Testimonial

Guest Institution: University of Seychelles

Academic Year: 2019/20

Course: Master in International Studies in Tropical Aquatic Ecology

Hello everyone!

I am a master student in Tropical Aquatic Ecology at the University of Bremen. Thanks to this program I was given the opportunity to conduct the necessary fieldwork for my master thesis abroad. Through the close collaboration of my department with the Centre of Tropical Ecology (ZMT) in Bremen, I was confronted with what it seems like was endless opportunities of where to undertake my research. However I didn't have to think twice and decided to take this chance and return to the Seychelles Archipelago (Mahé Island), where I had previously graduated with a BSc in Environmental Science at the University of Seychelles.

My master thesis investigates the feeding preferences of the key sea urchin species *Tripneustes gratilla* and possible competition with other species with the aid of an isotope analysis. Understanding the feeding habits of sea urchins is vital in order to predict their impact on lagoon patch reefs around Seychelles and to better comprehend the flow of energy through this ecosystem. *T. gratilla* is also one of the fastest growing sea urchin species and has a high market value due to its highly priced gonads, which are mainly consumed on the Japanese market. For this reason, this species is also of interest for the new aquaculture facility on Mahé.

With this short letter I will provide all the information about my time abroad including my country information, travel advice and my experience conducting field work.

First of all a short introduction to Seychelles: The Seychelles Archipelago consists of 115 Islands in the Indian Ocean. The three main islands are Mahé, Praslin and la Digue. The population is very small with less than 100 000 citizens. As it is typical for islands the majority of products have to be imported and therefore the prices of goods are high. However, once you have adapted to the local setting and know where and what to buy (fresh vegetables, fish) you will find yourself spending less money. Due to the island's high

degree of isolation in time and space, Seychelles harbors a very high degree of biodiversity and endemism. The truly unique nature and the environmental consciousness of the government make this country an ideal place for scientific research work. The official language in Seychelles is English, French and Creole. While, the locals communicate in Creole, everyone with a few exceptions of older people also speaks English. Therefore, it is not necessary to learn any Creole before your arrival or during your time abroad. Nonetheless, Creole is a simple language to understand, especially if you have some knowledge in French.

As the ZMT has currently no projects running in this country it was up to me to find a suitable research institution and a local supervisor. Through my positive experience with the University of Seychelles (Unisey) and my contacts to local staff members and possible supervisors, I decided to carry out my fieldwork in collaboration with Unisey. It didn't take long for me to find a supervisor, who was keen to work with me on my research idea. My local supervisor also put me in contact with the Seychelles Fishing Authority (SFA), who provided assistance with the preparation of the Isotope samples. For anyone who does not have any connections within Seychelles, I recommend to have a look at the home page of the University of Seychelles, where you will find a list of all professors, which you can contact via Email. Alternatively, you could collaborate with a local NGO such as the Marine Conservation Society Seychelles or Nature Seychelles.

In order for me to work with Unisey a collaboration letter had to be completed by myself and my local supervisor. In addition to the letter several documents (Insurance, Enrollment papers, Passport, CV, and Passport Photo) had to be provided to Unisey. Furthermore, an administration fee of 220 Euro had to be paid prior to my arrival in the country. The administrative details were dealt with by the Unisey Global Office.

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It is also necessary to apply for a Research permit at the Seychelles Bureau of Standards at least 3 month prior to data collection. The necessary papers to apply for a research permit were provided by the Unisey Global Office. Please bear in mind that everything in Seychelles takes a long time, especially with regards to paperwork. I only received my official research permit one day before my flight to Seychelles, although I had applied for it several months

in advance. This should not worry you however, but simply illustrates the laid back atmosphere of the country. Upon my arrival in Seychelles, I was also invited by the Ministry of Environment to talk about my thesis idea and sample collection. To my surprise they were extremely interested in my research, and empathized that local stakeholder are excited to see the results.

I also took out international travel insurance to cover me for my time abroad. As a tourist in Seychelles you can easily get health care in any of the public or private hospitals, where you will have to pay a small fee for the doctor's consultation and any medications you receive (usually around 20 Euro).

It is not necessary to apply for a Visa when flying to Seychelles, as every German citizen will be provided with a 3 month visitor permit once entering the country. The prerequisites are a passport valid for the intended length of stay and an onward flight ticket. If one wishes to stay for longer this permit can be extended for another 3 months for a fee of 5000 SCR, which is equivalent to 330 Euro. The papers for the Visa extension are also provided by Unisey and can be handed in at the Immigrations office in Victoria once you are in the country. Alternatively, you can choose to leave Seychelles for a couple of days and receive a new visitor permit upon entry. I decided to go with the second option, as I was able to get a cheap flight to Johannesburg, where I spent Christmas.

Receiving cash upon arrival is also not an issue. ATMs are readily available and I have not had any issues with any type of credit card. Exchange bureaus can also be found at the airport and the main town Victoria.

The two phone provider Airtel and Cable & Wireless are also present at the airport, where a Sim-card can be purchased within a few minutes. Mobile Data as well as Wifi at home are expensive (1 GB of mobile data is around 12 Euro), but Unisey provides you with a free Wifi access code for on Campus usage.

