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	Herman Njoroge Chege
Project title	Bottom up Conservation, Empowering School Kids to be Champions of Bat Conservation in Mombasa, Kenya
RSG reference	20445-1
Reporting period	November 2016 – July 2017
Amount of grant	£5000
Your email address	chegeherman@gmail.com
Date of this report	9th August 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
Recruit 50 "bat defenders" from 10 schools (30 primary and 20 day secondary school children)				We recruited 30 "bat defenders" from five primary schools. (We trained 15 primary and 15 secondary school children) who would go on to act as our Mombasa bat defenders. These kids were a subset of enthusiastic environmental club members from their respective schools.
After identification and training of the "bat defenders" organization of an on the ground interactive field based bat education training at a bat roosting site in Mombasa.				The group of 30 kids were taken through a practical training in the field at the Uhuru Gardens roost site that hosts > 10,000 Straw colored fruit bats *Eidolon helvum* bats.
Visit 10 schools (6 primary and 4 secondary) and have a bat symposium and talk organized together with the bat defenders and facilitated by the project leads.				Instead of visiting the individual schools (due to logistical ad financial constraints) we organised a "Bat Defenders Weekend" where 100 kids from 10 schools attended to learn about the bat conservation message. Together with the trained bat defenders we were able to impart knowledge on bats and their conservation through experiential and peer to peer training. The call to action was to find colleague both in their schools and community, give them an appropriate flyer and talk to them about bats. With 10 English (for peers) and 10 Swahili flyers (for community) the message we estimate was able to reach 20,000 people in Mombasa town. The strategy was for the 100 kids to talk

				to 20 other people hand them bat material and ask that individual or community member to talk to ten more people. Huge posters for the 15 schools attending both the training and bat defenders weekend were given for display at school notice boards and public places.
Evaluation of effectiveness of the project intervention through post-project monitoring				A survey was carried out before and after the training to gauge the effectiveness of the training
Erecting and putting up of easily understandable bat relevant signposts on bat roosts in Mombasa public parks in consultations with the management of the parks and the Mombasa County Council.				After consultation with Rufford it was agreed that we would need to come up with an effective way to engage the trainees for a longer period of time instead of implementing this objective. Effectively, The team agreed that the schools would alternate in groups of 10-20, visit the roosting sites frequented by locals and talk to the park visitors and talk to locals on bats for five consecutive months. This as we speak is ongoing even further beyond the project as a result of a great relationship developed with the local wildlife clubs in the Mombasa schools.

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

- Loss of Pound Value When we initially budgeted we were estimating a rate of 1 GBP to approximate to around 140 Kenyan shillings. However, we received the grant after the Brexit activities where the pound had lost almost 15-20% of its value to the Kenyan shilling and hence forcing us to go back to the budget drawing board. We were able to mitigate this by consolidating the training as opposed to holding separate workshops as in the case of the very successful "Bat Defenders weekend."

- Bat Defenders Participants turn out. We had initially targeted a total of 50 bat defenders from 10 schools. However, at short notice and due to security concerns due to heightened political activity and newly established school rules some schools pulled out at the last minute. Fortunately, 30 students from five schools showed up

and we were able to go on as scheduled and went on to collaborate with them on subsequent peer to peer and follow up activities.

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

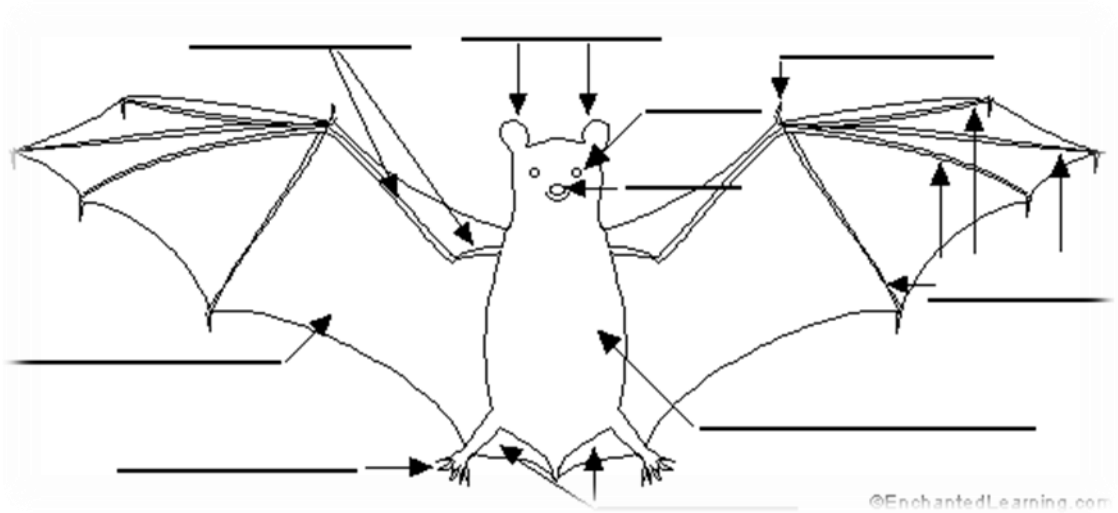
I. Training of a core group of 30+ "Bat Defenders."

