

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	Jimmy Barrantes-Madrigal
Project title	The Common Coqui Frog: A Latent Threat in Costa Rica
RSG reference	19385-1
Reporting period	July 2016 – October 2017
Amount of grant	£3812
Your email address	Jimmybarrantesm@gmail.com
Date of this report	22/10/2017

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
Estimate the current distribution of the introduced Common Coqui frog (<i>Eleutherodactylus coqui</i>) in Costa Rica				Although a current distribution was determined based on field sampling and interviews, I consider that it is possible that there are sites with presence of this species that have not yet been reported. More sampling effort is needed.
Estimate the potential distribution for this exotic species in Costa Rica.				We managed to generate a map of the sites with ideal climatic conditions for the establishment of this species
Evaluate the presence of the infectious fungus <i>Batrachochytrium dendrobatidis</i> in the introduced population of Common Coqui frog in Costa Rica				We analysed 54 samples of coqui and other species present in the site, all result was negative for the presence of this chytrid fungus.
Analyse perception and attitudes of stakeholders about this species				We successfully documented the level of knowledge and perception of local people about this species. In the same way, the attitude of the stakeholders about a management proposal

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

At the beginning of the project it was necessary to change the spatial scale of the study area. The reason was that the population of *E. coqui* was more restricted than expected.

Another unforeseen was that after the fieldwork there was a delay in the expected date for the analysis of the samples to detect the chytrid fungus, this is the reason I had to request an extension in the deadline of this report. Fortunately, the samples were analysed satisfactorily.

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

- One of the most relevant results of this project was the discovery of a new population of *E. coqui* established 8 km away from the original population

reported in 2010. This result shows that this species is dispersing within the country and it is necessary to implement the appropriate measures for its control.

- The presence of the chytrid fungus *Batrachochytrium dendrobatidis* was not detected in any of the analyzed samples from this and other species present in the study area.
- The perception of people towards this species is mostly positive, however, a small percentage of the people interviewed perceives annoying caused by its presence. In addition, even though most of the people disagree with the management of the species a high percentage believes it is necessary.

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

In this initial phase of the project we decided not to fully involve the community because the objective was to analyze their level of knowledge and perception about the species without the influence of the interviewer. However, if the project continues, the next step will be to develop information campaigns to involve the community in the management process of this species.

5. Are there any plans to continue this work?

Yes, as I mentioned in the previous section we plan to continue the project with an information campaign, this will help to avoid the dispersion of this introduced species by human action. In addition, there are also plans to develop a more ambitious project involving the management of introduced species at the national level that could benefit the entire country.

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

Currently, the results of this project have been presented to different stakeholders, including the National Commission on Exotic and Invasive Species (which is the advisory commission of the government entity in charge of wildlife management in the country), students of the Universidad de Costa Rica, and representatives of the Barbilla Biological Subcorridor (where the study site is included). Also, part of the results of this project have been presented internationally at the XI Latin American Congress of Herpetology, and will be presented at the XXI Congress of the Mesoamerican Society for Biology and Conservation.

In addition, we will public our results in the form of papers in peer reviewed journals.

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 throughout the project. The money arrived in time for the proposed start of the project and was sufficient to

finance its entire duration. Most funding was spent during field trips and the purchase of materials, the remaining percentage was used recently to pay for the reagents used in the laboratory analysis.

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
Local Transport	100	215	-115	Increased transportation costs due to the new population registered
Food expenses	900	1093	-193	The sampling effort was increased to cover protected areas
Lodging	1000	1080	-80	The sampling effort was increased to cover protected areas
Field work materials	104	86	+18	Were used some materials of the Universidad de Costa Rica
GPS	208	253.2	-45.2	Unexpectedly high import taxes
Laboratory assays	1500	1086.15	+413.85	The payment of taxes was reduced because it was processed as a purchase of the Universidad de Costa Rica
Total	3812	3820.35	-1.35	The leader of the project covered the difference
Exchange rate used				1 GBP = 748,367 CRC 1 GBP = 1,31841 USD

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

We clearly identify a necessary goal that is the prevention of the facilitated dispersion of this introduced species. The next step should be an information campaign at local and national level to inform people about this introduced species, the possible impacts it could cause and the actions they can take to avoid their dispersion.

Also, it is important to develop a national communication medium (such as a website) to publish information about this and other introduced species present in the country, this will make it easier for people and researchers to know about these species and the research priorities needed for their management.

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, we use it in the presentation of the results to the stakeholders. Also, the logo was present in the acknowledgment slide during the talk at the XI Latin American Congress of Herpetology celebrated in Ecuador.

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

Jimmy Barrantes-Madrigal: I was the leader of the project. I conducted field sampling, analyze data, write reports and present the results of the project.

Víctor Acosta Chaves: His role was to help during the field sampling and advice during the project.

Gilbert Alvarado Barbosa: He was in charge of the laboratory analysis for samples of the chytrid fungus

Manuel Spinola Parallada: His work consisted in advising during the project and developing the analysis of potential distribution.

12. Any other comments?

The team expresses their gratitude towards The Rufford Foundation for their support. In our country the information about introduced species is very scarce and this research generates a great contribution for the management of one of the species potentially invasive. I hope we can continue our project for the management of this and other species introduced in Costa Rica.

