

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	Kamal Kandel
Project title	Educating and empowering local communities for cheer pheasant (<i>Catreus wallichii</i>) conservation in western Nepal
RSG reference	14046-2
Reporting period	Feb – March 2015
Amount of grant	£6000
Your email address	kandel.kamal82@gmail.com
Date of this report	07 April 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
Publication of outreach materials			√	
Public awareness programmes			√	
Youth to Youth Environmental awareness programs			√	
Radio programme			√	
Capacity Building and Establishment of Long-term Cheer Pheasant Monitoring Program			√	
Project Impact survey			√	

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

Not applicable

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

I. Radio programme, publication and distribution of outreach materials with conservation messages

Forty weekly episodes of radio programme were aired on 3 local FM Radio stations: Three Angels Community Radio 94.6 MHz Pokhara, Radio Kusum 90.0 MHz Kushma, Parbat and Radio Dhorpatan 104.1 Burtibang, Baglung. The radio programme was aired in those radio stations at 18:30 to 19:00, every Wednesday. The name of the radio programme is "Cheer Sandesh" and was hosted by Mr Ganesh Puri and Ms Binita Karki.

The radio programme covers 16 districts (Gulmi, Parbat, Palpa, Arghakhachi, Myagdi, Mustang, Pyuthan, Rukum, Rolpa, Rupandehi, Syangja, Nawalparasi, Kapilvastu, Kaski, Tanahun and Lamjung) and reaches to more than 200,000 people in and around cheer pheasant habitat. The radio programme spreads knowledge and importance of cheer pheasant and its habitat, its survival threats and conservation issues in the area. Five interviews were taken with cheer pheasant experts and park authorities regarding the status of this bird and its conservation challenges and future plans for its conservation. Since forest fire is one of the prominent threats to its grassland habitat, one special episode was aired about the forest fire problem. Forest fire expert was interviewed in this episode and discussed how forest fire affect the pheasant and other wildlife and how can we control and mitigate forest fire in future.

The radio programme was very successful and local people and school students heard the programme with great interest. School students were actively engaged and participated in our weekly quiz contest conducted by the radio programme hosts at the end of each episode. The feedback from

the listeners was very positive and they expressed their interest to continue such awareness programme in the coming years.

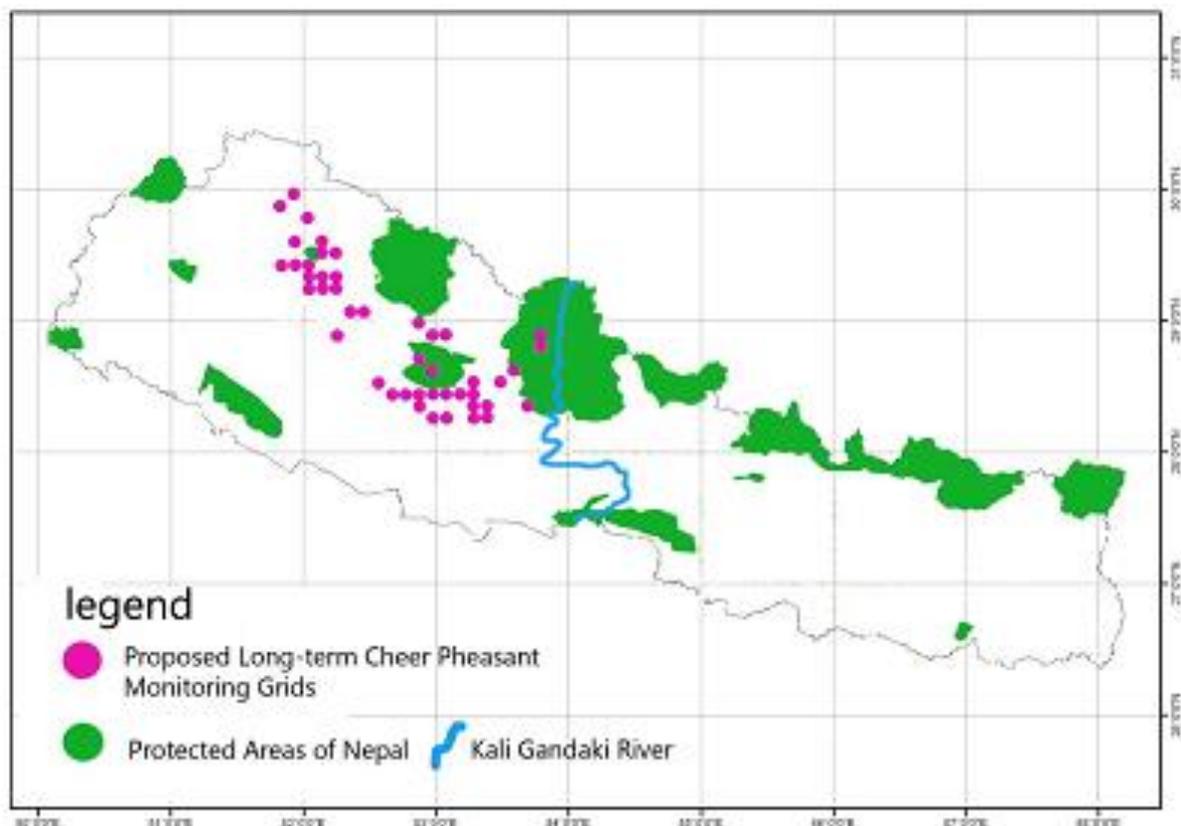
The printed community outreach materials such as posters, leaflets and t-shirts with cheer pheasant conservation messages were distributed in the community and local schools during workshops and school education programmes. Altogether five schools were visited and more than 500 students were benefitted and inspired from the conservation education class and outreach materials.

