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	Jan F. Kamler
Project title	The ecology of dholes in a zoned reserve in Laos
RSG reference	8936-1
Reporting period	January 2011 to August 2012
Amount of grant	£5,900
Your email address	jankamler@hotmail.com
Date of this report	10 October 2012

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
Train park staff to identify sign and conduct surveys for dholes			X	Several biologists and park staff accompanied the PI during six field trips and they were trained in the identification of dhole sign and how to conduct dhole surveys. Additionally, several additional park staff were trained in these methods, although they did not accompany the PI in the field. The trainees included 12 park staff, two regional forestry personnel, and two Laotian biologists from the WCS Lao PDR program. Additionally, the PI gave educational presentations to all park staff in NEPL (n=22) and to all staff in the WCS Lao PDR programme (n=25) about the identification of dhole and other predator sign, predator surveys, and the importance of dholes in healthy ecosystems.
Select at least one Masters student from the National University of Laos to participate in the project			X	Although a Masters student was not chosen, due to conflicts in academic schedules and field work, two Bachelor students were selected to participate in the project (Ms. Khamtai Thatdokkham, and Mr. Xaysavanh Inthapanya). More than 15 students were interviewed by the PI for the two positions.
Conduct seasonal surveys for dholes in core, buffer, and unprotected zones of NEPL			X	We determined that dholes were relatively abundant in the core zone (1 scat/3 km) but we could not detect their presence in the buffer zone (0 scats) or unprotected areas (0 scats).
Send scats to lab for species ID, which will help determine pack size and diet of dholes			X	230 potential dhole scats were sent to a genetics lab at the American Museum of Natural History for species identification. Results showed that 84 scats were from dholes, whereas 116 scats were from small felids, including leopard cats and golden cats. The number of dhole scats found in latrines ranged from one to five scats, indicating the maximum pack size was five dholes, with packs containing three to four dholes being most

				common.
Conduct surveys to determine ungulate densities			X	Although pellet counts were not conducted, data were used from occupancy sampling by park staff to determine ungulate abundance. Also, data from camera traps were used to determine ungulate activity periods.
Create educational programme about dholes to local people		X		Educational presentations were given to all local park staff in NEPL (n=22) and to all staff in the WCS Lao PDR program (n=25) about the identification of dhole and other predator sign, predator surveys, and the importance of dholes in healthy ecosystems. Although educational programs were not given in local villages in the buffer zone, 15 local villagers from the buffer zone accompanied the PI on field trips. During the field trips, and while staying overnight in five different villages in the buffer zone, the PI (via a translator) discussed dholes with groups of local villagers, and they were told about dhole ecology, and the importance of dholes in healthy ecosystems.
Dissect dhole scats in laboratory to determine prey remains			X	85 dhole scats were dissected in the laboratory by a Laotian student, and prey remains were identified to species. Additionally, 116 scats from small felids were dissected by another Laotian student, and prey remains were identified.
Determine diet and prey selection of dholes			X	The diet and prey selection of dholes was determined for the core zone of NEPL, and results were recently published in a scientific journal. Because dhole scats were not found in the buffer or unprotected zones, dhole diets could not be determined there. Additionally, we determined the diets of medium-sized felids.

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

There were no major difficulties during the project. Smaller difficulties included not being able to get a Masters student on the project, due to a conflict in the academic schedule and field work.

However, this was overcome by having two BSc students conduct their theses on the project. Also, additional field trips were needed to collect an adequate number of dhole scats.

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

1. Showed that the core zone contains the only viable population of dholes, whereas there was no viable population in the buffer zones or unprotected areas. Therefore, zoned reserves are valuable for the conservation of dholes in Southeast Asia.
2. Trained park staff and several students regarding the identification of dhole and other carnivore sign in the forest. This helped increase knowledge of Laotian biologists and park staff to better identify carnivore sign and conduct carnivore surveys. Two Laotian students wrote their BSc theses from this project, and graduated from the National University of Laos in August 2012.
3. Published results regarding the diet, prey selection, and activity of dholes in northern Laos. This paper showed that dholes have a relatively narrow niche breadth in the tropical forests of Southeast Asia, therefore the management of only a few ungulate species is necessary to conserve dhole populations in the region.

