

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	Niti Sukumal
Project title	Collecting information and monitoring the situation of green peafowl (<i>Pavo muticus</i>) in pristine habitat in Thailand and disturbed habitat in northern Vietnam
RSG reference	14285-1
Reporting period	Jan 2014 - Feb2015
Amount of grant	£6,000
Your email address	niti_230@hotmail.com
Date of this report	February 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
To indicate the necessary ecological factors that manifest suitable habitat			X	Habitat selection model- From a total of 70 camera traps set in two distinct sites, habitat variable was investigated to presence/absence of birds in different micro-habitat types. The model shows that the species mostly use open grassland nearby streams where this type of habitat provide food and appropriate display ground.
To assess the population status			X	Population density assessment- The population density was estimated in pristine habitat, Huai Kha Khaeng Wildlife Sanctuary, Thailand where the results show increasing population during the past 20 years. The plan to study in northern Vietnam had been cancelled as the previously reported presence of this species in the area was later found to be mistake with escaped blue peafowl. However, we took a chance to survey more important areas in central Myanmar (in south of Shan State and Sagaing Division) where most likely the largest population is remaining. We found that the surveyed population in Shan State still show high density although the species inhabit in non-protected areas, the species is conserved mainly by monks and local communities. While the survey in Sagaing Division had no detection that because high habitat disturbance and hunting pressure in the area. More surveys in the area should be conducted.
Provide information and knowledge to public			X	Power Point presentation- The result from this study was presented to researcher, students and public. The study was presented to: 1) The 3 rd Conference of the Society for Conservation Biology-Asia Section, 19 th - 22 nd August 2014, Malaka, Peninsular Malaysia; 2) Gembloux Agro-Bio Tech, 20 th October 2014, Belgium; 3) 13 th

				Thailand Bird Fair 2014, 8 th – 9 th November 2014, Samut Prakan Province, Thailand; and 4) Department of Zoology, University of Yangon, 3 rd February 2015, Yangon Division, Myanmar.
Training to students, young researchers, rangers and local staff		X		During the survey, young researchers and students assisted in the data collection and learned through a fieldwork research methodology and research data analysis (one undergraduate student, one masters student, two graduate students, one young researcher, one researcher and one local staff). This study also focused on a protected area, Huai Kha Khaeng Wildlife Sanctuary in Thailand where the objective of this study plan to train the rangers to collect research data. However, as the main duty of rangers in this area mainly focus on patrolling, the ranger only took partially part in the survey.
Modelling the potential habitat for green peafowl		X		The analysis is in process and expected to finish soon.
Update the conservation status and contribute to the next IUCN Red List assessment for the species		X		In process and expected to finish soon.

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

During the project, no unforeseen difficulties arose, although the plan has changed from the proposed study as the work in northern Vietnam was shifted to central Myanmar. The study in northern Vietnam had been cancelled as the reported observation of green peafowl was mistake with released (or escaped) blue peafowl. Consequently, I have changed the study site to Shan State and Sagaing Division, central Myanmar where an important population has been detected after a survey in cooperation with my Burmese colleague who will now establish a long term survey and ecological project in these areas.

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

3.1). Conservation principles to increase green peafowl population –The results from this project show that the green peafowl population is increasing and recovering in Huai Kha Khaeng Wildlife

Sanctuary over the past 20 years. This has been the consequence of frequent patrolling and intense covering in the whole area as well as the relocation of villages outside the protected area to reduce the disturbance to wildlife. These show that the species has high recovering capacity once its protection is implemented. In Myanmar, south of Shan State, a potentially viable population was found in heavily disturbed habitat where the species is actively protected by monks and local communities, while in south of Sagaing Division, the species was heavily disturbed, and no detection were recorded during the survey. The results show that increasing of conservation awareness to local people and patrolling system (which can decrease hunting pressure in the area) result in an increase and recovery of green peafowl population and other wildlife, also in heavily degraded habitat. We have presented the results to the chief of Huai Kha Khaeng Wildlife Sanctuary, the chairman of village in Shan State, researchers, students, and local people to exchange knowledge about conservation in those two potential areas.

3.2). The information on ecology and population status of green peafowl- The result from this study found that the green peafowl mostly use open grassland. The species increased its range during the non-breeding season when it ranged randomly throughout open habitat. During the breeding season, the species mostly gathers close to open stream or river where the male use large sandbanks and clear grasslands as display sites. The lowland open forest habitat was firstly intruded and disturbed by human activities, either for human settlement or agricultural area, these causes overlapping area with green peafowl habitat. In Huai Kha Khaeng Wildlife Sanctuary, Thailand, the sanctuary moved village out in north-east part to reduce the disturbance to wildlife. During the past 20 years, the population of green peafowl recovered and increased in that area. However, the result from Shan State in Myanmar still shows a potentially viable population in heavily disturbed habitat and higher elevation (between 1400-1500 m) than reported before. The population in this area is conserved by local communities and monks, and mostly inhabit in the area between small patch of evergreen or coniferous forest and agricultural area. These results show that if undisturbed the species can recover very well and relatively fast.

