

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	Daniel de Figueiredo Ramalho
Project title	Edge effect of a highway on bat's activity and diversity in a Neotropical savanna
RSG reference	20081-1
Reporting period	
Amount of grant	£4795
Your email address	daniel.f.ramalho@gmail.com
Date of this report	24 th October 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
To evaluate the effect of roads in bat activity in a Neotropical savanna				I have completed all fieldwork foreseen in the project. We have recorded bat activity in both dry and rainy seasons in nine different transects, comprising three types of road (dirt road, simple highway, and divided highway). We have a total of 1,728 hours of recording, which are now being analysed in order to have a value of activity to the different sites. After sound analysis, which should be finished in the next month, we will be writing a paper and presenting the results in bat research conferences.

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

Due to difficulties in Brazilian delivery system and its bureaucracy, with extensive paperwork, equipment purchased did not arrive in time for the start of fieldwork. Because of that, we used ultrasound detectors that belong to Bat Biology and Conservation Lab (SM2BAT) during the fieldwork. We will continue using the ultrasound detectors that we purchased with this grant to other projects regarding urbanisation effects on bat activity. Because of the aforementioned difficulties, the purchased detectors only arrived to us this month (October, almost 1 year after purchasing).

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

Although we don't have still an actual result from the fieldwork, the amount of recording is very important because in Brazil, bioacoustics is still a much understudied field. After analysing data, we will provide Brazilian Government with a report on how roads are affecting bat activities on the surroundings of protected areas and how it could affect ecosystem services provided by those individuals.

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

Not answered.

5. Are there any plans to continue this work?

Yes. This project is a part of my PhD thesis project, and we will be continuing sound analysis for the next month. Also, we will develop more studies on how roads affect bats (e.g.: roadkill, vocalization structure) and on how urbanization affects bat's activity (e.g.: effects of public lighting).

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

I plan to submit the results of this work to international scientific journal, as well as present the results of this work in the next International Bat Research Conference (IBRC). Also, we will share the results with the managers of the areas in which this research was conducted.

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

We used the grant to purchase SM4BAT FS ultrasound detectors in the beginning of the project. Unfortunately, we had some problems with Brazilian delivery system, which led us to begin the project later than we anticipated and with detectors that belonged to the Bat Biology and Conservation Lab at the University of Brasilia.

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
5 SM4BAT FS w/ microphone	£4795	£4531	£260	The difference was used to pay for bank taxes, which were almost £400

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

The priority step is to finish sound analysis to be able to describe if and how different roads affect bat activity in Brazilian cerrado. After that, the results will be submitted to international scientific journals. After we finish this project, we plan to study other effects caused by roads in bats (e.g.: roadkill, vocalization structure, and foraging success).

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?

Because we don't have any full results from this project, we haven't used the Rufford Foundation logo in any material. However, after all analysis are completed, I will present the results of the project in scientific conferences. In these presentations, the Rufford Foundation logo will be used and the Rufford Foundation will receive publicity for that.

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

Ludmilla Aguiar – PhD advisor, assistance with paperwork and with project writing

Fieldwork assistants - **Camila Moniz, Lucas Damásio, Priscilla Petrazzini, Thiago Furtado, Lucas Lauretto, Elba Militão & Debora Resende.**

12. Any other comments?

The Rufford Small Grant was very important to this project, which is one part of my PhD research. Also, with the purchase of new equipment, we will be able to increase our knowledge on how bats are affected by urbanization and habitat alteration that comes with it.