

# Placement Report

The organisation I worked with over summer 2015 was Operation Wallacea. The placement consisted of four weeks as a research assistant based in Mexico. My time in Mexico was divided into two weeks in a terrestrial environment and two weeks in a marine environment. The first two weeks were spent in the jungle of the Yucatan Peninsula, while the other two weeks were spent on the East coast of Mexico at the Akumal dive centre.

## Yucatan Peninsula

The work I carried out in the Jungle was divided into two locations. The first week was spent in the Calakmul bio reserve at a camp called KM20. The second week was spent at another camp also based in the jungle four hours away, called Mancolona. After arriving at KM20 we were split into groups and were shown a schedule of the different activities in which we would be taking part each day. The same scheduled activities were continued at Mancolona. Our research consisted of recording local flora and fauna each day by undertaking activities such as;

**Habitat Surveys:** To provide a record of data which represented the change of habitats through time and space, quadrats were set out along 2km transects through the jungle. Within these quadrats we would use different techniques with measuring poles to measure sapling height, tree width and canopy density. This data is recorded annually to keep track of the rate in which habitats change.

**Road Impact:** To increase tourism to the ancient Mayan ruins located within Calakmul, the Mexican government plans to upgrade the road running through the jungle to the site into a dual carriage way to make public access easier and swifter. This project would be detrimental to the wildlife of the Yucatan as it would make it increasingly difficult for animals to cross the road, disrupting mating and migration patterns, as well as increasing risk of fatalities by collision. Therefore, to demonstrate to the government how frequently the road is used by wildlife (including endangered species), we helped specialists record data by setting up camera traps at intervals along the road to capture images of animal crossings. We also used a speed gun to record the speed of cars using the road, to demonstrate that if cars on average were already breaking the speed limit, then upgrading the road and increasing the speed limit would only increase road fatalities.

**Birding:** To record data of bird species of the Yucatan we would set up mist nets in open spaces along a 2km transect to safely catch birds. After setting up the mist nets we would retreat roughly 100 metres down the transect where we would wait 15 minutes before going to check the mist nets. If a bird had been caught in the net, a specialist would carefully untangle the bird and we would then assist them to record the species, gender, weight and different length measurements of the bird before releasing it. We repeated this process multiple times each morning when birds were most active.

**Batting:** To record data of bat species of the Yucatan we would apply the same mist net techniques as with catching birds. However expert bat handlers would always wear gloves when handling the bats to protect themselves from bites and possible conflict of rabies. We would help the specialists record their species, gender, weight and take length measurements before setting them free. In some cases, a small amount of sugar water was fed to the bats to replenish energy to those that may have lost a lot while trying to struggle free. This activity was always performed at night as bats are inactive during the day.

**Herpetology walks:** To record data of different amphibian and reptile species of the Yucatan, we would undergo walks along 2km long transects, slowly searching all around us for herpetological species. If we spotted a herp, we would report it to the specialist who would attempt to catch it using their hands, or in some cases, a snake hook. We would then help the specialist record the species, gender, weight and length measurements of the herp before releasing it. These herp walks took place either at night or in the morning when herps are most active.

**Butterfly's:** To record data of different species of butterfly we would set up baited traps along a transect. The traps consisted of fomented banana set upon a plate with an open bag positioned over the top. The butterflies would feed on the bananas sugar and would then become trapped in the bag as they flew upwards after feeding. Once the traps were set we would retreat 100 metres down the transect where we would wait 30 minutes. Upon returning we would check the bags for butterflies and would use a butterfly identification chart to record which species were present.

## Akumal

The marine based work I carried out at Akumal was split into two weeks. The first week was spent becoming a certified scuba diver and gaining my PADI Open Water qualification. The second week was spent learning how to identify different species of coral and fish. We also acted as research assistants helping specialists every day collect data from species of sea grass. We did this by swimming out to sea, placing weighted quadrats on the sea floor at designated areas, and swimming under water wearing a mask to count the different species of sea grass within the quadrat. We also used rulers to measure the length of the longest blades of each species, to record growth rates and richness.

Undergoing this placement has enhanced my development within a personal career by demonstrating first-hand the importance of data research and advising governments on ecological matters which can affect substantial political decisions. The experiences of this placement have broadened my knowledge of the practical and political side of testing ecological theory and hypothesis, and has widened my field of employment upon graduation. I will keep an open mind to possibilities I previously wouldn't have considered such as pursuing a career in governmental research within organisations such as the EA (environmental Agency).

I also learned practical skills from professionals and specialists that will be fundamental in my career to come, as well as how to take the most from employers with skills and knowledge to teach to improve my own. This placement gave me the chance to apply my existing skills and knowledge of ecology gained from studies to real examples of effects of food chains and habitat destruction. A large part of my placement experience also taught me communication skills and how to work effectively within a large team. Not only how to work together to produce the best results but also the importance of morale and keeping a positive attitude, even when long working hours and exhaustion can make it difficult. This is something I feel I can and will improve upon in the future. Finally, I learned that rules and procedures are important to keep a system successful, and that a strict schedule and protocol must be followed to ensure a stable operation.