Regarding in country accommodation, the University does not currently provide any student housings. However, the Global office or your local supervisor can assist in order to find a suitable place to live. In my experience the easiest way of finding an apartment in Seychelles is via various Facebook Groups such as: Seychelles Accommodations or Seychelles Bedsitter – Apartment. Trying an online google search will unfortunately not lead you anywhere.

Other than that Seychelles is a very easy going and relaxed place to live. You can easily get around the entire Island (Mahé) by bus, which will take you about an hour and a half. Each

Bus ride costs less than 50cent, however bus schedules are not on time and the bus rides can be quite adventurous. You find small shops and local vegetable markets all over the Island and only for more specific things or if you wish to see a slightly bigger supermarket you will have to go to the capital Victoria in the north of Mahé. For your lunch I can highly recommend the take-aways, which are usually open between 11.30am and 2pm. You can get a very good local meal such as grilled fish or curry along with some rice and satini for 3.50 Euro. The people are really outgoing and friendly, and as a foreigner you will have no issue of finding social contacts. The country is also great for any kind of water sports activities like diving, surfing or paddle boarding.

Regarding my field work in Seychelles, the aim was to investigate the feeding behavior of *Tripneustes gratilla* on Mahé with the aid of a stable isotope analysis. This includes the evaluation of possible competition for food with other urchin species, and the determination whether *T. gratilla* feeds selectively. Following my pre-investigations, I was surprised to find that *T. gratilla* did not inhabit the extensive seagrass meadows around the Island, as was to be expected according to available literature. Interestingly, the species was mainly found within one bay in the south-east of the Island.

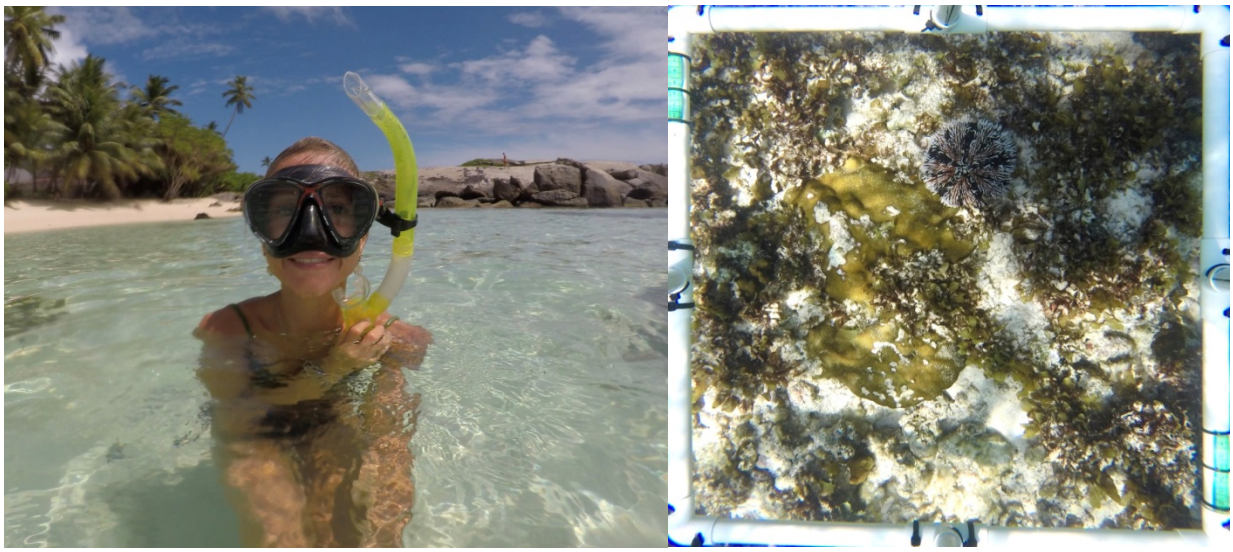

Fig. 1: Habitat Survey in Anse Forbans with the aid of a photo quadrat

For this reason, my research focused on this area and also included an extensive habitat survey and mapping. For my in field data collection I was provided with all the necessary

equipment by my local supervisor, the lab technician from Unisey and SFA. Many times I was out in the field by myself, which was a challenging but rewarding task. I have learned a lot through this experience by coming up with my own research idea, developing a methodology and then applying it in the field. Many times I had to realize that what I had planned was not applicable, due to environmental conditions (i.e. rough sea) and hence had to adapt my methods. The most, exciting but also exhausting task was the collection and preparation of the sea urchin and algae samples for the isotope analysis. All samples were collected in one day with the assistance of my supervisor. All 25 sea urchins had to be dissected the same day, which was a challenging task. For this I used the laboratory at the University, which is a very simple lab and cannot be compared with any of the standards we are used to from Germany. Thankfully, I received help from my supervisor and the local lab technician. The samples were then further processed (freeze dried and grinded) at the laboratory of the Seychelles Fishing Authority. The samples were also transferred to France through SFA to be analyzed for ^{13}C and ^{15}N isotopes.

Fig 2: Sea Urchin Dissection at the laboratory of the University of Seychelles

My time abroad has once more helped me to become more independent and learn how to deal with new and unexpected situations.

All the data collected during my time in Seychelles will be complied into my master thesis and will hopefully also provide the basis for a scientific paper. The data collected here is also of high interest to local stakeholders, and will hopefully aid the sustainable management of lagoon patch reefs around Seychelles and the successful culture of *T. gratilla* in the aquaculture facility.