

## The Rufford Small Grants Foundation

### Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants 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	
<b>Your name</b>	Raymond Katebaka
<b>Project title</b>	Understanding the impact of forest fragmentation on forest hornbills of Uganda
<b>RSG reference</b>	01.08.08
<b>Reporting period</b>	March 2009 - June 2010
<b>Amount of grant</b>	£5680
<b>Your email address</b>	<a href="mailto:r.katebaka@probiobiodiversity.org">r.katebaka@probiobiodiversity.org</a> , <a href="mailto:katebakaraymond@yahoo.com">katebakaraymond@yahoo.com</a> <a href="mailto:Raymond.katebaka@gmail.com">Raymond.katebaka@gmail.com</a>
<b>Date of this report</b>	2 <sup>nd</sup> June 2010

**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
(i) To build capacity of community members, especially youth		√		<p>I conducted feasibility assessment, 27 sites were surveyed to ascertain project sites. For the time of data collection, I narrowed down and concentrated on 22 sites. I engaged local authorities to identify the interested individuals to learn avifauna identification particularly to hornbills and understanding causes of forest fragmentation in the region. 3 undergraduate students of Conservation Biology from Department of Botany Makerere University participated in socioeconomic data collection and were trained the use of GPS in the field. Deogratious Muhumuza worked in the field gaining thorough understanding and linkages of communities and hornbills.</p> <p>Building capacity was not fully achieved because there was less willingness from the communities. The reason for this it's assumed that they have seen projects come and last for a short time.</p>
(ii) To collect baseline data to enable future monitoring of avifauna in fragmented forest systems			Yes	<p>To assess the distribution in the selected sites, I used Timed Species Count (TSCs). Points were located on each transect across the fragmented forests. Ten minutes were spent on each point, 200 m separated from each other. All individual bird species were recorded within the planned time including hornbills, the species of the study. I collected human activities at each point such as stamps, timber making, firewood collection medicinal herb collection etc. All the mentioned parameters were to determine how they affect distribution.</p>
(iii) To identify best land use management practice regarding sustainable conservation of			Yes	<p>During the sensitisation workshops I displayed the pictures of three focus species and it's where communities identified the ethno-ornithological values. I explained why they are worth conserving in their best land use</p>

hornbills in Uganda				systems.
(iv) To disseminate information on best management of fragmented forests to organisations and local communities within Uganda.		√		I have shared information gathered with National Forest Authority (NFA) on how these small forests can act as carbon pockets. Nature Uganda and National Biodiversity Data Bank (NBDB) at Makerere University Institute of Environment and Natural Resources. The data given to NBDB will be geo-referenced for future monitoring.

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

There were a number of unforeseen difficulties; the wet season was one of the hindrances during avifauna data collection, time and effort basically to prepare for collection of socioeconomic data and organising village workshops for data collection and sensitisation. During the planning time the exchange rate was estimated at £1 = UGX3050. However by the time the funds reached the organisation's account, the exchange rate had considerably dropped to £1 = UGX2762 and thus caused the project team to make a slight review on the budget and agreed to leave out some activities such as radio talk shows. However, we agreed to conduct these activities in the next phase of the project.

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

- a) Two scientific articles have been drafted and will be submitted to the journal of East African Ecological Society and another scientific journal to be identified. Their title of the formal report is: Hornbills and Fragmented Forests of Uganda. "A survey across central region, Uganda". Title of the scientific articles: "Impact of forests fragmentation on the distribution of hornbills in Uganda". "Alteration of habitats and evaluation of distribution of hornbills". The posters include "Hornbills in Uganda: Save their habitats and protect forests". "Roles of Hornbills in our communities of Central Uganda".
- b) Nine young gentlemen and three young ladies were trained in avifauna identification in the project area. Considering the growth of avitourism industry in the region the trainees will be absorbed in the rural established systems as local guides. For example a number of tourists visit Mabamba bay, a route to Busi Island where we have two sites Mulubanga and Gulwe. There is a plan to expand on the tourism by reaching the island and tour the rural communities. One young lady trained from the island will benefit on avifauna guiding and she is ready to learn more. We have kept the record of the youth and I will continue linking them to learn more and benefit on the upcoming activities especially conservation programmes in our organisation and those of Nature Uganda, a Birdlife International partner in Uganda.
- c) 1000 copies of posters on the importance of hornbills were distributed for sensitisation in the communities of the project area during sensitisation. Communities have started understanding the presence of hornbills and why they should conserve them in their small fragmented forests. This will contribute to reduced degradation of forests on a long term given the follow up and hence hornbills.

- d) During our avifauna data collection, it was observed that Integrated Rural Community Development Organisation (IRUCODI), under the leadership of Dr. Celsus Senhte, has been implementing a related forestry project in Rakai District. Therefore Celsus and his team were invited to share ideas on community engagement and field experiences. Their team also contributed during sensitisation workshops.

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

12 project sites were selected on the private land ownership in the communities and the rest were Central Forest Reserves under the protection of the National Forest authority (NFA). 12 youths were selected by the local authorities from the communities and benefited by acquiring knowledge on the value of the fragmented forests, why they should be conserved and the roles of forest hornbills in the ecosystem in general. They will carry on sensitising their communities even when the project ends. They had an attachment with hornbills previously that was not clear on communication of fruit harvesting in the forests. Some have come out to understand that hornbill calls are linked to environmental change seasons. What is not yet clear is the tree felling and its impacts on the hornbills because they assume that there is still plenty of tree cover where they can occupy and the can continue to collect them. However some members currently know that their activities on the forests have triggered a climatic change that may worsen if nothing is done.

