

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION

**Expedition/Project/
Conference Title:** Operation Wallacea Expedition: Research Assistant in South Africa-
Terrestrial and Marine site.

Travel Dates: 21st June to 21st of July 2024

Location: Somkhanda Game Reserve and Sodwana Bay, South Africa.

Group member(s): Claudia Mata Ladevesa

Aims: -Develop my skills in the field, gain experience and apply my knowledge.
-Work alongside biologists, experts in their fields, to learn, help and immerse myself in their world and learn about conservation.

Photography consent form attached: Yes
(please refer to your award letter) No

OUTCOME:

The first two weeks I was at the terrestrial site of Opwall, in Somkhanda, South Africa, where I worked alongside Wildlife and Ecological Investments (WEI), other volunteers and biologists.

In my time there we went on paths within the reserve to record data through game transects. The data collected was on mammals and consisted of GPS coordinates, the direction (using a compass), the distance from the path (through a range finder), the type of landscape where the animals were found (hill, valley, etc.), the sex, life stage, number of individuals and physical condition of the animal, as well as the type of species found along the path. We performed multiple game transects to cover different habitats within the reserve, as each species prefer different environments. And we sampled them equally to avoid confirmation bias by using this technique. Then we logged this data collected in the field into a wildlife software for it to be presented to the authorities in charge of the game reserve, giving them information on population density, presence or absence of species, habitat, distribution and movement patterns of mammals to have a better understanding and protect the reserve accordingly.

In reserves surrounded by densely populated areas such as Somkhanda Game Reserve, there is human-wildlife conflict. So, our aim is to research by gathering data to look at the extent of this conflict, especially on large mammal species. Other types of data collection included working on foot, doing biodiversity assessments of birds and vegetation surveys to study the impacts of herbivory and fires on vegetation across the reserve. We also set up camera traps to capture evidence of elusive and nocturnal species. A couple of days after setting up the camera traps, when the batteries were low, we changed them and analysed the data captured, identifying the species, sex and number of individuals, so it could be added to the database.

JAMES RENNIE BEQUEST

During the time at the camp, we had daily lectures about the problems facing these reserves, African wildlife conservation and management. In my free time I read books to further my knowledge of the species found here as well as identifying the trees and birds around camp and learning their calls. Observing the birds I discovered a new habitat that I wasn't aware of before and learned some of the behaviours of birds which was very interesting.

We also developed tracking skills in the African bush, identifying which animals have passed through a path and basic survival skills like making fire and what you need to survive here.

The last two weeks I went to Sodwana Bay to conduct my marine research which is the largest marine protected area in South Africa. Where I learned to dive and got my PADI Open Water dive qualification.

We usually did dives on the two-mile reef, which is 1.8 kilometres in length, 900 meters in width, and ranging from 12 to 30 meters in depth. Here I did 10 dives through the different pinnacles, swim-throughs and caves found in this dynamic reef. I observed more than 50 species of marine life, from white-tip reef sharks, manta rays and eels in caves, to angelfish, snappers, paper fish, potato bass, loggerhead turtles and nudibranchs. I also conducted fish surveys during my dives by writing underwater and identifying the corals and fish species. In just one dive I identified 24 species! Afterwards I uploaded my findings to www.reef.org to help with conservation.

We saw the magnificent humpback whales and swam with dolphins, where I learned the male's distraction tactics they play on humans to draw the attention away from the females and calves. We also spent time cleaning the beach from plastics, we gathered more than 5 kilograms of all types of plastics along the beach and we could see the microplastics in the sea. This has generated an awareness in me regarding the significance of reducing plastic usage and recycling it as much as possible. It takes around 450 years for plastic to decompose and even then, it never fully disappears.

During our time at camp, we learned to identify fish species and had lectures about the Indian ocean reef ecology regarding the importance of conservation and the dangers that is facing. I learned about the whale sharks and their decreasing population, how years ago you saw at least one on each dive and now many months pass by without one in sight due to several threats like finning, pollution and degradation in the form of overfishing of reef fish. You can also evaluate the health of the reef by the number of turtles you see on each dive. You should always see at least two turtles per dive, that is an indicative that the reef is in good health.

In my expedition I have gained awareness in conservation and the impact that our lifestyle is having on the sea and the land. I have become aware of how water is a scarce source in South Africa and my impact. I have developed my skills in the field with data collection and processing. I learned about the diversity of species, flora and fauna, from the thorn umbrella (*Vachellia tortilis*) to the nyala (*Tragelaphus angasii*), and from the whale shark (*Rhincodon typus*) to the fleshy soft coral (*Sarcophyton trocheliophorum*). And the current efforts to protect them and allow them to thrive once again while gaining an insight on how to preserve them.

JAMES RENNIE BEQUEST

I gained an understanding of rhino awareness about poaching and how removing their horns is in a way helping to protect them from poachers. We must debate if this is really the best solution long-term.

And what about eco-tourism in Sodwana Bay? Is it helping preserve it by generating awareness or making it worst, attracting people for the wrong reasons? Should we have more wild areas where no human contact disturbs nature?