

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	Thyara Noely Simões
Project title	Following the genes: an assessment of migratory routes of the hawksbill turtles (<i>Eretmochelys imbricata</i>) through genetic tools in north-eastern Brazilian coast
RSG reference	21566-1
Reporting period	25.03.2017 – 30.02.2018
Amount of grant	£ 4950
Your email address	Thyara.noely@gmail.com
Date of this report	23.03.2018

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
Collection of tissue samples from <i>Eretmochelys imbricata</i>				We obtained 230 tissue samples from <i>Eretmochelys imbricata</i> .
Laboratory Analysis: DNA extraction, PCR reactions				The analyses are still being carried out, since some samples were with the DNA degraded
Sequencing of haplotypes				This objective will be realised upon completion of all DNA extraction, and PCR reactions
Compare the haplotypes of the breeding areas with those of the feeding areas (GenBank)				We are searching the haplotypes available in genetic information databases (GenBank)

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

We had difficulty collecting in the State of Piauí, since field monitoring activities were suspended in 2017 by the local NGO. These facts delayed the collections conclusion in 2017, and only which were only finished in March 2018. In addition, laboratory analyses, such as DNA extraction and PCR reaction, were delayed, having been carried out again since some tissue samples had damaged DNA. At this moment we are carrying out this step to proceed with the research. Another difficulty was the delay in the delivery of some laboratory materials to continue the analysis, and this also contributed to the postponement of the activities. But even with these difficulties the research continues in progress.

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

1 - One of the main results of the research is to first describe the mtDNA of hawksbill turtles, still unknown in several areas of north-eastern Brazil. In addition to understanding the populations that produce in areas of birth still little known.

2 - Another important result is the different mtDNA genetic information of areas that have been analysed so far. Those results are important for studies on gene flow of the species.

3 - Sequencing of the mtDNA haplotypes of the nesting area samples has not yet been performed to be compared with the haplotypes already described for the feeding areas available in databases. This result will be obtained in the next months.

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

In all the beaches of the study I was in contact with the local community and tourists. At that time, people were able to follow the birth of sea turtles and understand more about their ecology, also learn about their importance to nature and the marine environment. We held small lectures during the field activities, as well as allowed the community to participate in some activity helping us. In general, there have been exchanges of knowledge, and the community has always shown an interest in knowing more about sea turtles.

5. Are there any plans to continue this work?

Yes, I intend to continue the research on the nesting grounds of hawksbills turtles, but we also intend to expand studies for feeding areas using new molecular markers to study connectivity between populations, and to contribute with valuable information for these animals' conservation.

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

I plan to submit articles in scientific journals for a wide dissemination of the results until the second half of 2019. I also want to present the data in national and international scientific conferences, such as the Jornadas y la Reunión e Investigación y Conservación de Tortugas Marinas del Atlántico Sur Occidental – Red ASO, and at the International Sea Turtle Symposium. In addition to divulging in the Rede de Conservação de Tartarugas marinhas do Nordeste- RETAMNE, which occurs every year in Brazil. And finally, organise a workshop to convey the results of the research in the local communities of the areas where the collections were carried out.

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 RSG funds were used from May 2017 to May 2018 (was used for 12 months). The project will continue through 2019.

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
Travel: Round trip fare from to the study local	£900	£900		It was sufficient according to the budget

Fieldwork food supplies	£1140	£990	£150	Economics of £150 that was applied in the item "Primers for PCR"
Fuel	£1760	£1560	£200	Economy of £200 in the fuel that was applied in the item "Sequencing reactions"
DNA isolation	£600	£600		It was sufficient according to the budget
PCR and sequencing	£550	£550		It was sufficient according to the budget
Sequencing reactions	£0	£200	£200	It was necessary to add sequencing reactions
Primers for PCR	£0	£150	£150	It was necessary to acquire more primers for the reactions
Total	£4950	£4950		

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

After publishing the study on scientific journals, it is important to continue the collection of biological samples of hawksbill turtles in the birth places to better understand the genetics of these animals, and to obtain information about the possibility of hybridity and characterize the population structure. It would be important to expand the study to never analysed sites to better understand the measures needed to conserve these populations; and to exchange knowledge with other researchers and under-development projects on sea turtles.

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?

I used the RSGF logo on the project presentation at the Universidade Estadual de Santa Cruz - UESC. The RF was also recognised as a funding source in all research productions, such as posters, abstracts and lectures at conferences.

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

Prof. Dr. Mirco Solé - Full Professor at the Biological Sciences Department of UESC, Brazil; and researcher who assisted in the field activities and made very important contribution to the research.

Dr. Ednilza Maranhão dos Santos - Professor at the Federal Rural University of Pernambuco - UFRPE, Brazil. Researcher who participated in the field activities, made important contributions to the research and participated in the scientific events by spreading the research.

Dr. Fernanda Amato Gaiotto - Full Professor at the Genetic Department of UESC, Brazil; and researcher who is assisting the activities in the genetics laboratory, and making relevant contributions to the study.

12. Any other comments?

I acknowledge all the financial support of The Rufford Foundation, since the research is proceeding due to its support, and greatly increase for having walked with us in the conservation of the animals threatened of extinction. Thank you also for understanding all the unexpected events that have arisen, which have somehow disrupted the research deadlines.

