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	Mohamed Julius Kibaja
Project title	Conservation of the Endangered Ashy red colobus monkeys (*Piliocolobus tephrosceles*) in unprotected areas of western Tanzania
RSG reference	22089-1
Reporting period	December, 2018
Amount of grant	£ 5000
Your email address	kibaja@udsm.ac.tz
Date of this report	1st December 2018

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
Distribution and conservation status of Ashy monkeys in unsurveyed (unprotected) areas in western Tanzania				Surveys along trails were conducted and group location and size were recorded. The current distribution of this primate was mapped in all sites covered during the study period. Population size and density figures are currently being analysed and will be published soon. However, for accurate population size estimate, monthly repeat surveys are required on same trails for about 6 to 12 months.
Conservation threats of Ashy monkeys in unprotected areas in western Tanzania				Human signs were fully recorded along trails. Mapping of human signs (threats) and their respective encounter rates have been produced and will also be published soon. However, in the future, strip method should be chosen to compare the level of human threats facing this species in sites experiencing different levels of human settlements.
Conservation genetics (Genetic diversity) of Ashy red colobus in western Tanzania				About 1000 faecal samples were collected from all sites in western Tanzania: 100 samples in the Mbuzi forest area on the Ufipa plateau, 700 faecal samples in the Masito-Ugalla ecosystem and additional 200 samples from Gombe and Mahale National Parks. Samples are kept in a fridge at -20 degrees centigrade at the University of Dar es Salaam. DNA analyses will be conducted.
Conservation campaigns in the study areas (Masito-Ugalla Ecosystem) and Mbuzi Forest area) in western Tanzania.				In both study areas, conservation campaigns were conducted for different target groups: villagers, elders, village and religious leaders, students and district forestry officers regarding the conservation of ashy

				monkeys and their habitats. These involved talks, lectures, excursions and poster displays. Progressive reports containing information on status and threats of ashy monkeys were also given to Tanzania Forestry Services (TFS) and Districts Forestry officers.

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

i) The rough terrain of the study area. The roughness (hilly and deep canyons in some sites in the Masito-Ugalla Ecosystem and steep rugged slopes of Ufipa escarpment) have forced me to use trails instead of straight line transects.

ii) The vastness of the landscape and time constraints. One of the goals was to map the distribution of the species in a large area in the Masito-Ugalla ecosystem. However, time was not enough to conduct monthly repeat surveys along the same trails to permit more adequate assessment of the ashy monkeys' population density. Hence, I focused on comprehensively establishing trails in accessible sites across the ecosystem. This is because it is imperative to comprehensively know the distribution of this species in this ecosystem, a unique dry and seasonal habitat not initially considered to be ideal for the folivorous and arboreal ashy monkeys.

iii) Slowness and protracted progress regarding the generation of a species Conservation Action Plan in the Mbuzi Forest. The major reason that caused its slow progress was that there was a major debate on the fact that currently the Mbuzi Forest is severely degraded. Up to 96% of its forest has been converted into farms and it also suffers from serious ongoing land use ownership conflicts such that people think it is of little conservation value. Thus the Conservation Action Plan has to be stopped until these conflicts are addressed. An immediate solution to this problem was to focus primarily on Chala forest, adjacent to Mbuzi Forest. Thus, the action plan is not complete. There has been however, an emerging concern that a new comprehensive action plan should be made to include the entire Mbuzi Forest area in order to include the newly discovered sites harbouring this endangered primate. In the meantime, there has been an approved Conservation Action Plan globally which also addresses conservation actions for Tanzanian red colobus species (endorsed and inaugurated in the International Primatological Society Congress in August 2018 in Nairobi, Kenya).

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

i) The current distribution of ashy monkeys in all sites covered by this study has been mapped and updated. Also the group and population density of ashy monkeys in the Mbuzi forest area (Mbuzi Forest and adjacent areas) and in the Masito-Ugalla ecosystem have been quantified and will be submitted for publication soon. In summary, about 182 groups were found, in which 88%

were in the Masito-Ugalla Ecosystem whereas 12% were in the Mbuzi forest area. Additionally, Chala forest and Ufipa escarpment are new sites on the Ufipa plateau where this primate has been discovered. I believe that these findings are important to speed up actions to upgrade some proposed forests (Tongwe East and West forests in the Masito-Ugalla Ecosystem) into forest reserves which also harbour this endangered primate.

ii) Human signs were fully recorded and mapped in all surveyed areas. Encounter rates and density of human signs were calculated based on the total trail length. Based on these findings we now understand types, sources and impacts of threats. These will be useful for designing appropriate intervention and guide conservation biologists in designing alternative activities for the specific human groups that cause such threats.

iii) In both study areas, conservation campaigns were conducted in at least seven villages for different target groups: villagers, elders, village and religious leaders, students and district forestry officers regarding the conservation of ashy monkeys and their habitats. These involved talks, lectures, excursions and poster displays. Progressive reports containing information on the status and threats of ashy monkeys were also given to Tanzania Forestry Services (TFS) and district officers. I believe that the conservation campaigns we have conducted have helped and will increasingly make local people willing to support conservation and accept community conservation programmes imposed in their village areas.

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

The project has directly employed local people from adjacent villages who were mobilised to study sites for data collection. They were employed as field research assistants, guides and ad hoc porters. Field research assistants and guides were trained on how to collect population survey data and in the use of equipment including binoculars, range finders, GPS and camping techniques. These skills will be very useful for any research and conservation initiatives involving communities in the area.

