

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	Tulsi Ram Subedi
Project title	Habitat, Status and Conservation of Red Panda (<i>Ailurus fulgens</i>) in Dhorpatan Hunting Reserve, Nepal
RSG reference	10.05.08
Reporting period	December 09
Amount of grant	£ 4615.60
Your email address	subeditr@yahoo.com
Date of this report	12 September 2009

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			√	
Population status		√		We are unable to see the animal in the field but used indirect method, Scat measurement survey from which we didn't get significant method to calculate the total population
Microhabitat			√	
Conservation measures			√	

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

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

i. Distribution and population status of red panda

Total of 210.43 km² area was surveyed for the red panda study in Dhorpatan Hunting Reserve. Based on Pradhan *et al.* (2001a)¹ red panda was surveyed within the altitudinal range of 3000 m to 3600 m. In the reserve 3000 m was lower altitudinal range. Scats of red panda were considered as signs and total sign density was observed 0.43/km² in the surveyed area. Red panda signs were not observed between 3000m – 3200m altitudinal range. At 3200m – 3400m range it was observed at the rate of 0.83/km² and at the altitudinal range 3400m – 3600m it was 0.69/km². Thus the distribution of red panda signs indicates that red panda are more abundant in between the altitudinal range of 3200m – 3400m in Dhorpatan Hunting Reserve.

In the study red panda distribution is found significantly related to altitude ($\chi^2 = 148.9$, $df = 5$, $P \ll 0.05$) as well as sites ($\chi^2 = 152.59$, $df = 8$, $P \ll 0.05$) of the study area. Most of red panda signs were observed in north facing slopes of the reserve where the day light period was comparatively shorter which indicates the distribution of red panda is limited to the exposure daylight i.e. red panda prefer short exposure of light due to its nocturnal habitat. Scat measurement (for adult: 19.2 ± 2.3 mm diameter, 41.6 ± 6 mm length and for young: 14.9 ± 2.6 mm diameter, 34-7 ± 7.1 mm length) survey of red panda showed that the study area holds four small isolated groups of red panda, in which three groups bearing cubs.

ii. Microhabitat study of red panda

Microhabitat analysis of red panda habitat found total of 10 species of trees and seven species of shrubs in red panda plots. Habitat analysis showed red panda habitat was highly dominated by *Tsuga dumosa* with relative density 44.51, relative frequency 15.28, relative dominance 62.22 and importance value index 122.01. That is followed by *Rhododendron arboreum* and *Betula utilis* among tree species and *Arundinaria* sp. with relative density 326.68 and relative frequency 19.44. Thus the

1 Pradhan, S., G.K. Saha & J.A. Khan (2001a): Ecology of the red panda (*Ailurus fulgens*) in the Singhalila National Park, Darjeeling, India. - Biological Conservation 98: 11-18.

analysis of microhabitat showed red pandas are abundant in *Tsuga dumosa*, *Rhododendron*, *Betula* and *Arundinaria* sp. dominated habitat in altitude between 3200 m to 3400 m in Dhorpatan Hunting Reserve.

iii. Threats and Conservation measures to red panda in Dhorpatan Hunting Reserve

Disturbance and destruction of habitat by seasonal grazing of vast number of livestock is the major problem for the conservation of red panda and other wildlife in the reserve. Our study indicates total of about 3500 buffaloes, 25000 cows, 3500 horses and 70000 sheep/goats graze in the reserve area impacting the potential habitat of red panda. Beside this trapping of red pandas by the poachers, illegal tree logging for firewood and timber (huge volume of wood consumed for firewood, building roofs of huts, cowsheds and hotels), collection of ringal bamboo as a fodder for young livestock are other threats for the existence of this endangered species.

To increase knowledge and change the attitude of local people towards red panda and other wildlife conservation, a total of six conservation awareness programmes had been conducted to community peoples, herders, school students and teachers covering 186 individuals. In the reserve area, three red panda conservation groups were formed with the aim to monitoring red panda and perform community based conservation activities such as anti-poaching, control fuel-wood/timber/ringal bamboo collection and over grazing of livestock in red panda habitat. To increase the knowledge and encourage youths on red panda conservation, nature conservation groups were formed in schools are actively involving to distribution of information and sensitize local community for red panda conservation.

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

In this research project, two local people and one staff member from the hunting reserve have been trained as field assistants. Those people will be available for the future work on red panda and wildlife conservation and research. Besides those, the project also raises the conservation awareness and importance of focal species in different groups such as local mother's groups and community forest user groups in and around the reserve area. This will foster the monitoring of panda in their community forest and expect to helping for the further study and conservation. Beside community peoples one post graduate student Mr. Arjun Thapa from central department of zoology, Tribhuvan University, Nepal was taken as a field associate, who is studying red panda diet analysis for his dissertation work in master level. Now the person is also involving in red panda monitoring in different areas.

5. Are there any plans to continue this work?

Yes, I have plan for the long term monitoring of red panda and its conservation in different landscape.

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

Report produced from this work will be disseminated to the Department of National Park and Wildlife Conservation (DNPWC) which is the sole authority for the management of hunting reserve. Copy of report will be made available in the central library of Tribhuvan University for the wide use

by the students and other, who wants to pursue their research work in the related field. The result will also be tried to publish in different printed and online journals.

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 during the field study period of the project from October 2008-September 2009. This covers the major field study period of this research around 4 months out of 12 months, the actual length of the project.

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	560	400	160	
Accommodation and subsistence	806.40	1163.1	356.70	Due to increasing market price than expected and also we bear the food cost of local guide and porter which was not in our budget.
Field Supplies	600	300	300	We do not hire camera and GPS, those were supported by Bird Conservation Nepal.
Daily stipend for field assistance	957.60	1098.5	140.90	Increase in market price affected stipend.
Conservation activities	1032	1100	68	More peoples were involved than planned.
Communication and miscellaneous	659.60	521.2	138.40	
TOTAL	4615.60	4582.80	33.8	

Local Exchange Rate: £ 1 = NRS 130.85

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

After the completion of this project, I am feeling the need of intense conservation programme and long term monitoring of red panda population/habitat in its potential habitat, strengthening the capacity of local community groups and mobilizing them. This will help to build ownership in local community and stewardship for long-term conservation of wildlife and biodiversity.

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?

Yes, I used the RSGF logo to produce awareness raising materials such as red panda brochures, flex poster and banner in easily understanding Nepali language. RSGF did not receive these materials.