At the end of the project, four theoretical and two practical field based bat conservation training sessions were held. In addition, the audience consisted of National Museums of Kenya Fort Jesus museum staff and interns who all benefitted from the training workshops and field visits.

A pre- and post-questionnaire survey was carried out before and after the training. The objective of this exercise was to test students' knowledge about bats before and after receiving the presentations, to assess whether their knowledge on bats increased after receiving the presentations and their perception on bats changed after the presentations.

Students were asked to answer a total of 15 questions with responses "strongly agree," "agree," "neither," "disagree," "strongly disagree," or " "I don't know," for questions 11 to 15. A correct answer was associated with each question. The questions were as follows:

1. Are bats mammals or birds?
2. What is the Swahili/ local name for bats?
3. Are bats blind? (a) Yes (b) No (c) Do not know
4. A group of bats is called (a) harem (b)colony (c) flock
5. Are bats active at night? a) Yes (b) No (c) Do not know
6. In which part of the world are bats found?
7. Where do bats live?
8. What do bats eat?
9. What is echolocation in bats used for?
10. Do you think bats are bad?
11. Are bats important?
12. Do you think bats are a bad omen?
13. There are more than 1000 species of bats
14. Bats are the only mammals that can fly?
15. Bats are threatened by human activities
16. Label the following parts of a bat



In addition to the above questions, the pre-test also contained several background questions to determine the student's age, gender, whether or not the student had ever seen a bat before and where they had seen it. These background questions were not asked again in the post-test. Incorrect answers were represented with a zero and correct answers were represented with a one. All answers of "I don't know" and answers left blank were scored as incorrect. These scores were then aggregated for each question to give an estimation of the effectiveness of the bat training.

Majority of the students had prior knowledge of bats before the presentation. Of the 30, 28 had never seen bats before at home, in the village, on trees, caves or in Mombasa City- Uhuru Gardens. Based on the pre-questionnaire survey, most of them knew that bats were mammals, are nocturnal, where they lived and their local name. However, they had little knowledge on what echolocation in bats is used for, the name given to a group of bats and if bats were blind (Figure 1).

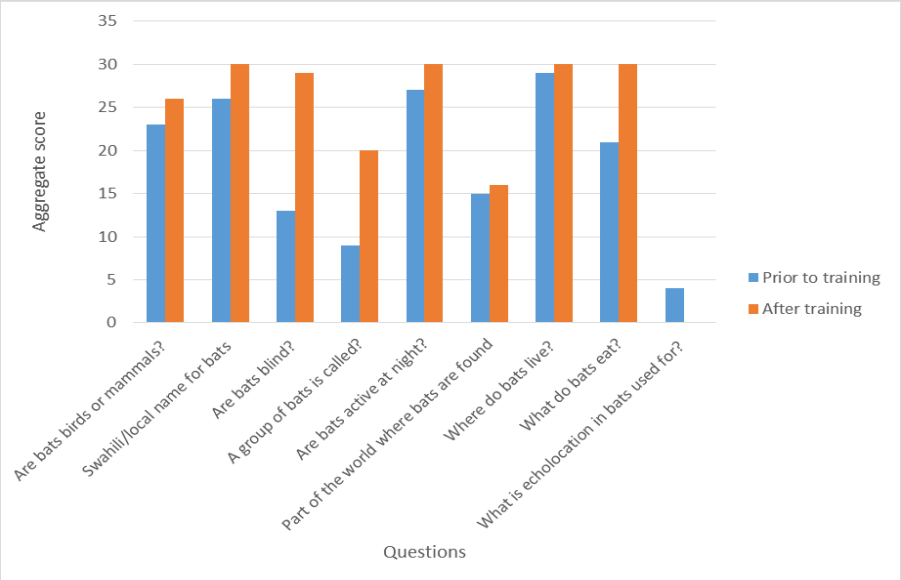


Figure 1: Aggregate scores for both primary and secondary schools before and after the bat training.

