

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/Conference Title: Operation Wallacea: Expedition to Madagascar

Travel Dates: 3 July – 7 August 2011

Location: Mahanavo dry forests, Mahajanga, Madagascar

Group member(s): Craig Vernon

Aims: To train and work as a research assistant in the dry forests of Madagascar

OUTCOME (not less than 300 words):-

Introduction

Madagascar is home to some of the strangest, some of the loveliest and some of the most bizarre animals in the world. There can be few animals more domestic than the Madagascar Fish-Eagle, hovering, ready to strike prey; few more eerie than the Sifaka, their white shades seem ghostly in the trees they so effortlessly leap through; few more stunning than the chameleon, its bright colours almost improbable with its slow motionless lifestyle, predominantly spent basking on tree tops or waiting for prey. Beautiful birds, their gaudy colours and slick feathers are such a common sight that they become almost unremarkable: Green Parrots so perfectly disguised within palm trees or the Malachite Kingfisher with its iridescent feathers flashing like a rainbow in the sky.

Natural History

In the super continent of Gondwana, Madagascar was sandwiched between the India-Antarctica and the Africa-South America landmasses; during the continents epic break up 135mya Madagascar was 'dragged' with the Indian-Antarctica land mass into the Indian Ocean until it detached 88mya leaving it isolated from any other land mass since then. This isolation led to a great speciation event which culminated in 80% of the islands species being endemic to Madagascar and some other smaller surrounding islands. This extraordinary level of endemism for an island of Madagascar's size (*587,041 Kilometres Squared*) has led to some truly unique ecosystems seen nowhere else in the world, containing unique fauna and wildlife. The country is separated into three main geographic zones; a highland region in the centre of the island with peaks that can reach up to 9,436ft; an eastern belt that lines the coast that contains rainforest; west of the highlands there are dry plains that slope toward the Mozambique Channel. Each of these zones has a unique set of wildlife that has adapted to that particular ecosystem.

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Due to Madagascar's position within the tropics and the effect that the trade winds have on the island, from May till October it sparsely rains except in the rainforest zone: from November till April due to the ITCZ the entire island undergoes a wet season that often includes destructive cyclones.

Expedition Details

I arrived in Madagascar early July to join an expedition to the North-Western dry forests with an organization called Operation Wallacea. Operation Wallacea run conservation minded biological expeditions to remote parts of the world; this was no exception. Despite the islands already difficult location to access, once I did arrive into the capital city, Antananarivo located in the lower highlands, it was a farther ninety minute plane ride to a northern city called Mahajanga. After an overnight stay the next morning I was itching start the final journey. The last part of the journey was a 6 hour camion ride through grassy savannah seeing brief glimpses of the beautiful birds that live in this area. It was an extremely bumpy journey as there was no road and I was elated to have finally arrived.

Base camp was set up in a small village called Marirano, right on the edge of the extensive but diminishing dry forests. The base camp consisted of a small building for storing food and science/medical equipment; a twenty foot long structure made from palm leaves and poles for eating and working; a numerous bunch of small 2 man tents were located to the edges of these buildings for the volunteers to sleep. There was also a second camp based in an area of the forest known as Maseldroy, about a 2 hour walk from Marirano and had a similar set-up.

The scientist and volunteers were separated into three teams; birds, herpological and lemurs. The bird team would predominantly survey routes early morning so that they could identify birds not just from seeing them but also from hearing them: birds are most vocally active in the morning before they start foraging. The herpological team went out both night and day; this team had the most success during the night time surveys as the herpofauna reflect back a different shade of light from the surrounding leaves and branches making them less camouflaged. The lemur team go out night and day as some species in the area are diurnal and some are nocturnal; lemurs are easier to spot during the night as during the day, if they are motionless their coats are hard to spot amongst the foliage, however, during the night nocturnal lemurs eyes reflect from torch light, once spotted a spot light would be used to identify them. Lemur's eyes reflect back due to having more rods in their eyes to help them see better in the dark.

Lemurs

In Madagascar there are 76 species and sub species of lemurs. They are the icons of Madagascar and are found in virtually everywhere on the island, including inner cities. The northern dry forests are no exemption with multitude of lemurs found there. Some lemurs were common and could be found with ease while some where incredibly illusive and remained unseen through the expedition. The most common lemurs seen throughout the expedition where; Sifakas, brown, woolly, mongoose, sportive and gold/grey mouse lemurs. However, there were some more elusive

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lemurs such as the fork faced lemur. This lemurs range was well within the dry-forest but, as with a lot of creatures, was hibernating during the dry season.

Future

These beautiful and magnificent dry-forests manifest a vast array of rare and exotic animals. However, their future remains unclear. With ever increasing human encroachment vast habitat destruction has removed much of it already. But stopping deforestation is no easy task. The main threat to this forest is outsiders arriving and burning vast-expanses to make charcoal. They will remove several kilometres squared of prime forest leaving only blackened sand. At the other end of the scale, the people of Marirano have been removing wood to act as timber and fuel for centuries. Although this may not seem a major threat careful selection must be done to ensure biologically important trees are not removed by accident.

Management of the dry-forest is essential for their long-term survival. To tackle the problems of charcoal burning and clearing for rice-paddies will involve a combination of security measures and public education. Due to the high biodiversity of rare animals it may be a good zone for international investment into the carbon stock scheme. The carbon stock scheme involves large companies or governments paying for the management of an endangered habitat. These schemes teach people how to look after it themselves and do not necessarily have to be long-term. I feel the best strategy in this example would be to teach the community about why they must keep it and provide them with an alternative fuel source. Or, alternatively, pay the wages of several locals to patrol the forest helping to prevent illegal deforestation.