II. Conservation workshops and People-Park Interaction (PPI) in and around cheer pheasant habitat

Twenty conservation workshops and three Park-People Interaction (PPI) programme were conducted in and around Dhorpatan Hunting Reserve. The local people were actively participated in the programme and shared their knowledge about cheer pheasant and its habitat in the area. In particular, the PPI programmes were very successful in increasing the dialogue between local people and park officials. One of the great achievement of this interaction is that some of the local people who were well known as wildlife hunters in that territory actually did promise to abandon it and support the wildlife conservation issues.

III. Identification and establishment of sampling grids for long-term monitoring of cheer pheasant

The highly suitable sites have been selected and proposed for long-term research, monitoring and conservation of cheer pheasant in western Nepal. These grids have been selected based on robust GIS and occupancy models using current and historic cheer pheasant presence data, environmental and geographical variables and machine learning algorithms. In total, 45 grids of size 10 x 10 km has been prioritised in western Nepal (see fig. 1) for further research, population and habitat monitoring and conservation of cheer pheasant.



IV. Workshop on DISTANCE SAMPLING and OPEN GIS to the young conservation scientists

More importantly, we conducted skill development training cum workshops for the young scientists (university graduate students) basically in the areas of contemporary research and conservation tools such as Distance Sampling and use of GIS. Altogether 32 graduate students benefited with these trainings. I hope these workshops opened the door future researchers in looking the possibilities of using contemporary tools and techniques in wildlife research and conservation.

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

The local people were involved in conservation workshops and interactions programme organised by the project in and around Dhorpatan Hunting Reserve. The project became successful in changing the attitude and behaviour of the local communities particularly the adult professional hunters who use to hunt the cheer pheasant in the project site in some extent. For example, after this project some of local hunters have promised not to hunt the cheer pheasant and any other wildlife because now they are aware that it is a globally threatened species, its populations has been declining rapidly and need proper conservation for its survival. Local school children participated in conservation education class in their schools. Besides hunting, collection of eggs by school children is the major threat for the survival of cheer pheasant. Therefore the conservation class and awareness programme conducted in school helped to change the children's behaviour and they are now committed for the conservation of the cheer pheasant in their vicinity. Moreover, this project encouraged and made greater dialogue between the local people and the forest authorities, which helps in improving the people-park authority relationships leading to a substantial and long-lasting contribution to cheer pheasant conservation. More importantly, weekly radio programs remained fundamental in engaging and informing local communities about species, their importance in our ecosystem, need for their conservation and co-existence of human and wildlife.

