

## Final Project Evaluation Report

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Your Details	
Full Name	Jean Claude Tumushime
Project Title	Mapping roosting habitats of straw-coloured fruit bats (Pteropodidae: <i>Eidolon helvum</i> ) in Kigali City and Rwamagana District and enhancing their Conservation
Application ID	1bdc9a-1
Grant Amount	£4,994
Email Address	tumuclaude@gmail.com
Date of this Report	October-05-2018

1. 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
Mapping and monitoring of roost sites of straw-coloured fruit bats in Kigali city and Rwamagana District and estimating of population sizes at these roosts.				All roost sites were GPS mapped and monitored. Bat counting was done on monthly basis in order to estimate the population sizes of <i>Eidolon helvum</i> in our working sites.
Gather views and perceptions of local people about bats				This was fully achieved especially in the last term of the project implementation as schools and community members willingly gave information about how they perceive bats.
Document threats facing the bats and their habitats				Much information was obtained from schools where by students/pupils and teachers listed to us adverse things that are done on bats and their roosts. For instance tree cutting was common in all six roost sites we monitored, spraying pesticides and burning objects that produce fumes in order to chase bats.
Raise public awareness on the role bats play in ecosystems				Local communities were reluctant to participate in talks because of initial negative perceptions on the importance of bats; but later on they became interested in our talks.
Work with local people to restore degraded habitats around <i>E. helvum</i> roost sites via Planting of potential indigenous roost trees.				Towards the tail-end of the project, new roost sites were discovered both in Kigali and Rwamagana District, but it was too late for us to engage local communities in activities of planting trees and the sensitization was not fully conducted at these new sites.
Work with stakeholder agencies to protect bat roost sites				We got support from Rwanda Development Board's (RDB) Department of Conservation, where

				<p>by their staff participated in our campaigns.</p> <p>We also worked with Rwanda Wildlife conservation Association (RWCA) during monitoring activities.</p> <p>Local leaders were also of great help for us in gathering trainees and organising the workshop venues.</p>
<p>To publish materials for School kids in which we highlight the necessity and the myths Surrounding Bats.</p>				<p>We made banners that contained bat information and we used them in our campaigns. Additionally, We distributed leaflets that contained bat information but we could not develop comic books for students as it was logistically expensive.</p>

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

We got a permit from RDB's Department of Conservation a bit late. This resulted in the delay of project implementation. However we covered much ground after the permit was granted.

Secondly, our work schedule conflicted with the school calendar but later on we managed to adjust our activities to align with school sessions.

Thirdly, new roost sites were discovered very late in the day. The limited budget and inadequate could not allow us to do these additional sites. However, we managed to at least visit each new site once by recruiting two interns/volunteers. The new interns worked alongside our team to help in mapping and monitoring activities, albeit belatedly.

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

1. All roost sites of *Eidolon helvum* in Kigali City and Rwamagana District were mapped and their population sizes estimated. This baseline information is critical for designing intervention for the conservation of this endangered species in Rwanda.
2. Students understood the importance of bats in the ecosystem and the ecosystem services bats provide to humans and the environment in general. Students also created Environmental clubs with the help of their teachers, important avenues for inculcating conservation values at a young age for future generations.
3. Participation of stakeholders was very important in delivering conservation messages to local communities and schools. Consequently, local leaders

promised to continue advocating for bat conservation in areas of their jurisdiction.

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

Roost sites located on lands owned by schools and local communities were, prior to this project, prone to tree cutting and pruning as people wanted to chase away bats. However, at the commencement of this project and the subsequent intense public education and community outreach programmes, attitudes changed with local people understanding the importance of bat roost sites (especially at one of the roost sites called Camp Kigali). In addition, at one of the sites at Rwamagana, local communities pledged not to cut trees used by bats for charcoal purposes. Finally, at another roost site located at Rwamagana and where the land is owned by the parish, the owner understood the importance of not clearing roost trees at that site and actually recommended that we should plant more indigenous trees for bats to use as roosts in the future.

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

Yes, we have plans of continuing with this work. We intend to work with and through environmental clubs (and student members) that we formed at different schools in developing innovations that can be used to protect bats. For instance, we will organise local songs, together with football and volleyball matches, and other locally driven initiatives to pass on messages of bat conservation. As requested by School head teachers, we will develop teaching materials about bats, their ecological importance and the need to conserve them. Importantly, we will make tree nurseries of indigenous trees to augment existing ones at mapped roost sites (four in Kigali city and two at Rwamagana District).

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

We plan to present our results through attending conferences. For instance, we will present our findings at the famous annual conference called Conversation on Conservation in Rwanda that provides a national platform where all conservationists and other stakeholders meet and discuss conservation issues.

Head teachers requested that we develop teaching materials about bats that can be used in their schools; this can be a good channel for creating awareness about bats.

We plan also to develop a short video on bat conservation; this video will be shared with our stakeholders, on social media and uploaded on YouTube.

We will also share our results with East African Bat Network which is a new platform of bat conservationists from Rwanda, Kenya, Uganda, Tanzania and Ethiopia.

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

The project took 13 months, instead of the proposed 12. This delay was caused by the late granting of the working Permit, and the asynchrony of our planned activities with the school calendar in Rwanda.