Additionally, 22 of the students disagreed that bats were bad mainly citing that they are God's/ beautiful creatures, help to protect crops and their waste could be used as gunpowder. Those who agreed that bats are bad (n=5) mentioned that they scared people, soiled their clothes with poop, destroyed crops and were blind therefore not knowing what they are doing (Figure 2). Only 11 students agreed that bats were important because they helped in pest control and their feces could be used as gunpowder while five agreed they were a bad omen. Out of 30, only nine students agreed there were over 1000 species of bats worldwide while 11 agreed that bats were threatened by human activities, with majority of them noting that they were experiencing habitat destruction and some were killed by young children or because they were associated with negative myths (Figure 2).

Overall, students generally scored higher after the training in all the questions apart from question 9, which was missing in the post questionnaire survey (Figure 1). All the 30 students correctly answered the Swahili name for bats, if bats were active at night, where bats live and what bats eat (Figure 1).

The number of students who did not perceive bats to be bad increased from 22 to 27 after the training (Figure 2) with majority of them stating that they did not harm people and aided in pollination and pest control. They also agreed (n=29) that bats were important in pest control, pollination and provision of manure. 23 of the students agreed that bats were affected by human activities mainly due to habitat destruction and climate change. However, after the training, the number of students who did not know there were over 1000 species of bats worldwide increased from 9 to 14 (Figure 2).

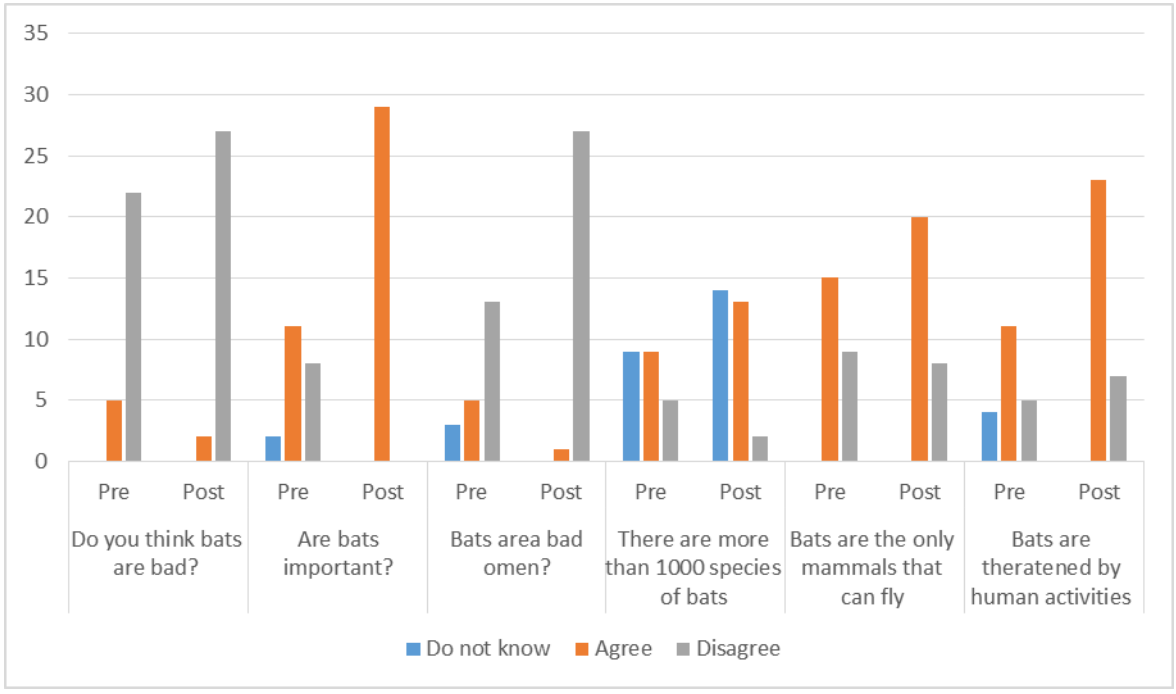


Figure 2: Overall students' perception and knowledge of bats before and after the bat training.

