500m. On the first three days, I had lectures on Neotropical biodiversity and local fauna. I also went to different transects with researchers on projects like bird and bat mist netting, herpetology opportunistic searches, and habitat surveys. I was amazed by the quality of research on chytrid fungi in the campsite, as there is a lab dedicated to chytrid scanning with PCR. Apart from organism-oriented research, the importance of understanding the local habitat is also stressed, as the survival of all flora and fauna depend on a balanced ecosystem. The habitat surveys aim to calculate the carbon storage in the forest. Corporations can then purchase carbon reserves to show that they are environmentally friendly, and in turn the money goes into conservation and research purposes. It is interesting to learn that mascots animals are also used to gain public attention and attract funding. In the case of Cusuco National Park, they are the Quetzals, a brightly coloured red-and-green bird. I was lucky to see both a male and a female during my two weeks there.

In the later half of the first week, I took part in a jungle-training course, which helped us to acclimatise and to gain a deeper understanding about the local topography and biodiversity. Hiking for hours on end everyday was every tiring, but we were able to visit different parts of the National Park, including the dwarf forest which is 2000m above sea level. As the altitude increases, the dominant plant differs and creates unique habitats for endemic species. Such a unique relief also gives rise to species that only lives in a certain elevation, and I experienced that first-hand by noticing the differences in birdcalls at different altitudes.

In the second week, I transferred to El Danto, a satellite camp on the west side of the Park. It took us a whopping 10 hours to hike from the starting point to the camp. On the way, we saw massive forest areas along the margins of the Park being cut down for pastures and plantation. The large extent of clear-cutting showed the seriousness of deforestation in Cusuco National park. Over the next five days, I went out on different transects according to personal interest in the researches. I have dug a pitfall trap with the herpetology team to capture snakes, set up camera traps with the mammals team, and light-trapping moths and beetles by the river. These experiences equipped me with the techniques to perform similar experiments in the future.

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Cusuco is indeed rich in biodiversity. In my two-week stay, I saw multiple humming birds, Quetzals, endangered snakes and amphibians, and even rare mammals like kinkajous in the daytime. It is also fascinating to see have dedicated the scientists are towards their projects.

After two weeks, we bid farewell to Cusuco and travelled to the island of Utila. Unlike Cusuco, Utila is much hotter and sunny everyday, making it perfect for tropical marine researches. Of my two weeks in Utila, I spent the first week learning diving and obtained the PADI Open Water certificate. The coral reefs were stunning and rich in biodiversity. We saw eagle rays, greats barracudas, Caribbean blue tangs and numerous corals and fish. In the second week, I further completed the PADI Advance Open Water dive qualification. It was a remarkable experience to dove at night, seeing all the nocturnal animals like spotted spiny lobster and common octopuses. The reef at night also amazed me with the bioluminescence in the ocean.

While studying in the Reef Ecology course, I learn that intense interspecific competition exists between macro algae and coral, and that too much macro algae is detrimental to the health of coral reefs. In Utila, I did Coral Watch, transect and quadrat surveys on corals. The Coral Watch Survey is a very simple test invented by the University of Queensland, which estimates coral health by recording its colour tone and structure. The quadrant survey estimates the proportion of coral, macro algae, sponge, sand and rocks, whereas in the transect survey, we recorded footages along transects for coral, fish and invertebrates distribution among the reefs.

Upon my arrival in Utila, I was surprised to hear that the lionfish population in Utila is so low that no surveys are conducted on them. However, the problem is still very severe in another site in the mainland (Tela). We had the chance to dissect lionfish and investigated their effects on local biodiversity. It was a unique experience to examine their stomach contents, and it was shocking for us to find a damselfish in one of their stomach! To combat against lionfish invasion, local restaurants contribute by serving lionfish on their menus and encourage people to consume them over other native fish species.

Throughout my stay in Honduras, I see the importance of working with locals when it comes to conservation. Guides who helped us navigate through the Cusuco jungle are all local Honduran that live in nearby villages. They used to make money by running coffee plantation or hunting for bush meat. With the designation of National Park and the help of Operation Wallacea, many locals now work as guides, cooks or vendors in the Tourist Centre of the Park. Not only securing a job, they also realize that they can generate income through protecting the forest, and therefore they are very dedicated. I have met some amazing and inspiring guides: one hardworking guide taught himself English so that he can better communicate with the foreign scientists, and a former hunter ended up helping us to locate kinkajous in the forest. Without them, I am sure conservation will be even harder and fewer science discoveries will be made.

This trip not only makes me realize how precious the Earth is, but also give me a taste of how science works in field. Being a field scientist is tiring and laborious, as it is physically demanding. However, the hard work pays off when one discovers a rare scene of a Monte Cristi Graceful Brown snake feeding on a lungless salamander, or finding an endangered frog hopping around in camp. Seeing their dedication on their subject of interest fascinates me, and certainly inspires me to work in this field.