5. Are there any plans to continue this work?

I definitely have plans to continue with this work.

i) There is still a need for more detailed population surveys in the Masito-Ugalla Ecosystem. This is a very large landscape (above 10,872 km^2) and most of its remote sites are extremely hard to access, especially during the rainy season. Despite of outstanding findings (160 groups of Ashy monkeys found), monthly line transect surveys for at least 6 consecutive months are recommended in the main vegetation types (woodland and gallery forest) in the ecosystem. This will compel me to reapply for an extension grant in order to comprehensively and systematically survey this endangered primate in this unique savanna woodland habitat.

ii) There is also a need to study their behavioural ecology in dry savanna woodland of either the Masito-Ugalla ecosystem or Ufipa escarpment in order to learn how these arboreal and folivorous monkeys can survive in such dry woodland with very small natural patches of evergreen vegetation.

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

I have presented part of the results as an oral paper at the XXVIIth Congress of the international Primatological Society in August 2018 in Nairobi, Kenya. In addition, I plan to publish the results in high impact, peer-reviewed journals including *American Journal of Primatology* and *Conservation Biology*. The findings will be disseminated to decision makers such as government and non-governmental conservation agencies for conservation intervention. The results will be also disseminated through awareness campaigns to local people using different media, including posters. The results will also be presented in the Biannual Tanzania Wildlife Research Institute (TAWIRI) conferences, which draw national and international researchers, conservationists and government wildlife managers, including the Tanzanian Wildlife directors of protected areas.

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 period was 16 months. The common length was supposed to be 12 months, there was only 3 extra months. However, I was able to use the funds one month late in July 2017 because I was in the field in June 2017.

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**
Distribution surveys				
3 field assistants @ £ 56 for 6 months	1008	1398	-390	Because of the largeness of the Masito-Ugalla Ecosystem, a team of three field assistants and one camp guard was added in the ecosystem, thus, making the costs to increase form *£ 1008 to £ 1398.*
Porters (4 porters@ £ 4 per six months	96	96		Spent as budgeted
Field food costs and local	560	560		Spent as budgeted

transports				
Equipment (I Nikon camera, 2GPS, Stationary, tents, boots)	973	919	+54	Two binoculars were borrowed from the University of Dar es Salaam. The *£ 54 difference (cost of binoculars) was added to budgeted amount of £1008 to cover costs of additional survey teams.*
DNA Faecal sampling				
3 field assistants @ £ 56 for 6 months	1008	1008		Spent as budgeted
Reagents and chemicals	260	260		Spent as budgeted
Conservation activities				
Awareness campaigns	300	300		Spent as budgeted
Conservation Action Plan	795	459	+336	The difference was added to budgeted amount of 1008 to handle the costs one extra team of three personnel and a camp guard during distribution surveys.
Total	**5000**	**5000**		

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

i) The next step is practical implementation of the findings/results of this study through collaboration with government and non-governmental organisations and conservation biologists. Increasing community conservation campaigns in order to shape local communities' attitudes towards conservation of endangered primates and their habitats is also needed.

ii) Another important step ahead is a plan to have a detailed population surveys in the Masito-Ugalla ecosystem upon availability of funds. This requires monthly transect surveys for at least 6 or 12 consecutive months for accurate population size estimates.

iii) I plan to study their behavioural ecology in dry savanna woodland and compare them with those living in forest habitats in order to learn how there arboreal and folivorous monkeys can survive in such dry woodland with very small natural patches of evergreen vegetation.

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?

I have used and I will use the Rufford Foundation logo for any materials (including presentations, posters and leaflets) and reports pertaining to this project and final report.

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

Prof. Nils C. Stenseth (Research Professor and Chair of the Centre for Ecological and Evolutionary Synthesis CEES) my main PhD supervisor

Dr. R. Adriana Hernandez-Aguilar (Researcher at CEES and Lecturer at the University of Oslo) Co-supervisor oversaw and ensured that all the activities in this project were fully implemented.

Dr. Fatina Athumani Mturi (Advisor). She is a researcher and Lecturer in the Department of Zoology and Wildlife Conservation, University of Dar es Salaam. As a primatologist who studied Zanzibar red colobus monkeys, she advised me on how to effectively carry out the various activities.

Dr. Flora Magige She is a Lecturer and Head of the Department of Zoology and Wildlife Conservation, University of Dar es Salaam. As the Head in my working institution, ensured that the activities of this project were executed as planned.

12. Any other comments?

I am grateful to the Rufford Foundation for this generous financial support of my PhD research and for for the conservation of endangered ashy red colobus monkeys in unprotected areas in western Tanzania. I recommend further distribution and population surveys for ashy monkeys in the entire historical species range in the country. Among areas surveyed on the Ufipa plateau, the Ufipa escarpment is now serving as refuge site for ashy monkeys losing their habitats on the plateau. Thus, conservationists must focus in this part for the protection of the species. Continued organisational collaborations and community involvement is a key to achieve this end. There is still a need for additional surveys in the Masito-Ugalla ecosystem. This is a vast landscape (above 10,872 km^2) and most of its remote sites are very difficult to access, especially during the rainy season. Monthly repeat trail surveys are needed.