



The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	Helen Taylor-Boyd
Project title	Bat Biodiversity, Ecology and Conservation in Zambia
RSG reference	18204-1
Reporting period	November 2015 to September 2016
Amount of grant	£5000
Your email address	helenfromz@yahoo.com
Date of this report	17/9/16

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
Identify potential feeding, commuting and roosting areas		✓		Initial recording and trapping study has revealed suitable feeding and commuting habitat. A clear transect methodology has been developed to allow for data comparisons going forward. Building and cave roosts have been investigated. The network of relevant land/house roost owners is building up. Other potential roost features, such as in trees and rocky outcrops, require further scrutiny. A records database, including roost locations, has been started. This aim is ongoing as the long term project will continue to do this.
Record bat species via acoustic and trapping methods		✓		Acoustic recordings and trapping have emphasised the importance of combining the two methods of identification – with many species being impossible to distinguish with either method alone. This is especially the case with the lack of data available on the bats in Zambia. The data will contribute to future identification studies and training. This aim is ongoing as the long term project will continue to do this.
Work with local organisations to initiate awareness campaigns within local communities		✓		Contacts with local organisations have been initiated and maintained for the purposes of collaborating further as the project develops. Educational and awareness talks have been given, with more being arranged. This aim is

				ongoing as the long term project will continue to do this.
Build on current and new relationships with local wildlife management, conservation and agricultural organisations as well as landowners to aid future activities		✓		Despite maintaining great links with organisations and individuals so far, networking to aid further activities requires continual attention. This aim is ongoing as the long term project will continue to do this.

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

- a. The RSG grant was received after the project commenced. The pilot project was initiated whilst awaiting the RSG through equipment loans and personal contributions.
- b. The vehicle loaned for the project, although on the whole a very reliable Toyota Land Cruiser, did have some issues. Vehicle maintenance and possible breakdowns were foreseen; however it is always very frustrating when something does happen. On one occasion, there were issues with the fuel reaching the engine on the road. Despite generous help from passing truck drivers and mechanic friends on the phone, the car would not start. The team had to overnight at a local guest house and the following morning we were towed back to the base in Lusaka by obliging acquaintances. Luckily this incident was near the end of the fieldwork and so repairs did not hinder further work.
- c. Sample export permits were delayed, but the samples taken are appropriately stored so as to be transported and analysed in due course. Staff at the Zambian Department of National Parks and Wildlife have been very helpful and communicated well, despite things taking a while longer than expected.

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

- a. Collaborations –
Progress has been rapid with the project due to the collaborations with organisations (both locally and abroad) and with landowners. They have supplied local knowledge, advise, logistical support and venues. It has meant that the team has been well accommodated to carry out the

research and public awareness activities. These collaborations have been maintained so that the project can go forward smoothly and have greatest effect.

b. Data Collection –

Through greater, more current knowledge of the biology, ecology and conservation of the bats in Zambia, people can be better informed when making decisions relating to bats. This can be on a small scale, such as a house roost owner maintaining their property, to large scale agriculture project developments.

Building up a knowledge base on the bat species in Zambia and at the study sites has been essential in moving forward with the project. In addition, knowledge obtained about the study sites will aid further research activities.

The DNA analysis will provide further insight into the species occurrence and when combined with biometrics can develop identification features for future.

c. Awareness –

The local knowledge that the research team has developed has been shared passionately wherever we go. We have given several talks for educational and wildlife management groups. Information has also been shared on social media.

Although awareness locally is key to conservation, the international community does have a role to play. By exposing local people in Zambia to an international pool of experience, I hope to generate greater interest in bats locally to promote their conservation, but also provide training and experience for the next generations of local ecologists and wildlife experts.

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

- a. Local volunteers have mainly come from amongst the staff at the study locations e.g. farms and safari lodges. These individuals have greatly benefited from gaining knowledge about bats in their respective job roles, from farm workers to safari guides. I also have put together a team of local volunteers, some of whom will travel with the project activities and others who will help at particular sites in the areas in which they are based. I hope to develop this network of volunteers so that they will be able to carry out bat work more independently in time.

- b. Talks have been delivered to local groups which inform them of the importance of bats but also how to avoid the human-wildlife conflict associated with bats. Roost visits have helped to put people's minds at rest, whilst giving valuable information about living with bats or helping with humane exclusions. Land owners, managers and community members have shared in the experiences of seeing the bats up close and reports are being produced for them.

5. Are there any plans to continue this work?

The pilot project has proved a great success, especially in terms of data collection, raising awareness and collaborations. The project will definitely continue for the foreseeable future. The next research permits have been obtained and funding is being sought to continue the work. In addition, I have been accepted as a self funded, part time MPhil student at The University of Stirling focussing on the Zambian bats in agricultural landscapes – this will progress to a PhD next year all being well. I hope that this will enable the project to gain a more academic recognition and will open doors for further collaborations and published results.

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

- a. The data collected, such as calls and species occurrence, is being shared with open access databases, such as being developed by Bats without Borders.
- b. The data is also being shared with local organisations, landowners and managers through reports. The Zambian National Parks and Wildlife Department are receiving an annual report on the research activities.
- c. Results are also being shared through presentations at local and international talks, conferences and meetings.
- d. Articles aimed at the general public will also distribute knowledge gained. I also aim to publish the data collected in peer reviewed journals as the project progresses.

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

The original pilot project timescale was 'over a 6-week period from October 2015 to December 2015 with a view to developing the project into the long term'.

Having received the RSG after commencing the pilot project, plans were made to borrow equipment and provide personal contributions to get the project underway. As such, the RSG was used as the pilot project progressed and then into 2016 with preparations for more fieldwork.

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
Equipment	2,530	2,751.32	-221.32	Mist nets were purchased so as to eliminate the need to borrow in future
Travel	1,700	2,141.01	-441.01	The one flight ticket was cheaper than expected which allowed for some contribution towards the next flight, fuel costs were lower than expected, however, maintenance on the vehicle was higher due to breakdown.
Volunteers	570	330.54	239.46	Volunteer expenses were lower than expected as many were based at the study locations
Licences and Courier Fees	200		200.00	This was lower due to the delay in obtaining the export permit for samples.
TOTAL	5,000	5,222.87	-222.87	

*Exchange rate £1 =K12

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

- a. We have developed a more structured approach involving more acoustic surveys, to allow better comparison between study sites, which will be implemented in further fieldwork.
- b. PR activities require continual development and so more links with local communities need to be established.
- c. Developing the network of local volunteers for the project will allow greater capacity for the project in the long term.



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

The logo and mention of Rufford Foundation support has been publicised in the following ways:

- a. Articles - I have been writing articles for local publications aimed at the general public.
- b. Presentations – Talks have consisted of local educational talks and a presentation to the Zambian National Parks and Wildlife Department. The Bat Conservation Trust in the Midlands, UK invited me to speak about bat work in southern Africa and focussing on my experiences in Zambia, which went extremely well and many people came up to me afterwards to chat about visiting Zambia.
- c. Social Media - The Facebook group 'Bats in Zambia' has been established. Information about bats in general, as well as information about the project and other projects in the region are shared here and discussed. As internet access develops in Zambia, I hope we will reach a wider audience through social media.

11. Any other comments?

Thank you so much for the support this grant has given me to get the project off the ground with the efficiency and momentum that it has.

I would also like to say thank you to Jane and the rest of the Rufford team for being so enthusiastic and friendly.