

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	Gopi Govindhan Veeraswami
Project title	Conserving the endangered Asiatic wild dog <i>Cuon alpinus</i> in western Arunachal Pradesh: fostering better coexistence for conservation
RSG reference	08.09.08
Reporting period	August 2009 to August 2010
Amount of grant	£6000
Your email address	gopigv@gmail.com
Date of this report	22.10.2010

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
1. Prey selection and predation pattern			Yes	This is the first time that a proper prey selection study was conducted on Asiatic wild dogs in this part of the geographic range, where there is acute shortage of prey due to unsustainable hunting practices by the local communities.
2. Conflict assessment and livestock predation			Yes	The conflict assessment has revealed high, medium and low wild dog-people conflict areas in western Arunachal Pradesh. These areas should be targeted for mitigating the conflicts.
3. Conservation education programme			Yes	A successful conservation awareness programme for the local communities (Nyshi and Apatani) with their active participation was carried out. Also, conservation education programme was provided to other stake holders like academicians, researchers, students, governmental and non-governmental agencies.

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

The state of Arunachal Pradesh experiences high annual rainfall leading to geological fragility in this region, which hampers the planned project activities in the remote localities of the state. As it rains almost 7 months in a year, only 5 months are available to execute the field work.

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

1. Sign survey was done throughout the study along the road, trails and streams. Total encounter rate was 0.26/km. The encounter rate was high in stream (0.14/km), roads and trails had almost same encounter rates. The results of the density estimation analyses using Program DISTANCE showed that wild pig (5.4 individuals/sq.km) and barking deer (4.4/sq.km) are the prey species with the highest density in Pakke Tiger Reserve, followed by sambar (3.1/sq.km) and langur (1.9/sq.km). Gaur was the lowest density with 1.6 individuals/sq.km. Over all density of the study area was 17.02 (CV 16.2%). Overall encounter rate was high for gaur (0.22/km²) followed by wild boar (0.16/ km²), sambar (0.15 km²), barking deer (0.14 km²) and lowest encounter rate found was langur (0.08 km²). Ninety-five scats of dhole were collected analysed which indicated dhole consumed a minimum of five prey species. Most frequent prey species was of wild pig followed by sambar, barking deer, gaur and rodents. Wild boar (36%) was found to be highly consumed by dhole in terms of biomass followed by sambar (34%), barking deer (14.7%) and gaur (10.8%). Bonferroni's simultaneous

confidence intervals when constructed showed that prey species were taken proportional to their availabilities.

2. About 400 households from 52 villages were sampled surrounding three major protected areas of Arunachal Pradesh, Pakke Tiger Reserve (PTR), Itanagar Wildlife Sanctuary (ITWLS) and Talle Valley Wildlife Sanctuary (TVWS) for wild dog-people conflict targeting two indigenous communities i.e Nyshi and Apatani. Wild dog was the prime livestock predator across various clusters of villages (69.2%). Proportion of *Mithun* depredated by a large predator was reported as highest (27.1%) and wild dog accounted for the major proportion (79.5%) of this depredation. Depredation by wild dog was high near north-eastern PTR (32.2%), medium in Apatani valley (10.6%) and low in ITWLS (4.5%), eastern (8.8%) and northern PTR (4.4%) and negligible in Naumura (0.8%) areas. Out of 44 killings of carnivores, 15 wild dogs were killed in retaliation. More than half of the respondents hunted for wild meat at some point or the other (62.3%). Motive for hunting was for sustenance (54.9%).

3. The local communities, school children, college and university students, academicians, researchers were briefed about the ecological significance of conservation of Asiatic wild dogs. Local communities were also told about the process of claiming compensation from the forest department rather than going for retaliatory killing of dholes.

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

The main communities involved in the project were Nyshi and Apatani who are primarily agro-pastoralists and hunter gatherers living around mature forests. I measured the extent of their forest dependency, their agricultural and social practices that are a threat to wildlife.

5. Are there any plans to continue this work?

Yes, I intend to continue this work, the active network formed during the project should be continued. Further a status survey of Asiatic Wild Dog across the north-east India along with mapping the conflict levels are required to formulate a conflict mitigation plan for this region. Conservation education and awareness programmes are needed to be carried out along with the status survey to convince locals about the ecological significance of conserving this species.

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

A final report will be sent to organisations that are interested in research and conservation such as the State Forest Research Institute Arunachal Pradesh, Bombay Natural History Society, Zoological Survey of India - Arunachal Pradesh Field Station - Itanagar, North East Regional Institute of Technology – Nirjuli and Rajiv Gandhi University, Arunachal Pradesh. Research papers and popular articles will also be sent to peer-reviewed journals such as *Oryx*, *Biological Conservation*, and the *Journal of the Bombay Natural History Society*.

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 14 months, from August 2009 to October 2010. The field work was initiated from August 2009. Field data was collected for 12 months and 2 months was used for data analysis and report writing.

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
Hiring of local tribal youths as interpreters to communicate with the local inhabitants	1000	1200	+200	The project involved exploring remote and inhospitable areas of Arunachal Pradesh. An astounding diversity of more than 100 languages and still more dialects exists in Arunachal Pradesh among the different tribes. Hence a local tribal interpreter was hired to help the team while conducting interview with the local people and also to help during field visits.
Camping expenditures- purchasing tents and essential field equipments like camera traps	1600	1900	+300	Due to procurement of camera traps and their running expenses there was this small increase in the already proposed budget under this head.
Daily wages for one field technical assistant @ £ 2 /-365 days	700	700	0	The project required a local field assistant who helped in field surveys, contacting voluntary groups and keeping touch with the leader on regular basis.
Headquarters to various study sites by road for the project leader 13 trips/year @ £ 113 /around trip	900	700	-200	
Organising stakeholders workshop for awareness creation at select villages and at the headquarters 9 minor workshops @ different villages targeting hunters, children, village headman - and 1 major workshop @ state's capital with academicians, administrators, researchers and tribals	1000	1000	0	
Report publishing and information dissemination by posters and booklets 500 Posters on dholes and its	800	500	-300	All the proposed activities under this heading have been achieved with less amount of funds than that was proposed.

conservation importance- 250 £500 booklets on Dholes and its conservation importance- 250 £200 copies of final technical report after completion of the project- 300 £				
TOTAL	6000	6000		

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

1. Status survey of the endangered Asiatic wild dogs in the entire north-eastern region of India.
2. Conflict assessment of the endangered Asiatic wild dogs in all the north-eastern states of India.
3. Conservation awareness and education programmes in the conflict prone areas of the north-east India

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, the Rufford Small Grants Foundation logo was extensively used in the education materials like the posters and brochures. The RSGF logo has been used in the cover page of the final technical report and in the book written on the Asiatic wild dogs published by the Lambert Academic Publishing, Germany. The logo was also used in the banners which were used during the stakeholders workshops in various part of the study area. Information pertaining to Rufford foundation and RSGF and the application process and their benefits were briefed to many students, researchers, academicians and budding conservationists.

11. Any other comments?

Rufford Small Grant Foundation, a prestigious charity organisation grants conservation awards to address pressing conservation problems and the entire process from the application to final report submission is at very ease. Jane and Josh Cole were fantastic and have been extremely cooperative throughout the study.