

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

---

Grant Recipient Details	
Your name	Adeyanju Temidayo Esther
Project title	Assessment and impact of landuse and anthropogenic activities on insectivorous bat species composition and activities in Omo Forest Reserve, Southwest Nigeria
RSG reference	78ca1b-1
Reporting period	
Amount of grant	£5000
Your email address	<a href="mailto:temidayoadeyanju@gmail.com">temidayoadeyanju@gmail.com</a>
Date of this report	23/01/2019

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
1. The first objective of this project was to determine the knowledge and perception level using structured questionnaires and focal group				Questionnaire was administered to a total of 266 respondents out of a target population of about 300. Focal group discussion was held with key informants (village heads and chief hunters) to get sensitive information about bats and utilisation that the questionnaire did not capture. We had more male respondents as many of their wives or female population are in nearby towns and not in the agricultural settlements
2. The second objective will investigate composition and activities of bat communities in the existing land-use systems.				A total of 40 nights was used to investigate the composition and activities of bats communities in the different land use types using mist nets, harp trap and bat detector in the Strict Nature Reserve/ Buffer, Cocoa Plantations, Gmelina/Teak plantation, Naulear plantation and the pine plantation. A total of about 35 species were trapped belonging to five families (Vespertilionidae, Hipposideridae, Rhinolophidae, Nycteridae and Pteropodidae). There were new records and extended ranges of bat species during our study for the Nigeria and the study site
3. The third objective is to establish a bat conservation workshop, outreach, awareness and campaign programs to stakeholders at the surrounding communities and set up Bat Conservation Clubs and BatLife Initiative in primary and secondary schools in the surrounding				We had school outreach with the plantation primary and secondary schools in May and December. We had bat campaigns and night talks in six communities using powerpoint presentations in May, August and December 2019. Also as part of the objectives to expand the conservation and ecology of bat study, a 6-day training workshop was held in August to train students (undergraduate and postgraduate), rangers, researchers and lecturers on the basic techniques to bat capturing for ecological studies towards a successful bat ecology and conservation in

communities.				<p>southwest, Nigeria. This was the first training workshop for the region and about 20 participants were trained.</p> <p>There are plans to teach the children on tree planting as a follow up on the bat talks given to them, this hoped to be achieved in April 2020 at the onset of the raining season so that the tree saplings can survive. The plan is to plant about 400 indigenous tree species around the school compound.</p>
--------------	--	--	--	--

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

It was not planned that there will be a need for local security guides due to the activities of poachers and also possible encounter of an injured animal within the strict nature reserve (SNR). This was dealt with as two guides were employed during the study period in the communities close to the SNR (Etemi and Gerald). The roads were mostly inaccessible during the raining season, therefore motor bikes and canoes were used to assess the targeted communities.

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

There was success with the outreach especially within all the agricultural communities visited. Through the bat conservation talks, we observed a change in response from residents to bats assemblages especially those that roost in fallen logs within the farms. We encouraged them from the responses gotten from the questionnaire on the importance of bat species, their ecology and how their conservation can help with good cocoa yield and improve on better environmental quality.

A detailed list of the bat species of Omo Biosphere Reserve (OBR) within the different landuse types after the first survey about 7 years ago. There were new records of bat species as well as range extension species during the study.

The children were educated on the importance of bats as many of them thought that bats are birds. Also, the training of university students and lecturers, rangers as well as researchers was a success as many especially the students have ongoing projects on bat ecology (roost characteristics and diets of *Eidolon helvum* (undergraduate), bats as bushmeat (undergraduate) and genetic variation (MSc) in two families of insectivorous bats from OBR and urban (Ibadan).

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

The communities received the project well and cooperated with the team especially while within the core of the forest. They benefited and the forest guides were gotten from the communities, the school and community outreaches to

children was also an encouraging aspect of the project especially communities that quite of a distance to J4 where the plantation school is located. Water bottles and t-shirts were shared to children with Rufford logo on each material. We encouraged the importance of conservation education as this will also help the future of their children. T-shirts were given to the head of communities, chief hunter and youth leader in the communities visited during the outreach and campaign. Other stakeholders that benefited were community members from the J4 area and contractors who attended the training workshop.

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

Yes.

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

I hope to attend conferences (at least two) for the current research and others from the ones taken up by undergraduate and postgraduate students. I will also get out journal articles on ecology and conservation in peer review journals. I also intend that with more opportunities expand and share my results with schools in the urban areas, speak at non-science meetings as a means of awareness and outreaches

**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 funds were used within the stipulated time with 40 nights of trapping during the wet and dry seasons; school outreaches in May and December; community outreaches and campaigns in May, August and December as well as workshop training in August.

**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
Cost of producing 200 structured questionnaires @0.2/ questionnaire and other educational materials	40	40		There was increase in number of questionnaires printed by 100 copies
Living cost for four team members for 2 days workshop@24/day	48	48		
Living and transportation cost for four team members	240	240		

