

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. The Final Report must be sent in **word format** and not PDF format or any other format. 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. Please note that the information may be edited for clarity. 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	Quang Nguyen
Project title	Assessment of Genetic Endangerment to the Family Phasianidae in Vietnam
RSG reference	10888-1
Reporting period	Final Report
Amount of grant	£5996
Your email address	quanghaonguyen@ymail.com
Date of this report	February 12, 2013

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
Understanding of genetic variation in Phasianidae birds in Vietnam			x	Captured 100 birds (out of the targeted 120 birds) and then applied molecular techniques to understand their genetic variations
Risk assessment of genetic endangerment in the Phasianids		x		Did not collect enough domestic fowl samples to fully assess levels of genetic endangerment in the wild birds
Mapping the spatial patterns of genetic variations in relation to the environmental and habitat variables			x	Employed landscape ecology and spatial statistics techniques to map and quantify spatial variations of genetic diversity

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

The project targeted to capture 120 wild and threatened Phasianid birds in 120 fieldwork days at six protected areas in Vietnam. The actual field sampling proved to be more difficult than expected. The capture method has to be adjusted from field conditions. The fieldwork also had to be extended and required more field assistants in setting up and monitoring the traps. Totally 100 birds were captured in this project. More resources used for capturing wild birds (Objective # 1) also affect the collected numbers of domestic fowls (Objective # 2).

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

- (1) Population genetics of Phasianidae species: this is the first study on population genetics of threatened Phasianidae species in Vietnam and Southeast Asia. The project employs non-invasive capture methods to collect blood samples on the wild Phasianids. 100 birds were captured in 6 protected areas in Vietnam. Genetic variations (variations of the adaptive *Mx* gene) on these birds were gathered through advanced molecular techniques.
- (2) Landscape ecology of the Phasianidae: the project evaluated levels of genetic endangerment and genetic introgression in wild Phasianid birds in from their respective domestic fowls. Landscape metrics models and resistance surface models were constructed to understand how the *Mx* gene exchanges among wild birds and with domestic fowls.
- (3) Database: the captured 100 birds were banded and also taken swab samples. The banded birds will provide useful information about population demography and biology in follow-up studies. The swab samples are to be analysed to understand the threats of avian influenza in the Phasianidae birds in Vietnam.

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

The project worked closely with staff and management boards of the six projected areas to fully agree on the research framework and to share of project's outcomes. The project signed a Memorandum of Understanding with Bidoup Nui Ba National Park for future research activities in the area.

5. Are there any plans to continue this work?

The research team is planning for a follow-up project with three distinctive targets: (1) to capture more wild Phasianidae birds to have better understanding about genetic variations and gene flow in these birds; (2) to capture Phasianidae birds in relic and remote area to answer phylogenetic questions about the evolution of the Phasianidae; and (3) to compile more domestic fowl samples in order to fulfil the partially archive Objective # 2 in this project.

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

Conservation results in this project are to be shared to any local research and conservation organisations (University of Sciences HCMC, Southern Institute of Ecology HCMC, regional national parks). Scientific findings in the project will be updated with more fieldwork data and analytical models, and then to be published in relevant scientific journals (Molecular Ecology, Landscape Ecology, and Conservation Biology).

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

The project's anticipated timescale was 12 months, from March 2012 to February 2013, in which field sampling was from March to June 2012, and genetic analyses, analytical methods, and reporting writing were from July 2012 to February 2013.

The actual timescale is exact to the anticipated timescale, even with extended fieldwork sampling. The project has finished field sampling by August 2012 (2 months behind schedule). Genetic analyses and analytical models have been finished by December 2012. The final report will be available and submitted by the end of March 2013.

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
Trapping set	750	980	230	Changed from walk-in traps to hanging traps methods, need more materials in building the traps
Blood collecting equipment (Whaman cards)	282	210	-72	Collected fewer samples than expected

Blood collecting equipment (Saf-T-Pak bags)	291	190	-101	Collected fewer samples than expected
Blood collecting equipment (syringe & needle)	37	37	0	
Vehicle rental	900	900	0	
Wages for team members	1680	1680	0	
Food contribution for fieldwork	1200	1200	0	
Genetic analyses	756	756	0	
Reporting	100	100	0	
Total	5996	6053	57	

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

Fine-scale population genetics data of the threatened Phasianidae birds are essentially needed from follow-up research activities. These data will significantly contribute to the understanding of evolution and gene flow of these species of conservation importance. From there, conservation and park management plans can be set up with species-oriented knowledge.

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?

No, as the project has not produced any materials yet. The project will finish the final report and disseminate it to the concerned national parks with RSGF logo in its.

11. Any other comments?

No. The project appreciates the valuable funding support from RSGF.