

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	Dr Ryszard Oleksy
Project title	The impact of the Mauritius fruit bat (<i>Pteropus niger</i>) on commercial fruit farms and possible mitigation methods.
RSG reference	18137-D
Reporting period	October 2015 October 2016
Amount of grant	£10,000
Your email address	bzrzo@bristol.ac.uk
Date of this report	19/10/2016

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
GPS tracking of <i>P. niger</i>			x	In total 12 bats were tracked. One bat was tracked for the whole year which is a great achievement of this study
Survey in Fruiting Orchards			x	Litchi, mango and longan trees were monitored and damaged caused to fruits by bats and other animals assessed
Interview with stakeholders			x	Informal talks with several stakeholders and orchard owners were conducted
Role of bats in Mauritian ecosystem			x	Seeds collected from faeces were germinated in pertri dishes, additionally seedling recruitment around bat roosts were assessed
Mitigation methods			x	Netting of litchi trees was tested and its efficiency assessed

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

The main difficulty was to implement netting in orchards which proved to be too demanding for only two people. That resulted in netting less trees than initially planned but still the collected data was sufficient to prove that netting does minimise the damage caused by bats to fruits.

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

Bats do cause major damage to some of the orchards in Mauritius, however netting proved to be successful in reducing the damage from 50% to almost 100%. Bats are the main dispersers of majority of endemic and native trees in Mauritius and vital for forest restoration. The tracking of bats showed that they move across the whole island and clearly concentrate on tree major mountain ranges which host the remnant forest fragments in Mauritius. The movement of bats is seasonal.

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

Local farmers did provide help during the orchard assessment. The trees were netted in October 2015 in an orchard which haven't used nets before. This year (October 2016) over 30 trees were netted by local farmers following the methods used in the study in 2015. Clearly people understood that it is essential to protect the crop from bats and currently netting is the only method available.

5. Are there any plans to continue this work?

The project is ongoing and still one of the tagged bats is transmitting the data. The project is planned for another year and will focus on the way bats navigate on the island as well as on new methods to deter bats from the orchards which would be more feasible and efficient compared to netting.

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

The report of this project was sent to National Park and Conservation Services. The results were presented during the 17th International Bat Research Conference in August 2016 in Durban, SA. At least three peer review articles will be produced based on this project within the next year.

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 grant was used between October 2015 and October 2016 which was the anticipated period of the study.

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
Researcher's living allowance and accommodation	4800	4800	0	

Vehicle	2880	3200	-320	Longer rental was essential
Fuel	1440	1800	-360	Fuel cost was higher due to commuting between the orchards and GPS tracking
Poles for bat catching /ropes if needed	120	120	0	
Ribbons	60	0	60	Supported by other grant
Ropes for mitigation	100	0	100	Supported by other grant
External hard drive	80	0	80	Supported by other grant
Cable extenders	120	80	40	Lower cost than anticipated
Nets for mitigation	400	0	400	Supported by other grant
Total	10000	1000	0	

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

It is crucial to monitor the orchards over several years to see the variations in bat damage in response to yearly changes in fruit production. Most importantly it is essential to work on development of other mitigation methods to deter bats from orchards. At the same time, bat preferred endemic and native fruiting trees should be planted around Mauritius to ensure provision of natural food for bats all over the year.

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?

The logo was used during several talks given to governmental bodies in Mauritius, International Bat Research Conference and acknowledge in all the report produced by this study.

11. Any other comments?

The Rufford Foundation has been the major sponsor of this project for over 2 years and I am very grateful for the support. Without Rufford's grants this important project would have never taken place.