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

Yes, this project is planned to continue and overlap the period 2010/2011. It will be a follow-up to address the identified fragmented forest challenges, raise awareness on best land use practices and collect more monitoring data on the three species of the project for scientific analysis.

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

Understanding the impact of forest fragmentation on forest hornbills of Uganda aimed to understanding their distribution within fragmented forests of Central Uganda. Some of the studied forests included those that are protected as central forest reserves and those that are on private land. The results have been shared in numerous ways that include public fora such as the Ecological Society of Eastern Africa (ESEA) conference in 24<sup>th</sup>-26<sup>th</sup> June 2009 in Uganda, Celebrating 100 years of East Africa Natural History Society organised by Nature Uganda in Uganda on 19<sup>th</sup>-20<sup>th</sup> November 2009. The project team participated in REDD workshops in Uganda where some of this information has been shared. I have shared the results with one of the leading daily gazettes the New Vision where one article will be published. Institutionally I have shared the data collected with the National Biodiversity Data Bank at Makerere University Institute of Environment and Natural Resources. The results of the project have been shared with Nature Uganda a partner with Birdlife International and Royal Society for Protection of Birds (RSPB) in Uganda for the purposes of follow-up and monitoring on the species in future. Scientific results have been prepared to be published in the scientific journals where they will be shared and accessed by the public.

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

The timeframe for RSG was from March 2009 - April 2010. Originally the planned activities were for 11 months including the final report writing. However due to some of unforeseen difficulties, it extended to May 2010. This affected the budget particularly on the revisits to raise awareness in the communities. However most of the data was already acquired and most of the activities were already carried out. The write-up and review by the project team took some considerable time.

**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
Per diem and subsistence in the field	1,320	1,304	17	The project paid for field accommodation as some sites are far apart it would require us staying overnight, with lunches and dinners at cost of £18 per individual daily while in the field. To reduce on the field expenses we sometimes could cover more than one site in a day.
Field assistance	100	239	(139)	To put down transects and location of points properly, I hired a local man at each site to clear the way and also to attach the project to the communities as a benefit in the communities. These were field assistants from the communities and were paid £11 per day of working and were shared with local authorities. As part, this contributed to the awareness in communities.
Car hire/ fuel/petrol and maintenance	1563	1811	(248)	For the purposes of team work a vehicle was fulltime used in the field. To effectively collect information per site was surveyed twice, once for the interviews and once for distribution of sensitisation materials and local community workshops. The time planned for the car hire extended than originally planned. Extra payments were incurred and therefore the total cost originally planned for was increased as well. Refuelling fluctuates as per daily US dollar rate increases. As distance increases from the city to upcountry prices go up.

Local community workshop/village workshops	1000	1203	(203)	I collected socioeconomic in homesteads and organised local workshops in 14 local communities. However, I engaged Richard Mwesigwa a socio-economist and he worked with undergraduate internship students but first to familiar with nature of the forest as measure for raising awareness.
Purchase of equipment and supplies (digital camera 200, Binocular 200 and a GPS 200, machete, field safety boots, tape measure)	700	254 181 109 26	124	I bought one digital camera and one GPS. A pair of binoculars for Deogratus Muhumuza and used for training the youth as well. A machete, safety shoes were used to clear and for security and safety as well.
Permits	100	116	(16)	I paid for entrance fees to National Forest Authority (NFA) at every station we surveyed per time of entrance in the forest. I did not pay for the Licence from the National Council of Science and Technology as Earlier planned. However, I plan to pay for it in the next phase.
Publication materials these include posters, data sheets, preparation of drafts and internet	417	268 162	(13)	I printed 500 posters of size A2, 5 project maps of size A1.
<b>Total</b>			22	

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

The black and white casqued hornbill (*B. subcylindricus*) crowned hornbill (*T. alboterminatus*) and pied hornbill (*T. fasciatus*) were the species of focus. My future plans will be to incorporate those species that were recorded with related behaviours such as whole nesters. I will continue with data collection on the distribution of target species and assess them individually considering their preferences. A comprehensive second season of data collection will be to establish which species among the three is more threatened by the continual of forest degradation. It was observed that these species depend on the fruiting trees for foraging and these are mature trees which a good for timber and good for charcoal. Therefore these demands are increasingly threatening their food availability and habitat as well. The plan will also consider which forest that is likely to protect hornbills longer than the rest. This will be recommended for conservation and proper mitigation measures from the causes of the fragmentation. Future communication to any forum will also acknowledge RSG and the logo will continue to be used.

### 10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

In all the communication materials PowerPoint presentations, posters, recommendation and request letters, in community meetings, village workshops and during the socioeconomic data collection

interview guides were bearing Rufford logo. The final project report that bears a reference number of the also has Rufford SGF logo.

#### **11. Any other comments?**

The project understanding the distribution of forests hornbills is significant in central Uganda. It has explored that targeted species depend on the forests for foraging but currently they depend on the trees in modified landscapes. It has also realised that the trees where they breed from, are of multipurpose economically. It will contribute to conservation of degraded forests in protected forest reserves and on both private lands. Presence of hornbills will contribute to the conservation of non-target species on a long term. It will help to enhance on protection of habitats. The project will link other programs of poverty alleviation in the region and contribute to the management of land use.

The project and I wish to thank the communities for providing us with invaluable information and being corporative. Many thanks to The Rufford Small Grants (RSG) for Nature programme for considering the application. Previously the concern on individual bird species has not been considered widely but with Rufford grant has made this research and increase on the understanding.