

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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<b>Grant Recipient Details</b>	
<b>Your name</b>	Beryl Achieng Makori
<b>Project title</b>	Bat Habitat Use In Mangrove Forests With Differing Disturbance Levels, Northern Coastal Kenya.
<b>RSG reference</b>	19315-2
<b>Reporting period</b>	June 2016-June 2017
<b>Amount of grant</b>	£4997
<b>Your email address</b>	Berylmakori@Gmail.Com
<b>Date of this report</b>	21 <sup>st</sup> June, 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
Assess the influence of human disturbance on the use of mangroves by bats				
Compare bat habitat use (in terms of captures and bat passes) in mangrove forests facing different levels of human disturbance.				
Develop a vouchered reference call library from bat echolocation calls for Mida Creek and adjacent areas to facilitate future acoustic studies and monitoring.				Lack of adequate key to bats found in Kenya led to some species not identified
Assess seasonal variation in bat habitat use in the mangroves.				The project span was over 1 year and it is inadequate to confidently compare the season variations without replication
Sensitise local communities on bat diversity, their ecosystem roles, the need to conserve them and why mangroves are important and needed for the conservation of bats and other fauna.				

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

The difficulty in putting up nets in the mangroves in the evening before the bats came out due to high tides. We had to put up the nets during the day and risk some of them getting destroyed by the community.

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

The most important and impressive outcome is effect of the public education on the community along the creek. The tour guides around the area are constantly asking for information to use while guiding tourists.

Having a local call library of bats that are extant in the area which was not available.

Getting an idea of how disturbance in the mangroves affect bats and bat activity around the area.

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

The tour guides at Mida creek are all member of Mida creek community; they always passed information they got from the public education we carried out to others and to tourist who reached out on us for more information.

The community along the creek lacked basic information on bats and often saw them as foes but there is some improvement noticed from how much they ask and report to us showing they now realise bats are important to the ecosystem.

The project employed some community member to help in carrying equipment, and setting up nets under my supervision.

**5. Are there any plans to continue this work?**

There are no plans yet but I would like to continue with this work especially to further understand how seasonal variations affect bats and by the enthusiasm shown by the community, I would like to do more.

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

I plan to publish this work in a peer reviewed journal, send reports to the county conservator of Kilifi to share and send a report to the Kenya wildlife Services and Kenya Forest service.

The report will also be available for other stakeholders and individuals.

**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 over a period of 9 months and was used for the full project length. Though sampling was to be done for 7 months it was done for 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.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Camping and accommodation	1960	1650	310	We got a deduction in the camping charges
Mist nets (14 nets x 80£ each)	800	1120	-320	Four more nets were acquired due to some of the nets getting lost or destroyed
Vanier calipers	15	15	0	The prices were pre inquired
Bat bags(100 pieces)	100	100	0	The prices were pre inquired
Travel by bus to and from Malindi (15£ x 2 persons x 1 trips per month x 9months)	420	270	150	We sampled once a month due to the monthly changes in the tides which could not be possible to put up nets in the mangrove areas in the evening. Sampling was also done over nine month period.
Food (for 3 persons x 14 days x 9 months)	400	620	-220	One more field assistant was employed due to the difficulty in checking the six nets and making transect walks at the same time. Though he was from the community around therefore no transport cost were involved.
Complete cooking gas cylinder	45	47	-2	There was a slight fluctuation of the price due to the location of purchase.
Gas refill(13£ per month x 9months)	87	96	-9	There was fluctuations in the cost or refilling the gas cylinder
Cooking utensils	70	54	16	We got the utensils at a slightly lower price
Assorted batteries for head lamps and bat detector	200	325	-125	More batteries were used than anticipated especially by the bat detector.
Public education and workshop facilitation (included T-shirts to participants during the workshop)	300	415	-115	The cost of acquiring printed t-shirts was not included in the initial budget
Printing and stationary	200	215	-15	More material was printed in terms of data sheets.

Expenses for moving equipment within the study area	250	134	116	We were able to camp nearer to the study area therefore the cost of moving from the camp site to study sites was reduced. Instead the amount indicated was used to ferry the bamboo poles from one study site to the other especially going to the islands.
Chemicals to preserve Voucher specimens (Formalin 30£ per 5 litre container x 1 containers)	150	30	120	Other chemicals were donated by the Nairobi National Museum as their contribution to this work.
<b>Total</b>	<b>4997</b>	<b>5091</b>	<b>-94</b>	The excess was footed by the pi. This may have come about due to the changes in timelines.
<b>Exchange Rate</b>	<b>£1=131.26Ksh</b>			

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

Have more bat scientists doing public education and community outreach.

Undertaking the project for a longer period of time so as to make better comparisons.

**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 RF logo was used on the t-shirts that were used for the workshop.

RF received publicity during all the talks given, public education and the workshop.

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

BERYL ACHIENG MAKORI- The principal investigator

I was the one undertaking the project and overseeing all the project activities. I was also doing the bat and call identification in addition to recording the calls.

Simon Wafula Masika – Project/field assistant

He was assisting with putting up nets and monitoring the nets

Vinya Nodoro (Kadenge)-Field assistant/ guide

He was assisting in putting up nets and guiding us on how to approach farm owners and reaching specific areas for the study.

**12. Any other comments?**

I am grateful for the grant which has enabled us make a difference in the mindset of some of the people living along the creek and have a data that could be used as a baseline for future studies for this area. Thank you.