

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

**Expedition/Project/
Conference Title:** Operation Wallacea Expedition to Pacaya-Samiria, Peru

Travel Dates: June 17-July 16th

Location: Pacaya-Samiria

Group member(s): Anna Higgins

Aims: To aid in monitoring the biodiversity of multiple species in the
Pacaya-Samiria
National Reserve.

OUTCOME (not less than 300 words):-

This summer, with the aid of the James Rennie Bequest, I was able to take part in a research expedition led by Operation Wallacea in the Pacaya-Samiria National Reserve. We assisted in multiple animal surveys, which take place to monitor species between years, across local areas and internationally. The data collected is compiled in reports and then submitted to the Peruvian government, for national conservation initiatives, but also contributes to the large store of data necessary for such projects as the IUCN red list.

I was fortunate to have the opportunity to participate in this project, to assist directly in such vital work, and to observe first-hand the nature of this research and the locations in which it takes place.

This was my first experience of South America, but also of the rainforest. The Amazon rainforest, specifically the Pacaya-Samiria National Reserve, where my project took place, is a location of outstanding beauty and is also home to an astonishing diversity of plants and animals. On beginning the project we boarded our research ship, the Clavero, and, beginning from Nauta, travelled two days upriver on the Amazon, to venture deep in to the Pacaya-Samiria and stationed on the smaller Marañon River. Onboard the boat we were given lectures on the significance of the area, the nature of our work and the exact procedures of sampling, before being sent out on surveys. After the first week we were allowed to construct our own programmes, and so while attempting to experience everything fully, I focussed on primates. I have provided below a brief overview of the background to each species

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and the methods used to survey them, all of which was entirely new to me on beginning this expedition.

Dolphins

There are many river dolphins in the Pacaya-Samiria, both pink and grey. The dolphins are a good indicator species of aquatic environment, as they are not used by people, they are easy to measure and they will leave the area if there are problems. Dolphin surveys were done as a fixed-width transect, using the width of the river, and moving 5k upriver, or downriver from the boat, or along a nearby lake, in each transect. The size of group of dolphins observed was noted, along with their estimated age, and location along the transect.

Macaws

Macaws, easy to see and count, are good indicator species of the terrestrial environment, as they eat fruits of the forest and will leave the area in the event of terrestrial problems. Macaws were measured by point counts, where the group would wait at a point on the river edge for fifteen minutes and the number of macaws that passed over would be noted, along with their species, and estimated distance from the observer. The survey would commence away from the main research ship, in a smaller boat, and after the fifteen minutes would then move 500m further on before repeating. These surveys were begun just before sunrise and sunset daily. These point counts show relative abundance in number of individuals per 15 minute point.

Wading Birds

These surveys were carried out as fixed-width transects, in conjunction with that of macaws as they were surveyed for the 500m between macaw point counts. These fixed-width transects allow calculation of abundance as the number of individuals observed per kilometre.

Fish

Fish were sampled using a standard Catch per Unit Effort method, which allows calculation of the fish captured relative to the effort (time, or efficiency of nets) involved. Nets of 30cmx3m3inch were set for an hour both morning and afternoon and the individuals caught were counted, their species identified, measured and then thrown back.

Caiman

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Caiman were also measured by fixed-width transects along the river at nighttime. If a caiman was seen, its location and hypothesised species was noted, an attempt would then be made to capture it and bring it on board where it would be better identified, then measured, weighed, sexed and finally released.

Forest Birds

Forest Birds were surveyed using mist nets, thin long nets that were suspended between trees and checked at 20 minute intervals. This employed a CPUE method similar to that used with fish but also a mark and recapture method, to ascertain density. Once caught the birds were measured, weighed and identified, before being marked with either a clipped wing, or a small ring on one leg., then released.

Frogs

Frogs were surveyed by distance transects: in walking a 600m path through the rainforest any frogs visible from the path were caught, and their distance off the path was noted. The morphometric measurements of the frogs were recorded, but also observations of the micro-habitat in which they were found. Both terrestrial and night-time aquatic transects were carried out in the same way.

Primates

Distance transects were carried out to observe and identify primates in the same method as used for frogs. In addition to all other observations and measurements, the behaviour of primates, particularly that of monkeys was noted.

The data was compiled with all that for preceding months and analysed for any trends in species distribution. At the time it was not yet possible to ascertain the overall health of the biodiversity in the area, although species counts did not appear to differ too drastically from that expected. Further information on the outcome of these projects and resulting publications may be found on Operation Wallacea's website. Once again I would like to thank the James Rennie Bequest Committee for making this experience possible for me. I found it highly informative, interesting and enjoyable.