

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	Angela Maria Mendoza
Project title	Announcement calls of glass frogs as key for monitoring biodiversity of the Chocoan rainforest
RSG reference	18423-1
Reporting period	December 2016- December 2017
Amount of grant	£5000
Your email address	am.mendozah@gmail.com
Date of this report	22 December 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
Record the vocalization of all glass frog species as a reference for posterior passive acoustic monitoring.				Glass frog species were registered of all localities and the calls of those whom reproductive activity was beginning were recorded.
Identify the drivers of acoustic variation of glass frog species the chocoan rainforest.				The environmental and calls were obtained, I expected to analyse the results in 2018 to achieve this objective
Record the presence of endemic and highly endangered species in the sampling localities				All endemic and highly endangered species observed were recorded.
Create an acoustic guide of Chocoran amphibians, available for future studies.				The calls for species were successfully obtained and the acoustic guide is in process.
To identify and delimitate streams in field in at least three different points on each locality.				Streams in the localities were successfully delimited and it will be used for monitoring and future evaluations.
Analyse the recordings and will compare them with the species songs obtained during the surveys.				Stationary recorders here used had failures and the few data obtained were insufficient for a robust analysis. Therefore, the results were focused on the recordings with the unidirectional microphone.
Establish an effective monitoring method to evaluate changes in the acoustic landscape and loss of diversity.				Due to the failure of stationary recorders, we just achieve to define monitoring streams and gather single calls by the unidirectional microphone. We expected to perform this objective in the future.

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

The project was defined in four localities including national parks. Some of them do not give us the access permits on time, so the field trips were moved to nearby

localities low-cost and outside reserve areas. This allows us to identify some threats to rainforest diversity and to water-dependent species outside reserves such as illegal mining and the expansion of the palm oil crops.

The second difficulty comes from the long-term monitoring recorders. We expected to get equipment with additional funding, but it was not obtained. We bought other low-cost equipment previously recommended by our team. Unfortunately, it had failures in data acquisition and they were insufficient for a robust analysis. Therefore, the results are being focused on the recordings with the unidirectional microphone.

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

The most important outcome until this moment is the acoustic database of the amphibians (not just glass frogs) achieved.

Another important outcome is the link reached with the communities of the localities visited. One, in particular, is the teacher of a small town in Anchicayá, she was very interested in the appraisal of biodiversity and the strengthening of connections with the biologist of the region.

Finally, the data obtained for one of the glass frog species (*Hyalinobatrachium fleischmanni*) were successfully integrated into the first chapter of my PhD thesis and we are about to finish the manuscript to submit the research article to an indexed journal.

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

The visits to each locality have been a chance to identify the needs of each local community, we have appreciated that each one has different priorities. While in one site the community has begun bird observation trips, other has interest in trekking and ecotourism. Also, some members of the communities were fieldwork assistants of this project. For the next step of this project, we expect to invite the keyholders to strengthen these work strategies. We expected to incentive sustainable economic activities keeping in mind the relevance of amphibians for their intrinsic value and the ecological roles they play in the rainforest.

5. Are there any plans to continue this work?

Undoubtedly! The amphibian community of Chocoan rainforest is still unknown and the region was defined as a conservation priority for glass frogs. After completing the objectives of this first project, I expected to continue the monitoring in the localities here delimited and with the equipment already obtained. Also, I expect to keep linking research laboratories and young researchers to this initiative. If it is possible, I expected to apply soon for the 2nd Rufford Small Grant.

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

I will participate in national and international conferences to share the results with colleagues. Also, I expected to write at least three research papers with the results here obtained and to submit them to indexed international journals to promote new research in the region. Finally, for the final step of this project, I expected to generate a field guide and educational material to be shared with local communities and researchers.

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 Rufford Foundation grant was used in the first half of the project between December 2016 and December 2017 to buy all the equipment and materials, pay field assistants and travels for the four localities. I expected to use the remaining grant the next year in the creation of the educational material and for new visits to the localities to share the results obtained. Therefore, the time that Rufford Grant was used to date compared to the total length of the project is about one half.

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. 1£= 3 865 Colombian pesos

Item	Budgeted Amount	Actual Amount	Difference	Comments
GPS	225	225	0	None
Materials	785	350	-435	There is still lacking the generation of educational material adding the results here obtained.
Microphone and Recorder	675	675	0	None
Pericos Field trip	220	229	9	None
Anchicayá Field trip	790	396	-394	Costs of the field trip were shared with a second research team focused on the ecology of poison frogs. So, the remaining budget will be used in the second field trip in 2018 and for the educational material.
“Utria” Field trip	935	540	-395	The field trip was moved to other locality nearby due to the delay in the access permit for the Natural Park, and it was not necessary the transportation by plane. The remaining budget will be used in the

				second field trip in 2018 and for the educational material.
"Katios" Field trip	1370	465	-905	The field trip was moved to other locality nearby due to the delay in the access permit for the Natural Park. The remaining budget will be used in a second field trip in 2018 and for the educational material.
Total	5000	2880	-2120	

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

The next very important step to accomplish this project is analyzing acoustic data and generate the educational material based on it. The most valuable and final step is to return to the localities to share the information with local communities and local authorities.

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

Yes, I have used in the annual event for sharing the results of the student's research of my department, where I exposed the preliminary results of this research. It is also on the first slide of the presentation of my PhD thesis advances. I expect to use the logo in the educational material and guides generated with the results of this research.

11. Any other comments?

I want to thank Rufford Foundation for the grant obtained, without their support, this project would not be a reality. I expected to begin a research line from this project, considering the huge amount of work necessary for the knowledge and valuation of the biodiversity in a threatened region such as Choco rainforest.