

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
Your name	Truong Quang Nguyen
Project title	Evolution on limestone karsts: a case study on the herpetofaunal communities in northwestern Vietnam
RSG reference	14877-1
Reporting period	January 2014 – January 2015
Amount of grant	£6000
Your email address	nqt2@yahoo.com
Date of this report	25 January 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
Faunistic inventory			Yes	Updated lists of reptiles and amphibians of two nature reserves in Hoa Binh Province are provided: Hang Kia – Pa Co NR: 12 species of amphibians and 13 species of reptiles Ngoc Son – Ngo Luong: 28 species of amphibians and 19 species reptiles
Discovery of new taxa			Yes	Descriptions of two new species of geckos ( <i>Cyrtodactylus</i> , <i>Hemiphyllodactylus</i> ) and a new species of mossy frog ( <i>Theلودerma</i> ) are being prepared. Taxonomic assignment of another species of forest skink ( <i>Scincella</i> ) is under investigated.
Identification of important sites for conservation			Yes	Hang Kia – Pa Co NR: Karst forests near Hang Kia and Thung Ang villages. Ngoc Son – Ngo Luong: Karts forests in Tu Do and Ngoc Son communes.
Evaluation of major threats to the herpetofauna			Yes	Current threats: Slash and burn forest for rice and corn fields. Timber logging for construction and firewood. Collecting amphibians for food and reptiles (e.g., gecko, snakes and turtles) for traditional medicine and trade.
Providing recommendations for conservation measures			Yes	Local authority referred to our research results for developing operation plans and fundraising for their nature reserves.
Capacity strengthening for local staff			Yes	We delivered a rapid training course for forest rangers of two nature reserves on survey skills.

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

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

- 1) Research achievements: This research initially fills the knowledge gaps of the herpetofaunal diversity of Hang Kia – Pa Co and Ngoc Son – Ngo Luong nature reserves. We are going to publish our new discoveries (at least three new species for science and several new

distribution records) in academic journals. Results of this research not only revealed a high level of species richness but also indicated the unique conservation value of the herpetofauna of karst forests in Hoa Binh Province, northwestern Vietnam.

- 2) Capacity strengthening for local staff: Forest rangers of Hang Kia – Pa Co NR and Ngoc Son – Ngo Luong NR participated in our field surveys. They learned some basic skills in biodiversity assessment (e.g., selecting survey sites, setting up survey transects, detecting reptiles and amphibians in the forest, identifying important habitat of reptiles and amphibians) and field equipment use (GPS, camera). Local staff also involved in threat evaluation (habitat destruction, hunting activities) in the area under their management.
- 3) Conservation aspects: We discussed with directorates of Hang Kia – Pa Co and Ngoc Son – Ngo Luong nature reserves as well as with officials of the Department of Forest Protection of Hoa Binh Province (FPD) about current threats to the biodiversity. We reported to the authority about relevant matters of forest protection and wildlife conservation (e.g., forest patrol, law enforcement, facilities of ranger station, forest fire, and awareness materials) that need to be improved in future.

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

Before doing field excursion, head of village and local guides were informed about the purposes of our work in the area. Two or three local guides joined in our night excursion. They helped us to search for reptiles and amphibians. Interviews were also made with local guides about their experience of wildlife use, their opinions about causes of the rarity or disappearance of wildlife species, and how to protect them in the nature reserves.

Our recommendations for land use planning (i.e. creating a green corridor such as forest garden between nature forest in core zone of nature reserves and agricultural fields nearby villages where local people can collect firewood and timber for construction or cultivate fruit trees for addition income) may be useful to harmonize the benefits of economic development and forest protection in both nature reserves.

#### **5. Are there any plans to continue this work?**

Laboratory work: We are doing molecular analyses of different groups (e.g., geckos, mossy frogs, skinks). Molecular data will be used for describing new species and understanding of evolutionary process and community assembly of reptiles and amphibians in north-western Vietnam.

Further field studies: Additional field surveys will be conducted in afore mentioned nature reserves and adjacent karst formations of Son La Province in the north and of Hoa Binh Province in the south. We intend to evaluate the actual species richness, genetic diversity and the functional composition of herpetological communities across a biogeographic gradient in north-western Vietnam.

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

Two technical reports were submitted to the Hoa Binh FPD and management boards of two nature reserves. Responses from local authorities indicated that our reports are essential references for preparing operation plans for two protected areas for the period of 2016-2020. We are willing to provide further technical support for biodiversity research and conservation in Hoa Binh Province.

Several papers will be published in scientific journals. Academic publications and press release after that will attract the attention/investment of governmental agencies and non-governmental organisations about the conservation values of karst forests in Hoa Binh Province.

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

Two field surveys were carried out in Hang Kia – Pa Co and Ngoc Son – Ngo Luong NRs: the first from 10 to 24 April 2014 and the second from 30 September to 15 October 2014. Time schedule was fit with our proposed plan. However, we need more time for data analysis (morphology and molecular phylogeny) and publishing research results.

**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
Travel cost	1100	1170	70	The cost of car rental was a bit higher due to the increase of fuel cost in April
Per diem for local guides and porters	1200	1350	150	An extra payment for an additional staff of the nature reserve who accompanied us in the second field trip
Logging	320	320	0	
Food	2200	2200	0	
Field supplies	1000	1000	0	
Miscellaneous	180	180	0	
<b>TOTAL</b>	<b>6000</b>	<b>6220</b>	<b>220</b>	

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

Management boards of two nature reserves encouraged us to do further field surveys, and more important to publish our research results to attract the attention of international and national agencies, in particular the provincial government. Because of lacking basic data about existing status of the vertebrate fauna, most of investment for nature reserves has been allocated for salary, construction and a part for forest protection activities. An appropriate investment should be reserved for wildlife research and conservation in Hoa Binh Province because the vertebrate fauna has been rapidly disappearing since recent decades. Many populations of wildlife species are decline as a result of habitat loss and over-collecting for food consumption, illegal trade, and traditional medicine uses, including mammals, snakes, turtles and large-sized amphibians.

For conservation, public awareness is also urgently needed in order to deliver the conservation message as quick as possible to the local community (e.g., signboard, poster and the media).

**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 used the RSGF logo in my oral presentations in the 4th International Symposium on Asian Vertebrate Species Diversity, held in Kuala Lumpur, Malaysia, 18-20 December 2014 and also in my talks at the Hue University (in April 2014) and at the Institute of Ecology and Biological Resources in Hanoi (in November 2014 and January 2015).

**11. Any other comments?**

We thank the Rufford Small Grants Foundation for support of our biodiversity research and conservation in Vietnam.