5. Are there any plans to continue this work?

Among 45 grids, only five grids are inside the protected areas (fig. 1). All other 40 grids are present outside the protected areas which justify the need of further monitoring and conservation activities of cheer pheasant in such unprotected areas where species is facing even more severe conservation threats due to human activities. Therefore, I am planning to extend my monitoring, awareness and conservation activities in next project and to cover all selected and highly potential habitat of cheer pheasant in western Nepal.

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

The project report will be submitted to all the related stakeholders and government wildlife and park authorities. The findings will also be presented in national and international workshops wherever possible. Findings were already been presented in Students conference of conservation sciences (SCCS 2014) in Beijing, China and SCCS 2013 in Bangaluru, India as poster presentation.

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

I used the RSG from April 2014 to March 2015. The anticipated length of the project was same i.e. 1

year (January 2014 – December 2014). I had planned to start the project from January 2014 but due to some unexpected circumstances, the project started some months later.

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	Differenc	Comments
Local travel	£400	£400		
Food and accommodation	£500	£500		
Radio programme	£1500	£1500		
Training and monitoring	£900	£900		
Awareness campaign	£500	£500		
School program	£1000	£1000		
Publication of outreach materials	£1000	£1000		
Communication and reporting	£200	£200		
TOTAL	£6000	£6000		£1 = NPR

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

The highly suitable habitat and our proposed long-term cheer pheasant monitoring grids are not supported by current protected areas boundaries in Nepal. Therefore the cheer pheasant and its habitat are under great pressure from local people due its hunting and habitat degradation. This project only covered Dhorpatan Hunting Reserve and its surrounding habitat of cheer pheasant for awareness and conservation programmes. Most of the cheer pheasant habitat range still needs to be addressed in order to change the locals' attitude and to reduce the hunting activities and to reduce the anthropogenic pressure on cheer habitat. Moreover, regular survey and monitoring in landscape level is required to understand the population trends and meta-population dynamics of such globally threatened species whose global distribution is restricted in very few and isolated locations of only three countries: Nepal, India and Pakistan. Therefore I am planning to continue, replicate and extend these conservation programs in rest of the areas western Nepal; otherwise there is the high probability of local extinctions of cheer population in many parts of western Nepal in the very near future.

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 have used RSGF logo in all materials produced in relation to this project. I haven't sent the RSGF these materials yet. But I have now attached some soft copies of the produced materials where RSGF logo was used.

11. Any other comments?

I express my great thanks to the Rufford Foundation for funding this very important cheer pheasant project. I am expecting the similar support from the Rufford for the continuation of the current conservation activities and extending my conservation project to new areas in western Nepal. I would also like to thank two field biologists Suman and Anita and other forestry students who helped to conduct all the conservation programs in the study area. I am also thankful for Dhorpatan Hunting Reserve officials for their cooperation and support in every activity in the reserve. The radio stations and hosts Ganesh Puri and Binita Karki are thankful for their tireless efforts in preparing and airing radio episodes and receiving and handling audiences.

प्रकृति संरक्षणमा आधारित रेडियो कार्यक्रम
प्रकृतिको उपहारमा पंक्षी विशेष कार्यक्रम

“चीर सन्देश”

प्रत्येक हप्ताको बुधबार देखि शनि ६:३० देखि ७:०० बजे सम्म



रेडियो डोरपाटन
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श्री एन्जल्स सामुदायिक रेडियो
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रेडियो कुशुम
९० मेगाहर्ट्ज
पर्वत









Distribution and occupancy modelling of the globally threatened Cheer pheasant (*Catreus wallichii*) in Nepal

Kamal Kandel, Sonam T. Lama*, Ganga R. Regmi, Dikpal K. Karmacharya, Madan K. Suwal, Hem Sagar Baral, Falk Huettmann

INTRODUCTION

- Cheer Pheasant is a globally threatened species endemic to western Himalaya and has patchy distribution from Pakistan to Nepal.
- It is sedentary, easily detected by its calls and occupies fairly open habitats, with the result that it is extremely vulnerable to hunting and susceptible to complete eradication in given areas through prosecution (Young et al. 1987, Kaji 1995).
- The distribution and occurrence of cheer pheasant in Nepal is poorly known and studies carried out till date are concentrated on some small patches of its assumed distribution range.
- This paper addresses the potential distribution of the cheer pheasant in Nepal and assessed its occurrence in and around Ghopatan Hunting Reserve, western Nepal.