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

Although local communities were not involved directly with the project, there were many villages in the buffer zone of NEPL involved in ecotourism, and this is expected to encompass more villages in the near future. Conservation of wildlife, including dholes, in the core zone of NEPL is essential for all the ecotourism projects, and therefore important to the sustainable income of local communities. Our research showed that the core zone is essential for the conservation of dholes, and that management of certain ungulate species, particularly sambar and muntjac, are important for dhole conservation. The park management, along with local communities, now have the information that's needed to assist the long-term conservation of dholes in NEPL.

5. Are there any plans to continue this work?

Although the project in Laos in completed, I will start a similar project in neighbouring Cambodia. One of the students trained in the project, Mr. Xaysavanh Inthapanya, is now employed by the Wildlife Conservation Society Lao PDR Program, thus he will continue working with the conservation of dholes and other species in NEPL.

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

Two scientific publications have already been published in journals regarding this research and two additional publications are in preparation (one on seasonal diets of dholes, and one on diets of leopard cats and Asiatic golden cats). After the latter two papers are published, a final report will be made to WCS and NEPL park management, with recommendations on how to better conserve dholes in the region.

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 over 20 months, from January 2011 to August 2012. The anticipated length of the project was for 12 months, January 2011 to January 2012. The extra 8 months was needed to conduct more surveys in NEPL because fewer dhole scats than expected were collected during the initial field trips. Also, the extra 8 months was necessary for the two BSc students to conduct their research on the project, and write and defend their theses in August 2012 at the National University of Laos.

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
Vehicle rental and fuel for field work	£1,600	£1,100	-£500	We did not have to rent a vehicle most of time, which saved some money.
Scat collection supplies	£150	£300	+£150	We collected more scats than anticipated, and two students were involved, thus costs were higher.
Misc. equipment	£750	£1,200	+£450	More equipment was necessary, especially because extra field trips were needed and two students were involved.
Staff training and education workshop	£1,000	£700	-£300	I didn't use as much printed material as anticipated
Field trip costs	£2,400	£2,700	+£300	Extra field trips were necessary to collect sufficient number of scats in different seasons.
TOTAL	£5,900	£6,000	+£100	

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

At the local level, the next steps are for the NEPL management to continue long-term surveys for dholes, to better ensure that populations are not reduced to low levels. The park staff, local biologists, and several students are now well qualified to identify dhole sign, and conduct surveys for dholes. To enhance populations in the core zone of NEPL, the park management should increase patrolling to prevent poachers from killing too many prey species, which the dholes depend on. Because some villagers still graze livestock in the core zone illegally, the park management should better enforce the no-livestock policy, because illegal herders sometimes kill dholes in the core zone if they prey on their livestock. To expand dhole populations in the buffer zones, the park management should enforce the hunting ban on sambar (important prey of dhole) and limit the

hunting of muntjac (another important prey). Recommendations from NEPL can be used in other protected areas in Laos that still contain populations of dholes.

At the regional level, more data needs to be collected on the prey and area requirements of dholes, to better understand the minimum reserve size and prey numbers needed to conserve a viable dhole population.

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?

The RSGF logo was not used on any printed material, because none was produced during this study. However, RSG was acknowledged in both publications published so far from this project (see attached papers), and RSG will be acknowledged in the additional 2 publications that are in preparation, and in any other reports and recommendations written from this project.

11. Any other comments?

I just want to thank RSGF again for supporting this research because it would not have been possible otherwise. The project was hugely successful, and I was able to meet all my goals. The two Laotian students did fantastic research in the laboratory and during the field trips. This project has developed recommendations for the conservation of dholes in tropical forests of Southeast Asia, as well as the specific management of dholes in NEPL. This project has already produced two publications, and an additional two publications are in preparation based on the lab work and analyses by the students.