

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Olivier PASNIN
Project title	Harnessing biodiversity of marine sponges on Rodrigues Island (Western Indian Ocean) for improving marine conservation
RSG reference	21658-1
Reporting period	Jan-Nov 2017
Amount of grant	£4805
Your email address	Olivier.Pasnin@gmail.com
Date of this report	Nov 2017

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Literature review				
Administration procedures				
Field surveys				
Analysis of data				
Writing report				Report has been written and submitted to respective authorities. However, for scientific publication more sampling is required and we are targeting Mauritius and Reunion so as to cover the whole Mascarene Islands.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Sponges in Rodrigues were mainly found in the passes around the island and it was difficult to dive in those places due to the strong currents. Moreover, the triplicate transect method proposed was not possible in the passes so we adapted our methodology to the particular geomorphology of those passes used an adapted quadrat method instead.

3. Briefly describe the three most important outcomes of your project.

The main outcome of the project is that we performed the first preliminary survey of sponges for Rodrigues Island.

The second outcome is the potential discovery of new sponge species in Rodrigues. More analyses are being undertaken by Dr Nicole de Voogd for the description of those new species, but preliminary data suggests that the sponge biodiversity of the island is different to Mauritius and may mostly be unique to the island.

My results also suggest that the current MPA network in Rodrigues does not even protect 50% of the biodiversity of sponges. We will therefore perform more sampling so as to provide adequate information to the local government for the protection of the sponge biodiversity present. Moreover, we are planning to survey Mauritius and Reunion islands so as to cover the whole biodiversity of sponges on the Mascarene Islands and understand the differences in biodiversity, as well as to assess their evolutionary relationships with other sponges in the Indo-Pacific.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

The local divers from Shoals Rodrigues (local marine NGO), staff from SEMP (South East Marine Protected Area) and local divers were trained in the various ways of assessing and monitoring sponge biodiversity. We are also planning in producing a guide to sponges that the local divers can use to recognise sponges.

5. Are there any plans to continue this work?

As stated above, we are planning to survey Rodrigues again so as to make sure that we have covered the whole biodiversity of sponges around the island for proposing adequate measures on how to integrate sponges under the protection of the MPAs present. Moreover, we are planning to survey the islands of Mauritius and Reunion due to collaboration which have been created lately using the same methodology so as to enlarge the study area from an island to the whole Mascarene region. In addition, I am using a molecular approach to assess the evolutionary relationships of sponges from Rodrigues, Mauritius and Reunion, not only with each other, but also (using previously published sequences) with other marine sponges sampled throughout the Indo-Pacific. This will provide additional evidence for assessing factors such as endemism.

6. How do you plan to share the results of your work with others?

Reports will be published and submitted to all relevant authorities. Moreover, we will publish our findings in ISI – accredited international journals. A presentation was also done during the thematic school on sponges in Reunion where the preliminary results were shown. Presentations will also be done in Rodrigues in December.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The report grant was used over the proposed period of time. The field work was carried out during the period of January to March 2017 and the analyses from April to November 2017.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Eppendorf tubes	44	44		
95% ethanol	40	40		

Diving camera	440	660	220	The appropriate diving was more expensive than projected
GPS	440	440		
Sampling bags	13	13		
Boat renting	1320	1320		
Divers	264	262		
Accommodation	682	682		
Air flight	220	220		
Transport	660	660		
Food	682	637		Food costs varied on different days, so we managed to save some money

9. Looking ahead, what do you feel are the important next steps?

The next step is to re sample all the targeted sites so as to make sure that the whole biodiversity of sponges has been surveyed around Rodrigues Island. Moreover, as stated above we are planning to sample Mauritius and Reunion Islands, so as to enlarge the study area to survey all three Mascarene Islands. One last step is to produce underwater guides for the divers so that they may recognise the sponges while diving and make sure the monitoring is continued over the years. The molecular work that will lead to phylogenetic analyses is also an important facet of the study going forward.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?

The Rufford Foundation logo was used in all presentations done up to now (Stellenbosch University, Thematic school on marine sponges and University of Reunion Island).

The logo was also used in the report submitted to the government and local authorities.

We also used Facebook and Twitter for advertising the Rufford foundation (through @vonderheydenlab and @olivierpasnin).

The Rufford Foundation will also be acknowledged in the scientific publications produced from the study as well as any other presentation related to the PhD project.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Assoc. Prof. Sophie von der Heyden & Olivier Pasnin (Stellenbosch University) – taking care of the running of the project and scientific advice and mentoring

Dr Nicole de Voogd (Naturalis Biodiversity Centre) – sponge expert / helped on the methodology used and identification of all the sponges observed

Jerome Joseph & Runolph Raffaut (Shoals Rodrigues) – divers and also trained in sponge surveys

Jean Rex Pierre Louis (science coordinator & manager SEMPA) – involve in the training for sponge surveys but was not free for diving

Bertrand Ah soon, Bryan Meng & Drane Clair (unemployed young local divers) - divers and also trained in sponge surveys

Reshad Jangeer-Khan (Mauritius Wildlife Foundation – Rodrigues division) - diver and also trained in sponge surveys

12. Any other comments?

We wish to express our sincere gratitude to the Rufford Foundation for their support for the project. As the preliminary results have shown an interesting sponge biodiversity in Rodrigues Island and a rapid survey in Mauritius has shown a sponge biodiversity different from Rodrigues, we are planning to survey all islands found the Mascarene region to produce a preliminary survey of the sponge biodiversity present in the Mascarene Islands. Therefore, we are planning to survey all three islands (Rodrigues, Mauritius and Reunion Island) so to as to obtain adequate information on the sponge biodiversity present. Last but not least, we will train all people helping in the project so as to continue the sponge monitoring over the years as well as producing a sponge guide for the region.