In most instances, the presentations and activities succeeded in boosting the students' knowledge of bats during the training.

ii. Practical field interaction

The project organized trips to the main Mombasa roost site after the training to cement the newly acquired knowledge. This was achieved by discussions in the field at the maternal roost site at Uhuru Gardens where thousands of bats roost.

iii. Peer to peer training of extra bat defenders and an eventual dissemination of bat conservation message to the community

After the initial training above, the 30 "bat defenders" participated in the bat defenders weekend as co-facilitators with the project managers. During that major event held at the Fort Jesus's National Museums of Kenya; there was:

- Traditional dancers and folklore prepared by the participants demystifying bats.
- Presentations by the bat defenders.
- Peer to peer training sessions.
- Discussions on way forward for bat conservation message dissemination.

iv. Commitment of bat defenders going forward towards bat conservation

After the "bat defenders weekend" it was agreed upon that the 100 participants would aim to reach out to 20,000 people with the bat conservation messages. This would be achieved through distribution of flyers to 20 people and discussions with them on the newly acquired bat knowledge. These "peers" are in turn expected to talk to 10 more people and using a bottom up approach spread bat conservation awareness in the Mombasa society and debunk the myths and mystery surrounding bats.

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

The local community will greatly benefit from the project. The involvement of school going kids is intended to be a bottom up strategy to get the Mombasa community educated on the importance of bats. The bat defenders have dedicated themselves to spreading the message to the community via direct engagement in the bat roost sites and their surroundings.

5. Are there any plans to continue this work?

Yes, we intend to seek funding to support the grassroots work of the bat defenders for a longer period of time to ensure maximum penetration of the bat conservation message.

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

The basic information on bats and their conservation has been converted into infographics which have been circulated in forms of posters and flyers in Mombasa. This is meant to in the simplest way illustrate the function of bats, their threats and conservation in Mombasa.

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

It was used from February 2017 to August 2017 (6 months) as compared to the anticipated November 2016 – July 2017(9 months)

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 £ sterling =134 Kenyan Shillings

Item	Budgeted Amount	Actual Amount	Difference	Comments
Subsistence allowance for 3 project staff and 3 project interns	1518	1800	-282	This allocation facilitated the project planning and implementation of the project catering for out of pocket expenses for the core team and support volunteers.
Transport and accommodation for 3 team Members and 3 interns	694	600	94	This money facilitated the movement of the core team from their respective places of residence to Mombasa for the periodic trips
Transport and Lunch for bat defenders	723	750	-27	This allocation was used to cater for the logistical, food and training expenses of the 30 bat defenders both in the theoretical and field training
Symposium Organization	1130	1200	-70	This portion was used to organize the bat defenders weekend and facilitate the peer to peer training of the 100 kids.
Signpost design, construction and Installation	651	400	251	Instead of the signposts and as discussed with Rufford the money was used to facilitate field visits for the bat defenders. It also assisted the printing of flyers, posters,

				banners, roll up banners for the training and subsequent outreach
Communication(Internet and Telephone Costs) (@ 14 pounds per month)	169	150	19	
Stationery	15	103	88	
Finance management	100	100		
Total	5000	5103	103	We might have gone over budget because of the pound-shilling fluctuation and covered this deficit from our own resources

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

I feel the next steps involves facilitating the bat defenders and respective wildlife and environmental clubs to continue with the bat conservation outreach in Mombasa. Further give scholarships to the enthusiastic interns based in Mombasa who enabled us to carry out the work to study bat related courses with field components at the bat roost site.

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?

All the posters, banners and production material that we produced contain the Rufford logo and the foundation received tons of publicity during the project period.

11. Any other comments?

I am grateful to Rufford for this opportunity and I have no doubt in my mind that the project will have a significant and lasting effect to the conservation of the African straw coloured fruit bat and other bat species in general in the main Mombasa roost sites and their satellite environs.