3.3). Continuing of ecological study on green peafowl in Myanmar- During a survey in Myanmar, one graduate student and local people took part in the survey. The next step plans have been discussed with them and one graduate student has plan to continue with a doctoral degree in area starting in this academic year (August 2015). He plans to continue with a detailed ecological study on green peafowl in our survey area in collaboration with local people to pass on knowledge and increase conservation awareness.

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

In south of Shan State, Myanmar, the local people took part in the survey on which technique they were trained. Moreover, we provided detailed information from our study to them. We expect that this information will now be provided to local communities increasing the local awareness. We have discussed with local people who agreed to actively participate in the development of the PhD project (mainly in the data collection) planned to start this year in the area. We expect that this cooperation will be success for the next step of conservation action plan to this species.

5. Are there any plans to continue this work?

One graduate student in our programme will continue with a doctoral degree (in 2015) and study on ecology of green peafowl in south of Shan State and Sagaing Division in Myanmar. In Thailand, I caught only one bird and fitted radio collar so far, I plan to catch more bird to increase sample size and provide more information on ranging behaviour. Moreover, I plan to expand the survey to other area according to their former distribution range, to assess and monitor recent status of their population for example in Cambodia, Laos and Java (Indonesia).

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

6.1). Poster presentation- Ecological information and picture of green peafowl were prepared for local communities in Shan State, Myanmar. I plan to make a poster and pass to local conservation group that they can use to pass a knowledge and information to student or villager.

6.2). Power Point presentation- I have presented the result from this project to international conferences, national meetings and academics. After the presentation, I have exchanged knowledge and information to researcher, teacher, student and public. We have planned to arrange scientific methodology workshop to academic (for example to Department of Zoology, University of Yangon).

6.3). Scientific articles-I will prepare scientific articles to be published in an international journal. The support by RSGF will be kindly recognised and acknowledged throughout of publication or any publicity in relation to this work.

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

The budget was spent during the second year of the project (December 2013-February 2015). It was spent according to the second-year plan of the project. As the project also received additional funding from King Mongkut's University of Technology Thonburi (under Thai Government), the expenditure from RSGF funding was included with this additional funding.

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.

(Inconstant exchange rate in January 2014 – February 2015, 1GBP: 49.77- 54.8 Thai Baht)

Item	Budgeted Amount	Actual Amount	Difference	Comments
Camera traps	1290	3239	-1949	Surplus expense was covered by other additional funding
Shipping and import duties	134	324	-190	Surplus expense was covered by other additional funding
Batteries for camera traps	106	305	-199	Surplus expense was covered by other additional funding

Metal blocks for camera traps	130	340	-210	Surplus expense was covered by other additional funding
Field work in Thailand	2540	3804	-1264	Surplus expense was covered by other additional funding
Travel for Vietnam	300	235.5	64.5	Relocated to Myanmar. The different amount was relocated to cover other expense
Field work in Vietnam	1500	1000	500	Relocated to Myanmar. The different amount was relocated to cover other expense
TOTAL	6000	9,247.5	3,247.5	(Surplus expense was covered by other additional funding)

Camera traps bought for this project are still well performing. Now these camera traps are used in a forest edge effects project in Sakaerat Biosphere Reserves, north-east part of Thailand.

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

Population monitoring in other area where highlight in distribution former range- The last updating information of green peafowl distribution and population status was about 15 years ago (last updated report from Birdlife International 2001). During the first year project, we have surveyed in south-central of Vietnam and found that in the area where has been judged probably the most important in Vietnam showing a strong decline of green peafowl population, this is the cause of high disturbance and hunting pressure in the area. Population monitoring and assessment are very importance and to be continued, to point out a factor which influence to increasing or decreasing population in different disturbance level. This can be advantage to conservation action plan of this endangered species.

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 the RSGF logo for Power Point presentation to student and teacher of Department of Zoology, University of Yangon. I also acknowledged RSGF as partial funding to my project for Power Point Presentation to international conference and national meeting.

11. Any other comments?

According to seasonal behaviour of the study species, I have to arrange a field work to fit mainly with the breeding season of study species. Data collection during the breeding season consist of population estimation, catching animal to put radio collar, radio tracking to collared animal, and camera trap setting (while in non-breeding season, the field works are mainly camera trap setting and collared animal tracking). The breeding season of this species is in short period (December-March) and any field work which uncompleted in time, it has to extend to the next breeding season. This caused uncertainties and delayed finishing the project within one year. However, I recognise that all of activities in the project have supported by RSGF, and I arranged all of activities in the

project to fit with the whole budget that supported by RSGF. All of uncertainties and delayed is my solely responsibility. The grant from RSGF is very importance to my project, without this grant the goal of my project will be difficult and obscure to achieve. Any publicity in relation to this work will be recognised and acknowledged to RSGF.

