

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	Samuel Bakari
Project title	Assessing the implications of grazing intensity on vegetation structure and highland grassland birds in Kinangop
RSG reference	25070-1
Reporting period	Oct 2018 – Oct 2019
Amount of grant	£5,000
Your email address	bakarismuel@gmail.com
Date of this report	01/12/2019

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
Set up experiment in the two reserves which were also used as demonstration and education platforms for local farmers, conservationists, scientists, eco-tourism companies, policy makers and education institutions.				Paddocking was done in the two nature reserves to set up grazing experiment. In each reserve, 15 cows were allowed to graze in half of the area throughout the project season. The remainder half was divided into three equal portions/paddocks and 15 cows allowed to graze in each paddock for a month and moved to the next. More than 50 students, 10 teachers, 12 farmers, and five local tour guides have visited the reserves during the project life.
Document how grazing management systems and intensity influence vegetation structure and quality, invertebrates and how this subsequently affects the ecosystem functioning particularly the grassland birds.				We collected data on the vegetation structure (height and species), abundance of crawling and flying insects, abundance of grassland birds every month. We are processing the data and the findings will be used to feedback on farmers through leaflets. We are optimistic that the grazing system will continue, and data will be collected for at least every quarter, results of which will be published in a journal
Promote ecotourism and citizen science				We have received over 80 visitors (domestic and international) over the last one year. Local guides and students have been trained on how to collect useful data on local birds and submit the data through the BirdLasser .
Train local volunteers in biodiversity monitoring through active participation. This will at the same time help cultivate youth's interest in				Through the project implementation period, eight local and two international volunteers were involved in data collection and were trained on various sampling techniques including setting up

biodiversity monitoring and conservation				pitfall traps, sweep-netting, measuring vegetation height and structure, identification of birds and data entry. In collaboration with Nature Kenya, a 3-day training monitoring biodiversity was organised – 24 members of Friends of Kinangop Plateau were trained.
Create awareness to the farmers and local stakeholders on the importance of the grasslands as habitats for biodiversity, provision of ecosystems services and support of livelihoods. This will be achieved through feedback meetings and flyers.				More 100 individuals were directly reached out during the project implementation. We are now analysing data and as soon we have results, we shall print out detailed flyers.
Prepare and publish at least one peer reviewed paper that can be used by other scientists				We are analysing data and the results will inform if we may need to collect more data. We shall produce a report to share with stakeholders and the government and relevant policy makers

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

There was a prolonged dry season from November 2018 to May 2019 which greatly affected the regeneration of grass. The vegetation was back to normal after the rains in May. As a result, we shall continue to collect data for an extra 3 months after October, the scheduled end of project to cover on the drought period.

At the same time, we experienced some challenges with local farmers whose cows were used to graze in the nature reserves. Sometimes the farmers would sneak cows in paddocks before the scheduled time. Positively, we have a learnt lesson that we need to have full control of the livestock grazing and one way is to own livestock grazing in the area for us to be successful in setting up a long-term demonstration farm.

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

- a) Ten volunteers were trained in data collection through direct field involvement and, in collaboration with Nature Kenya, 24 members of Friends of Kinangop Plateau were trained through a 3-day training in monitoring biodiversity.

- b) Worked with the local youths to encourage eco-tourism and promote alternative nature-based income generating activities.
- c) Through the project, we managed to fill a management gap that we have been facing regarding the nature reserves in Kinangop for over 10 years through putting up of fences, designing paddocks and motivating young members of Friends of Kinangop to actively take part in the management of the reserves.

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

To promote eco-tourism, citizen science and motivate youths to participate in biodiversity monitoring, eight local volunteers were trained in data collection through direct field involvement 24 members of Friends of Kinangop Plateau were trained through a 3-day training in monitoring biodiversity.

Local farmers were allowed to graze their animals in the two reserves and were involved in one-on-one discussions on grassland management and are thus more aware of the threats facing highland biodiversity.

Students from nearby schools were educated on the ecology of highland biodiversity.

5. Are there any plans to continue this work?

The unique highland grasslands face many challenges from over utilisation, poor management, increasing human population and climate change all resulting in degradation of the grassland ecosystem a resultant decline of populations of highland grassland biodiversity. Our long-term objective is to halt the decline of the Sharpe's longclaw population and other grassland biodiversity. This is not by any means a small undertaking and we must keep on increasing our efforts towards saving this threatened species alongside other specialized highland grassland biodiversity. This project and the "sheep for Longclaw" led by my colleague Mercy Kariuki feeds into these efforts that are proving to be very efficient. To build on this momentum, we need to continuously build our ecological and socio-economic knowledge to inform best conservation initiatives. Moving forward, and following on lessons learnt, we shall endeavour to have full control of livestock grazing in the two reserves to. This way, we shall be able to improve the precision of our data and have more power to positively influence the policy and decisions by individual farmers.

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

We plan to share the results of our work from as many options as would be possible. To the local stakeholders, we shall hold a feedback forum soon after we have refined our results. We shall also produce simple flyers with simplified key findings. Next year, we plan to share the results during the Pan Africa Ornithological conference in Zimbabwe.

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 project ran from October 2018 until End of October 2019 as anticipated. However, to cover for the prolonged dry period, we shall aim to collect field data until December 2019.

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
Insect sampling equipment and material	180	235	+55	
Transport (car hire and fuel)	1440	1250	-190	We are likely to spend more on this for another 2 or 3 months but this will be supported by the Friends of Kinangop Plateau.
Principle Investigator	1440	1200	-240	
Field assistants	1440	1640	+200	Same as above.
Fencing and paddocking	2900	3300	+400	
Total	7400	7625	+225	

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

Looking ahead, we appreciate the enormous task of reverting the loss of habitat and the associated highland grassland biodiversity. We must keep on increasing our efforts towards saving the threatened Sharpe's longclaw alongside other specialised highland grassland biodiversity. We need to continuously build our ecological and socio-economic knowledge to inform best conservation initiatives. Moving forward, and following on lessons learnt, we shall endeavour to acquire sheep that will be used to graze in the reserves and serve as genetic seed bank for extending the sheep loan scheme initiated under the Sheep for Longclaw from South Kinangop to North Kinangop.

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, Rufford logo was used in the following ways;

- Education programme, participating schools and students received certificates that had Rufford Foundation logo.
- PowerPoint presentations made during the farmers workshops and the trainings held during the project phase.

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

I worked in collaboration with **M. N. Kariuki** (MSc; Kenyatta University) with whom I have worked together on various conservation and research projects in Kinangop including the “sheep for Longclaw project” also supported by The Rufford Foundation.

Abraham Mwangi Kuria and **P. Maina Kimani** were my field assistants for all the field work and data. **Ken Wanjohi** and **Lucy Ngare** often supported the field work as regular volunteers.

Dr Joseph Mwangi, the Regional Coordinator - International Cranes Foundation and **Mr. James Mutunga**, the Conservation Officer – Species, Sites and Habitats – Nature Kenya supported the training of youths in Monitoring of highland biodiversity.

12. Any other comments?

The funding by the Rufford Foundation was very instrumental and we are hoping that it will help secure further funding from other donors.