**8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Hiring venue for all workshops during project implementation	320	260	60	Some of the workshops were conducted at schools and we did not pay for the venue
Rainwear for 2 people	99	0	99	Donated by an Environmental agency
4 pairs of eye goggles	30	30	0	It was done as budgeted
Speakers and microphones	0	320	-320	We hired speakers and microphones we used in schools
Laptop-computer	350	320	30	We got a cheaper HP Computer as there was tax exemption on IT devices
Refreshment for workshop participants and facilitators	400	330	70	We were given discount on drinks
Daily allowance for personnel during mapping (2 persons working for 10 days)	330	390	-60	We had one more day of mapping for new roost sites of Kigali
Allowance for workshop facilitators from Environmental agencies (£20 per day *5persons)	100	100	0	It was done as budgeted for
Travel by Public transport/bus (2 persons for 12 trips) for sites coverage	440	480	-40	Some roosts were found in remote areas we had to hire motorbikes for transportation.
T-shirts with straw-coloured bat signs to be given to school kids	470	415	55	We got discount on putting Rufford Foundation Logo on T-shirts

Allowance for workshop participants (30)	520	502	18	One participant did not attend
Allowance for the project assistant coordinator for 12 trips	456	456	0	It was done as budgeted for
Allowance for the project coordinator for 12 trips for activities follow up	450	450	0	It was done as budgeted for
Printing and stationary	120	110	10	We were given discount on reams of papers
Two interns worked alongside our team.	0	60	-60	We had to interns who volunteered with us in the last term of project implantation where by interns worked with us in monitoring and mapping roost sites.
Batteries for Head lamps and GPS unit	40	37	3	We bought cheap batteries but of good quality
3 Head lamps	240	210	30	We bought headlamps at a lower cost than expected.
1 GPS Unit	221	220	1	Almost the same cost as the cost in the budget
1 Binocular	109	105	4	The binocular we bought was cheaper
1 Digital Nikon Camera	299	284	15	We got a cheaper digital camera
<b>Total</b>	<b>4994</b>	<b>5079</b>	<b>-85</b>	
<b>Exchange Rate</b>	<b>£1= FRW 1,062.95</b>			

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

- There is a need to continue repopulating and restoring bat habitats by planting trees especially at old and newly identified roost sites.
- Working with School Environmental Clubs that we established to further entrench bat conservation in Rwanda.
- Continued sensitisation of local leaders and other stakeholders will create a sustainable conservation approach of bats and will enhance the community ownership of bat conservation.
- Further studies on bat conservation needs are needed as they will help in generating useful information for the conservation of these bats.

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

Yes, we used the Rufford Foundation Logo on t-Shirts, leaflets, banners and on questionnaires we used during the project implementation. The logo will also be used wherever we present this work.

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

**Dr Jean Claude Tumushime:** myself, I was much involved in coordinating project activities, giving talks, field visits and data collection and reporting to our stakeholders.

**Dr Adrien Ntwali Emile:** He conducted field work by monitoring bat roosts, mapping bat roosts, taking photos, community outreaches by administering questionnaires.

**Dr Nzayisenga Gaspard:** Worked with our team occasionally in capacity of a trainer as his experience in bat conservation was useful to our Project (he previously worked as an assistant to Dr. Julius Nziza in the project of bat conservation in Musanze caves in Rwanda, a project that was sponsored by Rufford Foundation).

**12. Any other comments?**

We are greatly indebted to the Rufford Foundation for funding this project. Without this support, this project would not have been possible.

Further studies are needed so that enough information is available for the conservation/scientific communities as this will help in incorporating bat conservation in their priorities.

#### **Locations of Bat Roost sites in Kigali City and at Rwamagana District**

<b>Roost site</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Area</b>
Camp Kigali	-1.961573	30.060773	Kigali City - Nyarugenge District
Kigali-IPRC Kicukiro	-1.979045	30.105411	Kigali City - Kicukiro District
Kigali-Umubano Hotel	-1.945718	30.092815	Kigali City - Gasabo District
Kigali-Kiyovu (but this roost site is not a permanent one, bats occupy this roost seasonally).	-1.948995	30.065727	Kigali City - Nyarugenge District
Rwamagana District site	-1.94763	30.4561	Rwamagana District - Rwamagana town
Rwamagana District-Duha	-1.879968	30.347490	Rwamagana District - Musha Sector





Environmental club-Students and teachers. ©Adrien Ntwali.



Jean Claude counting bats at Rwamagana Duha roost site. ©Providence.





Bottom left: Dr Jean Claude monitoring a colony of Bats of Rwamagana. Bottom right: Dr Jean Claude counting bats at Rwamagana District-Duha roost site.



Left: Jean Claude Tumushime meeting members of environmental club. ©Adrien Ntwali. Right: From L-R, Richard, Adrien and Gaspard giving a talk to students. ©Jean Claude Tumushime.



Left: From L-R, Dr Richard, Head teacher and Gaspard talking to students about bat conservation. Right: Dr Gaspard explaining to primary school pupils the ecological services provided by bats.



Left: Dr Gaspard explaining to primary school pupils the role of bats in the ecosystem. ©Adrien. Right: Dr Richard (with Microphone) from Rwanda Development Board speaking to students about the role of bats.



Left: Dr Jean Claude Tumushime with the Head teacher of Camp Kigali Secondary school. Right: Cutting of roosting trees along Camp Kigali road. ©Jean Claude Tumushime.