for 10 days conservation education and awareness program@24/ day				
Cost of educational materials and refreshment (Water bottles, posters, flyers, brochures, snacks, water, etc)	200	200		
Cost of 70 Rufford Project T-shirt for conservation education awareness@7/ shirt	490	400	-90	80 T-shirts were made as against the proposed 70 @5/shirt
Living cost for four team members@6/day for 40 days field survey	960	960		Additionally, two guards were hired at the SNR in the dry and wet season
Cost of vehicle rental and fuel @20/day for 40 days field survey	800	780	-20	The roads leading to SNR and the communities are inaccessible during the wet season so that throughout the wet season, activities within the OBR was carried out using motor bikes and canoes. Assessing the SNR and during the dry season was much easier than during the raining the season. So that at some points, the project vehicles were able to ply the road to certain places such as the osoko settlement before the use of motor bikes and canoes
Cost of one Harp trap	600	300	-300	Two harp traps were fabricated at a reduced price than the budget
Cost of Ultra Bright Cree LED -160 Lumens, % lightening modes, white and red LEDs, adjustable strap, IPX6 Water Resistant	96	96		
Cost of Dell 15.6 Inspiron 15 5000 Series Notebook with carrier bag	468	431	-37	The notebook met specification
Cost of Nikon COOLPIX P900 Digital camera with extra batteries and memory cards	468	427	-41	The camera was refurbished, and this fitted into the specification as well as the budget
Cost of health precautionary equipment	70	61	-9	The medical supplies were purchased at whole sales cost

(3 boxes of surgical hand gloves, 3 boxes of face masks, etc)				
Cost of vehicle rental and fuel @20/day for 6 days workshop training	120	120		
Food and accommodation for seven training participants@4/day for 6 days	168	225	+57	We had a higher number of participants (13) at the training. Provisions were augmented from our field provision.
Cost of a projector	120	106	-14	The projector was purchased at a lesser amount than the budget
Shipping Cost	122	75	-47	This was the cost of shipping camera, laptop, projector and accessories (memory card, laptop bag, extra batteries) from the US
Duty custom charges (DHL and NIGERIA CUSTOM DUTY)		181	+181	The purchase of the laptop, camera and projector had duty charges on shipping arrival at Lagos from BH Photos in US. Goods would not be delivered except duty charges were cleared
Camping gears (3 tents, 2 sleeping bags and 1 camping gas)		101	+101	Camping gears were purchased as there was no housing unit within the SNR and this also facilitated our work within the communities as we had a camping points after each outing
External hard drive		60	+60	There was a need to empty the memory cards for both camera and bat detector during the field outing, outreach programs as well as the training workshop for safe keep
Projector repairs		42	+42	The projector had a technical fault and was fixed for subsequent use during the conservation education and outreach programs
Bank charges		115	+115	Domiciliary Bank charges and annual visa card charge
<b>Total</b>	<b>5000</b>	<b>5008</b>	<b>+8</b>	Exchange rate= 1GBP=454 naira

**9. Looking ahead, what do you feel are the important next steps? I hope to further look into bats as bush meat: the biomass and extent of hunting in southwest;**

Look further in the ethnochiropterology (traditional utilisation in relation to use with other small mammals).

Strengthen the conservation outreach to the schools in other communities.

Extend the research especially the conservation outreaches to Shasha and Oluwa Forest Reserves as well as other important bat sites in southwest Nigeria.

Endeavour to put some renovations in place for a good learning environment for the children as most of the classrooms are dilapidated and lack of some basic school needs such as seats (observed in Osoko area).

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

Yes, the Rufford Logo was used on the t-shirt; official communication with partner organisations, workshop materials; banner and also during presentations.

Yes, the Rufford Foundation received great publicity as at each stage, gratitude's were given to the Rufford Foundation on our Facebook page and blog

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

**Adeyanju Temidayo** (BSc Wildlife Management and MSc. Conservation Biology): I am a wildlife/ small mammal enthusiast with focus on bat ecology, taxonomy and conservation. She is the principal investigator to the project. She coordinated the bat research, conservation education outreaches, questionnaire, administration community outreaches as well as workshop training during the project.

**Adeyanju Taiye** (PhD): a wildlife expert in the fields of Ornithology and wildlife conservation in the Department of Wildlife and Ecotourism Management, University of Ibadan. He was the advisor to the team throughout the project. Actively on the field with team to give professional advice and provided the mist nets, extraction bags, GPS and poles used during the survey.

**Adejumo Dolapo**: A graduate of Wildlife Management and trained by the PI. He was a dogged team member, helping out with bat conservation outreaches, questionnaire administration; video recording, bat extraction and field work with setting up mist's nets, extraction of bats from net, poles carriage. He was active throughout the field work.

**Mr Daniel**: A machine operator and our guide during the bat survey nights. He is a member of the J4 community is also knowledge about wildlife and management.



He was one of the rangers we employed during the survey nights as security agent aside the individuals we worked with from the two communities close to the SNR

**Ayomiposi Ayodele** is a zoology graduate and currently a PhD student in the Department of Wildlife Management. She assisted with the training workshop and outreach in the aspects of logistics, feeding and accommodation during the August outing

**Yellow Ukeme Essien** was the GIS personnel on the team. He laid out the points where the mist nets were placed and also made the map for the study area. He also was the GIS instructor during the workshop training has expertise in Forestry, Wildlife and mapping and spatial data using ARCGIS and other related tools.

**Mr Clifford Omonu:** The Forestry Research Institute officer at the OBR. He was our logistics personal to the communities. He assisted with securing permits and entry into all the communities we worked. He was also active with the team during some of the nights of bat survey

**Emmanuel Olabode** is the education and research coordinator for Omo-Shasha-Oluwa Forest Reserve under the Nigerian Conservation Foundation. He gave stakeholders support especially during the school outreaches. He was very useful with the teams logistic to the schools

## 12. Any other comments?

I will want to use this opportunity to appreciate Rufford Foundation for the support given to birth the dream and passion in me for bat conservation conceived for many years now. Batlife initiative was launched with a major mandate of using bat ecology and conservation studies to mediate between nature and man with associated conflicts. This funding has helped to kick start a story about bat conservation in Nigeria and hope to expand to other West Africa countries