

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Julia Gessner
Project title	Importance of natural forest clearings in Central Africa for forest mammals and conservation
RSG reference	10357-1
Reporting period	10.2011-09.2012
Amount of grant	£5900
Your email address	omemao@hotmail.com
Date of this report	23.11.2012

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
Contribute to the understanding of the importance of bais for forest mammals by				
a) characterising forest clearings (ecological and geomorphic factors)			x	
b) investigating nutritional benefits of different resources used by gorillas and elephants at bais			x	
c) identifying major ecological factors influencing visitation of large mammals		x		analysis still ongoing
Contribute to capacity building of Central African nationals by				
a) elaborating and teaching of standardised sampling protocols			x	
b) training local assistants in the utilisation of equipment			x	
Evaluate the potential of camera traps as bai-monitoring tools			x	
Provide effective deterrent against poachers in the area			x	

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

Due to the presence of poachers and logistic constraints two bais had to be excluded from the study resulting in a total of 17 bais being surveyed. Additionally, water samples were taken in a forest stream where elephant holes were detected.

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

Several important outcomes have resulted from our project and analysis is still ongoing. In the following the three most important outcomes so far are described.

Our project demonstrates that camera traps provide effective and urgently needed tools for species inventories and monitoring at bais especially in remote areas. Results from camera trap data shed light on the activity patterns of different species visiting bais. They provide actual proof that significantly higher numbers of African forest elephants (*Loxodonta africana cyclotis*) visit bais during the night without any correlation between diurnal and nocturnal numbers and thus emphasise the importance of nocturnal data when addressing conservation and management objectives.

Furthermore, results of the present project shed light on the mineral concentration of ground water in holes dug by elephants within bais. Thirteen out of 15 measured minerals showed significantly

higher mean concentrations in ground water in comparison to surface water with mean concentrations being up to 280 times higher (chloride) in ground water samples. This further underlines the importance of bais providing mineral resources for forest elephants.

In the Trinational de la Sangha area comprising protected areas in Cameroon, the Central African Republic and the Republic of Congo, 17 bais have been surveyed during the present study. Results show a high diversity between these bais regarding mammal species, the mineral concentration in soil and water, the abundance of different plant species as well as further structural and ecological characteristics. Based on these data combined with data from camera traps factors influencing visitation rates of large mammals at bais will be investigated.

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

Local assistants were employed in every field mission providing them with a source of income during the study period in a region where employment opportunities are rare. They were trained in data collection as well as in the proper utilisation of equipment such as camera traps, GPS and satellite phone.

5. Are there any plans to continue this work?

The present project is designed to facilitate the study of ecological resources and mammal visitation patterns at bais by different projects in the broader region of Central Africa by providing valuable information and recommendations. Besides, further investigations of mineral concentrations at different bais and the comparison of camera trap data with data from direct observations at bais are envisaged. At the moment data analysis and the submission for publication are still ongoing.

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

Regular reports have been provided to the respective NGOs and park management during field work. A sampling protocol on the collection of ecological data at bais as well as a guide for feeding plants in bais are distributed to the relevant stakeholders in the region. Through publication in scientific journals results of the present project will be made available for a broader audience. Copies of publications will be provided to the RSGF.

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

The RSG was used for field work expenses during the first year as anticipated. Since actual expenditure for field work were lower than budgeted, we kindly ask RSGF for allowance to use the remaining fund for transport to field missions as well as for water and soil analysis conducted in the second year as scheduled in the original time scale.

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.

Local exchange rate: 1£ sterling = 746 Franc CFA.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Salaries for porters and trackers	£3360	£1798	-£1562	Due to high effectiveness of field missions featuring no major difficulties as well as the exclusion of two bais missions were completed in fewer days than anticipated.
Food for field missions	£2520	£1459£	-£1061	Missions took fewer days than anticipated (see comment salaries).
First aid kit	£20	£20	£0	
Transport to field missions	£0	£533	£533	Transport to field sites facilitated field missions and further allowed to reduce the number of days.
Analysis of soil and water samples	£0	£2090	£2090	Slightly higher costs than anticipated
Total	5900	5900		

We kindly ask RSGF for allowance to use part of the fund for transport to field missions as well as water and soil analysis. Expenses for salaries of porters and food ration were lower than anticipated due to a smaller number of days and slightly lower salaries paid by the locally active NGOs than it had been indicated. A smaller number of days were necessary in order to complete field missions due to their high effectiveness and a lack of major constraints. Transport from base camps to the field further facilitated field missions. Expenses in the laboratory were slightly higher than anticipated, *inter alia*, because important nutrients were included in analysis that had not been intended for analysis before. The analysis of iodine for example had not been envisaged. Since it presumably plays a very important role in the reproduction as well as for the brain of elephants, we decided to analyse it's concentration in water and soil consumed by elephants at bais.

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

The important next steps are to finalize data analysis and make results available through publication as well as presentations for relevant stakeholders. Possibilities to continue this project are taken into consideration with the major goals to protect bais as key habitats and to provide employment for local people and at the same time implicate them in conservation work.