MATERIALS & METHODS

- We used randomly selected calling stations and carried out replicated detection-det surveys in April, May and June in 2012 to produce the detection history of each calling station.
- We analysed detection-det data using PRESENCE to make the occupancy.
- We also compiled cheer pheasant presence locations from previous published and unpublished sources and ran RandomForest algorithm to assess the potential distribution using bio-climatic variables related to precipitation and temperature.

RESULTS

- The distribution model suggests that the cheer pheasant is patchily distributed in the western mid-hills of Nepal extending to around Kaligandaki river valley in the east.
- Multiple occupancy models were supported by the data with occupancy estimation of 0.62.
- It is found that grassland areas positively influence the occurrence of cheer and the detection probability is constant.

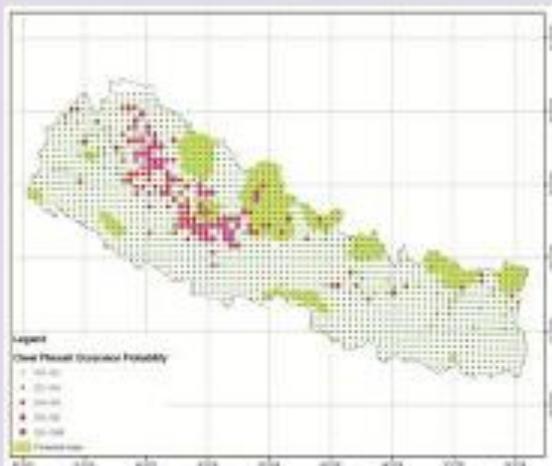


Fig. Potential distribution of Cheer pheasant in Nepal

Table. Summary of the occupancy candidate models

Model	AIC	deltaAIC	AIC wgt.	Model Likelihood	No.pts.	2*Log Lik
ps(Occupied p)	51.23	0	0.4023	1	3	45.22
ps(Occupied p f)	52.08	1.86	0.1787	0.3948	8	47.29
ps(Occupied+Disturbed p f)	55.1	1.87	0.1891	0.3754	4	48.2
ps(L p)	54.34	3.01	0.1093	0.222	2	50.24
ps(Disturbed p)	55.3	4.07	0.0390	0.1307	3	49.5
ps(L p f)	56.1	4.87	0.0287	0.0678	4	48.1

* Presenter, sonam@primatelife.org

DISCUSSION/CONCLUSIONS

- The occurrence of cheer pheasant is best described by the model $\psi(z_{grassland})p(z)$, which implies that its occurrence depends on the habitat type and the probability of detection for each survey occasion is almost constant but still there was reasonable amount of support that detection probability varies between surveys.
- Cheer pheasant is a grassland bird which is supported by our model.
- The finding of this study will be useful in determining species ranges, and is in agreement with current species ranking and IUCN status.
- The finding can also be used as a quantitative and robust baseline for developing landscape level monitoring efforts that require optimizing cost, effort and time using more ecological and social variables to reliably estimate species occurrence and focus the species conservation efforts.

REFERENCES

- Kaji, R. S. (1995). Status and Habitat of Cheer Pheasant in Himalach Pradesh. World Pheasant Association, SARO.
- Young, L., Gamon, P.J. and Kaji, R. (1987). Calling behaviour and social organization of Cheer Pheasant (*Catreus wallichii*): Implication for survey techniques. Journal of World Pheasant Association 12: 30-45.

ACKNOWLEDGEMENTS

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Cheer Pheasant in Ghopatan Hunting Reserve, Nepal



Habitat of Cheer Pheasant in Ghopatan Hunting Reserve, Nepal

