

## The Rufford Foundation Final Report

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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. 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. 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**

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Grant Recipient Details	
<b>Your name</b>	Raj Kumar Koirala
<b>Project title</b>	Diet, Nutrition and Movement Pattern of Wild Asian Elephant in Nepal.
<b>RSG reference</b>	15680-B
<b>Reporting period</b>	September 2014- September 2015
<b>Amount of grant</b>	£9840
<b>Your email address</b>	<a href="mailto:r.k.koirala@massey.ac.nz">r.k.koirala@massey.ac.nz</a> / <a href="mailto:rajkoirala@yahoo.com">rajkoirala@yahoo.com</a>
<b>Date of this report</b>	16/9/2015

**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
To identify and estimate abundance of important food resources of elephants along migration routes.			√√	The analysis of this objective has been completed and the outcome is in the final stage of review with the supervisors for publication with the title: Feeding preference of the Asian elephant ( <i>Elephas maximus</i> ) in Terai forests and grasslands of Nepal.
To assess the nutritional status of forage plants eaten by wild Asian elephants.			√√	A Review paper on Nutritional Aspects of the Diet of Wild Asian Elephants has been in final review in <i>Journal of Threatened Taxa</i> .
To measure the compositions of the foods of wild elephants and compare these to the composition of the crops targeted by elephants in this region.			√√	First draft of the research article has been prepared incorporating objective two and three with title: Seasonal diet and macronutrient balance of plants and crops consumed by Wild Asian Elephant ( <i>Elephas maximus</i> ) in Nepal.
To assess the ranges and movement pattern of elephants in Nepal			√√	A forum paper relating to this objective has been published with the title: Dispersal and ranging patterns of the Asian Elephant ( <i>Elephas maximus</i> ) in relation to their interactions with humans in Nepal. <i>Journal of Ethology, Ecology and Evolution</i> . Doi:10.1080/03949370.2015.1066872

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

N/A

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

- The study has identified a number of grasses, woody plants, shrub and herb in the diet of elephants which has not been reported before in this region.
- The study has investigated the feeding preference of wild Asian Elephants.
- The study has assessed the two season macro nutrient balance of natural food and crop consumed by elephants.

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

N/A

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

My work on elephant, especially on nutritional ecology will continue in future. The seasonal availability of all food found to be consumed by elephants and their relative preference through utilisation frequency was important baseline information of diet of elephant. My work will further validate the food preference result of present work (from feeding observation and micro-histological analysis) through a nutrient focussed perspective. I would try to explore the question whether the selection of food is either a nutrient focused or simply a mere consequence of availability or some other factors are involved. This would be huge information for habitat conservation of these animals in their range countries.

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

I have published a paper on diet and ranging pattern of elephants and one paper is in review in journal. A couple of papers are in the final stage of preparation for publication. I am planning to present my work on elephants at the institute of forestry in Nepal in my forthcoming trip next year.

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

September 2014- September 2015

**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
DSA, Principal Investigator	1200	1200		

DSA, field research assistant	900	900		
DSA, two local assistants	1440	1344	96	Cost was slightly less than budgeted as one assistant was not used for twelve days.
Nutritional analysis lab cost	2000	2000		
Local Travel	1500	1600	100	Travel cost was slightly more than budgeted.
Micro-histological analysis	500	500		
Survey equipment	800	800		
Plant identification, herbarium preparation	500	560	60	More than anticipated.
GIS mapping	500	500		
Miscellaneous	500	500		
<b>TOTAL</b>	9840£	9904 £		

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

N/A

**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?**

I have acknowledged RSGF in our elephant publication in journal of Ethology, Ecology and Evolution. Doi:10.1080/03949370.2015.1066872. I will be continuing acknowledging Rufford small grants Foundation in my forthcoming publication on Asian Elephants.