

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION / PROJECT / CONFERENCE

Expedition/Project/ Conference Title: Operation Wallacea 2018 Mexico

Travel Dates: 2/7/2018-12/8/2018

Location: Yucatan Peninsula, Campeche and Akumal Mexico

Group member(s): /

Aims: Evaluation of climate change impact in the Calakmul Biosphere Reserve and assess efficacy of new protected marine area in Akumal

OUTCOME (not less than 300 words):-

The expedition was comprised of 3 weeks terrestrial and 3 weeks marine surveys. For the terrestrial component, 5 types of surveys were carried out on 2km transects. Mammals, through tracking and camera traps. Herpetofauna surveys, through capturing and taking measurements. Birds, by mist netting and point count. Bats by mist netting. Habitat assessment, through surveying 20x20 quadrats. Through carrying out surveys, I have gained field techniques such as tracking, bird handling and mist netting skills. Lectures given by staff helped us understand the ecology and systems of the mayan jungle. Global warming has caused a change in the rainfall patterns in the tropics and has affected the unique natural irrigation system of the Mexican jungle- the aguadas which collects water for all flora and fauna. Many of them have dried up, causing notable habitat deterioration. Therefore, data collected will be used to monitor change in biodiversity in the calakmul biosphere reserve. The data enable scientists to observe any notable migration patterns of fauna and flora within the biosphere reserve and also allows them to plan mitigation measures. It also helps with forest and species conservation efforts with local communities.

In the 3 weeks in the marine site, I did the PADI open water course and put it to good use. During survey dives, target coral species were measured to locate potential reproductively mature corals for gamete collection contributing to the local reef restoration project. There was also data collection for the Coralwatch project which is the monitoring of degree of coral bleaching around the world. Fish survey were also a part of our dives as fish diversity is an important indicator of reef health.

Another major part of the marine component were the sea turtle surveys. Recently, a new refuge zone was set up and laws were set in efforts to conserve turtles. Prior to setting up the refuge zone, tourists would touch turtles which caused stress and decreased immunity of turtles. This increased susceptibility to the FP virus which causes tumours to grow lowering survival chance of turtles. We would record turtle and tourist abundances while snorkelling along 200m transects. Turtle behaviour surveys as a way of measuring stress levels of individuals. Data collected will be used to assess the potency of the zone to determine if improvements should be made to the refuge zone. On the side of surveys there are also marine ecology lectures about marine and related ecosystems.

This experience was truly unique and the knowledge I have gained definitely could only be learnt outside the lecture theatre and is extremely useful for future application such as in experimental design and conservation work. This trip has only deepened my determination in going down the career path in conservation.