

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

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
<b>Your name</b>	Vinh Quang Luu
<b>Project title</b>	Exploration of the herpetofauna diversity in karst forests of the Hin Nam No National Protected Area, Central Laos.
<b>RSG reference</b>	15001-2
<b>Reporting period</b>	Final
<b>Amount of grant</b>	£6000
<b>Your email address</b>	qluu@smail.uni-koeln.de
<b>Date of this report</b>	31 December 2014

**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 provide an updated checklist of reptiles and amphibians in Hin Nam No			X	87 reptile and amphibian species were recorded for Hin Nam No so far.
To discover new species and new country records for Laos			X	At least five new species of reptiles ( <i>Cyrtodactylus</i> sp., <i>Gekko thakhekensis</i> , <i>Gekko</i> cf. <i>petricolus</i> , <i>Gekko</i> cf. <i>thakhekensis</i> , <i>Lycodon</i> cf. <i>fasciatus</i> and one new country record of amphibian for Laos ( <i>Gracixalus quyeti</i> ).
To gather information about the ecology of the reptiles			X	Ecological notes for each species (temperature, humidity, perch, elevation...) and habitat structures of each survey areas.
To predict species occurrences in Hin Nam No in comparison with species composition of Phong Nha – Ke Bang on the opposite side of the Truong Son Range			X	I expect to have more discoveries in the herpetofauna of Hin Nam No in the near future. Because, 151 species of amphibians and reptiles are known from Phong Nha - Ke Bang up to date.
To identify threats and conservation status of reptiles and amphibians in Hin Nam No			X	Main threats are habitat loss and fragmentation
To raise the awareness for conservation among local stakeholders			X	

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

The topography of Hin Nam No is characterised by steep limestone karst, therefore, it was very difficult and dangerous for moving and conducting night surveys in the forest. In addition, no water sources were available during dry season in some areas.

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

- A list of 51 species of reptiles belonging to 10 families and two orders, and 36 species of amphibians belonging to seven families and two orders with ecological notes for each species. Most of them are new records for Hin Nam No.
- Two peer-reviewed papers were published: one new species (*Gekko thakhekensis* sp. nov.) and new country records of amphibians from Laos (*Rhacophorus maximus* and *Gracixalus supercornutus*). The papers were submitted to be added to the website of the Rufford Small Grants.
- Three manuscripts are under preparation dealing with the genus *Gekko*, *Lycodon*, and the descriptions of new bent-toed geckos from Laos.
- Capacity strengthening for young researchers of the National University of Laos and staff of the Hin Nam No on field work skills and reptile and amphibian identification.

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

Local people were invited to do the field survey with our team (local people from Noong Bua, Cha Lou, and Noong Ma villages). They help us to identify the survey sites, distribution location of reptile and amphibian species within protected areas.

We also explained about the importance of biodiversity and natural conservation during the interviews and field surveys.

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

I would like to conduct further field surveys on the diversity and ecology of reptiles and amphibians in Laos, especially in limestone forests and isolated areas of Hin Nam No. Application for the 3rd RSG will be submitted to investigate the “hidden biodiversity potential” of Hin Nam No and to elucidate the role of the Truong Son range to evolution trajectories of amphibian and reptile communities on the western side in Laos and on the eastern side in Vietnam.

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

In order to provide essential data for biodiversity assessment and conservation planning, results of my research (e.g., reports, published papers) will be sent to the management board of Hin Nam No, conservation projects in the area (e.g. GIZ), and researchers of the National University of Laos.

Two manuscripts were published in peer-reviewed journals.

- **Luu, Q.V.**, Calame, T., Nguyen, Q.T., Ohler, A., Bonkowski, M., & Ziegler, T. (2014): First records of *Gracixalus supercornutus* (Orlov, Ho & Nguyen, 2004) and *Rhacophorus maximus* Günther, 1858 from Laos. *Herpetology Notes* 7: 419-423.

- **Luu, Q.V.**, Calame, T., Nguyen, Q.T., Le, D.M., Bonkowski, M. & Ziegler, T. (2014): A new species of the *Gekko japonicus* group (Squamata: Gekkonidae) from central Laos. *Zootaxa*, 3895 (1): 073-088.

Three manuscripts are under preparation to be submitted to peer-reviewed journals.

Reptile and amphibian collections, which are deposited in the zoological museums of the Vietnam Forestry University (VFU), the Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology (IEBR), the National University of Laos (NUOL), and the Zoologisches Forschungsmuseum Alexander Koenig (ZFMK), Bonn, Germany will be used for scientific research and education purpose.

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

The actual duration of the field work is 75 days compared to 90 days in the proposed plan. Field surveys were interrupted about 15 days because of the rainy season in July and August 2014. However, research activities were conducted at day time and night time for optimum survey efforts. In addition, I also concentrated full time for data analyses and writing manuscripts from August to December 2014. Therefore, the project was completed accordingly.

**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
Batteries for digital camera and other field equipment	200	200	0	
Chemical and plastic boxes for specimen preservation	50	150	-100	Plastic boxes and tissue sample tubes were provided by the University of Cologne
Individual Field Equipment	200	200	0	
Camp Equipment	350	350	0	
Personal medication and first aid kit for the project team	70	70	0	
Domestic travel*	900	1580	-680	Domestic travel was longer and more difficult than expected. Therefore, the cost increased.
Wage for a field assistant	900	750	+150	
Food for a field assistant	900	750	+150	
Wage for a local person and a forest ranger for guide in the field survey	1200	1200	0	
Food for a local person and a forest ranger for guide in the field survey	1200	1200	0	

Wage for porters	300	300	0	
Training course and discussions for HNN staff and local people	80	80	0	
<b>Total</b>	<b>6000</b>	<b>6380</b>	-380	I also received more support from Cologne Zoo, Idea Wild, and GIZ from Hin Nam No for transportation.

*\* International travel was supported by Cologne Zoo, Germany*

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

Investigation of the herpetofauna is urgently needed to be conducted in Hin Nam No. It is expected that a considerable number of new records and new species will be discovered in Hin Nam No.

Research on zoogeographical relationships of amphibian and reptile communities along the Truong Son Range is also required in the future.

### **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 RSGF logo for my presentations at the University of Cologne and at the workshop in Myanmar in April 2014.

Staff and local people in Hin Nam No and researcher from the National University of Laos were also informed about the support of RSGF for biodiversity research and conservation through this project.

Furthermore, any publications and documentations of this project will include the logo and/or the name of the RSGF.

### **11. Any other comments?**

Data analyses (specimen examination, molecular analyses) usually take more time than previously assumed. Therefore, publications resulted from the project will be sent to RSGF few months after completion of my research.

Finally, I would like to sincerely thank to the RSGF for the kindness and strong support. This research approach is important not only for our project (team), but also both for biodiversity conservation in Laos as well as in a global scale.