

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. 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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Tshewang Jaimo
Project title	Abundance and distribution of Clouded Leopard in Royal Manas National Park
RSG reference	16752-1
Reporting period	10 April 2015 to 30 April 2016
Amount of grant	5000
Your email address	Tshewang1985@gmail.com
Date of this report	25 April, 2016

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
Sign survey			Fully achieved	The sign survey was conducted for the whole park prior to installation of camera traps to ensure that no animal had a zero probability of being photographed. This sign survey has proved essential for determining the locations and number of camera traps required in the study areas besides indicating rough idea of species distribution. However, we experienced rarity of signs for these elusive cats in the dense forest cover where trails were not prominent. The pug marks and scats were often found confusing with leopard cats as they were found to share habitats.
Camera trap survey			Fully achieved	The camera traps were installed in 115 locations at the grid cell of 2.5 x 2.5 km covering 1057 km ² . The entire study area is divided into three ranges for the administrative and protection purpose. The pair of camera traps at each station was installed from May 2015 to January 2016. Considering the total trap night of 45 days per station, the total effort for the entire study area is 5175 trap nights. Twenty out of the 115 camera stations captured the species which show the capture probability in the study areas was merely 17.4%. This probable reason could be either rarity (low density) of the species itself or the survey season was inappropriate. We recommend multi-year study using the camera trap survey to understand the population status of this rare cats. As on distribution, it is found across the entire study areas but with high capture probability towards northern part of the park.
Vegetation survey			Fully achieved	The camera stations were placed across different vegetation types

				<p>within the park ranging from subtropical grassland to cool broadleaf forests (97 to 2740 m asl). However, our capture record shows that they were mostly available at the edge of grassland (meadows and shrubs) and forest cover. They seem to prefer medium canopy cover and open areas. They occur along gentle to moderate slopes. The camera record also shows the maximum capture at the fringe of the settlements and close to water bodies. This could be good evidence to assume that they are moderately tolerant to human disturbance, but it will be subject to detail assessment through long term observation.</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The project was approved in April 2015. This coincided with the onset of the monsoon in the study area and the first phase of camera trap installation was a big challenge. Most the study areas especially southern foothill bordering to India becomes inaccessible due to high flooding of streams. Some cameras had to be abandoned from retrieving till receding of flood.

115 camera stations was a big effort for individual or small team research. Moreover, most of the study areas along the international border were hotspot for militant activities and most of the time remain closed for civilian activities. Even when the access was allowed, there was requirement for minimum of 10 members to form a team with more than 50% of them carrying arms and ammunition. This is costly both financially and risk to life.

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

1. Distribution mapping: The distribution of the species is documented and made available for the park management to infer for any future management planning. This is an important baseline data to build on further studies by any individual or institution in the park as well as in the country. The distribution maps will be helpful park management to prioritise conservation actions in different zones.

2. Camera trap picture: Through this project, all the camera trap pictures of the species were compiled and kept as repository. This picture will be useful for the park management to monitor the species population for the long term.

3. Learning experience: Although the researchers have been working in the field for long time, for most of us studying this cat species was new opportunity. Besides getting new information about the species, we have learnt different challenges faced by the researchers. These lessons will be very useful for us to take up further research in the same field or allied field in the near future.

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

The direct involvement of communities in the research activities was not feasible due to technical nature and involvement of risk to life. In areas where the risk factor was minimum, the communities were involved as local guides and porters and have financially benefitted through daily wages paid to them. In fringe villages, the survey team used local accommodations and offered them cash incentives. The people were also given awareness on the conservation of cats through informal conversation wherever possible during the survey.

5. Are there any plans to continue this work?

As long as I am attached to Royal Manas National Park, I will continue to monitor the species distribution through annual tiger monitoring programs. In future, if I can secure funds, I will work on the population estimation using the camera trap pictures.

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

The simplest way to share the results of my work is to submit the detail project report to park management along with few recommendations and publishing the same report in RSG websites and other official websites. I will also publish short information through social media such as Facebook.

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

The grant has been used for a period of 12 months (April 2015 to 2016) as anticipated. While the fieldwork has been completed on time, it took 2 weeks more to submit the final report.

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
Transportation/mobility cost	817	800	+ 17	The transportation on the road was less than anticipated but payment for porter/local guide was high due to remoteness of camera stations
Daily subsistence cost for the researcher	1226	800	+ 426	The principle researcher daily subsistence cost was reduced to cover the excess expenditure incurred for assistant
Daily subsistence cost for the research assistant	919	1345	- 426	Due to security risk areas many research assistants were deputed and the cost was escalated.
Cost of battery and memory card	800	830	- 30	The cost of the battery was much higher than anticipated as

				the study area was wet and humid and consumed lots of battery. The memory card was provided by the park
Cost of laptop	900	887	+ 13	One number laptop for principle researcher was bought.
Cost of stationeries	338	338	00	No change in cost of stationeries as it included some communication cost such as mobile recharge and internet.
TOTAL	5000	5000	00	

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

From the result of camera trap photography capture, it is one of the rarest cat species found in Royal Manas National Park. As such, it is recommended that detail population study on this species be conducted. An assessment of detail habitat including the threats would be crucial to come up with the appropriate conservation measures.

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 used RSG logo in poster presentations and reports. Yes, I did present posters at the RSG Bhutan conference held at the College of Natural Resources, Lobesa, Bhutan.

11. Any other comments?

RSG funding to individual researchers is very important not only contributing towards conservation of species but it helps in capacity building of researchers. I am personally benefitted by the grants in enhancing my research knowledge and enriching my experiences.