

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford 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	Pham Nhat Tan				
Project title	The butterflies of Kon Ka Kinh National Park: diversity, ecology and conservation				
RSG reference	24188-1				
Reporting period					
Amount of grant	£4980				
Your email address	Phamnhattan15@gmail.com				
Date of this report	28/02/2019				



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 apprise the butterfly recorded in Kon Ka Kinh National Park				A total of 323 butterfly species were recorded in Kon Ka Kinh National Park, including 235 species recorded by the Rufford project. Compared to previous data in 1999, this survey added 124 new records to the park, while 89 species were not recorded.
To compare the butterfly diversity indices in different typical habitat				The results indicate that diversity indices are different between the transect sites, and it is higher in lowland areas
To determine the factors affecting butterflies' diversity				The research results demonstrated that two factors, season and habitat types, are major factors to butterfly diversity
Training for assistant during works				Six field members were trained during the project. We also supported the national park twice to arrange their collection for the museum.

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

Butterfly identification during fieldwork: the butterfly population in Kon Ka Kinh National Park is very diverse and unique, but limited information led to difficulties in identification during the field observations. To overcome this difficulty, I worked with two experts in butterfly taxonomy work, Dr Alexander L. Monastyrskii and Mr To Van Quang. The field team also collected more specimens for identification at the lab.

Due to the development of tourism, the number of tourists increased significantly. The habitat was disturbed by human activities such as wood and honey collecting and camping. As the consequence of that effect, the numbers were dispread. The butterfly population was sensitive after people crossed the trails during our observations. To tackle this problem, we have to stay quiet in a place a bit longer to wait for the butterflies settle down then start to collect the specimens.

The weather challenge also made some difficulties for the field team. During the rainy season, we faced rain during the whole afternoon trip. For a solution, in the rainy season, we decided to carry the research from 08.30 to 13.00.



To reduce the impact from difficulties and increase the efficiency of field survey, we surveyed the transect twice as opposed to three times as in the proposal

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

- Updating the butterfly list for Kon Ka Kinh National Park.
- Diversity and distribution of butterfly along elevation gradients.
- Training field assistants to collect specimens and data regarding butterfly ecology and populations.
- Determining supported trails for priority conservation species by recording butterflies listed by IUCN, CITES and Vietnam Data Red Book: *Stichophthalma uemurai*, *Troides helena*, *Teinopalpus imperialis*

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

During the research period, local people were involved as field guides for surveys. We provided local participants with research skills including basic identification of butterfly species.

I also trained an assistant from Duy Tan University on butterfly research equipment, taxonomy identification and observation methodology. I coached him to able to work independently as a lepidopterist in the future.

5. Are there any plans to continue this work?

The updated list of butterflies is not fully adequate as the new record species still increased each time I went for searching part of the NP has not yet been surveyed. My next survey will be in March – April 2019 to complete the butterflies list of the national park. It will include surveys in Kon Plong forest, Kon Tum province. This work will be supported by the FFI - Vietnam Programme, National Geographic, Southern Institute of Ecology, and Vietnam Forest Museum

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

The survey results in Kon Ka Kinh were used for my master thesis at Vietnam Forestry University. A manuscript for the international paper was preparing to expand and contribute butterfly conservation in Vietnam and international level. Also, the results were prepared for a talk at the International Congress for Conservation Biology 2019 (held in Malaysia).

Besides that, I delivered research results to the park managers to support their tourism development.



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

The Rufford grant was used from February 2018 to January 2019, including two field surveys, one in the dry season (28th March – 18th April 2018) and one survey in the rainy season (10th – 30th May 2018). Each field trip, we carried the study in 20 days without 10 extra days due to challenge by weather and transportation.

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	Budgetec Amount	Actual Amount	Difference	Comments
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Aircraft ticket	600	516	-84	Ticket price was lower at booking time
Vehicle	240	130	-110	We used public transportation
Food	1260	1680	+420	Add the food of three porters
Room renting	150	195	+45	Because of weather, we needed to stay three days more
Field equipment (butterfly nets, paper envelopes, extra net bags)	150	150		No difference
Field equipment (Butterfly traps)	200	150	-50	Vietnam Forest Museum supported five traps
Porters		1200	+1200	To camping during fieldworks
Ranger	315	280	-35	He stayed with us 40 days
Scientific staff	315	280	-35	He stayed with us 40 days
Species preparation, identification, and insertion into the VFM butterfly collection	900	600	-300	Vietnam Forest Museum supported the collection
VFM oversight and supervision	100	50	-50	Vietnam Forest Museum supported
Data processing and reporting	600	300	-300	Only payment for data processing
Office Supplies (Pens, pencils, markers, folders, glue, notebooks, files, writing paper, USB, mobile card)	150		+150	Vietnam Forest Museum supported the project
Total	4980	5531	+551	



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

There are some more steps we are going to study more:

- One more field survey is planned to survey some more potential high butterfly diversity in Kon Ka Kinh National Park. We will investigate in high elevation and primary forest and expect to discover more interesting species.
- Looking forward to work on mapping of species distribution in Kon Ka Kinh National Park.
- Extending the butterfly survey in Central Highlands in Vietnam, where there are potential high biodiversity values.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?

Rufford Foundation was acknowledged at the Master's thesis in Vietnam Forestry University. The logo also was used in a presentation for master defense. Also, if I will be selected to participate in ICCB 2019, I would like to use the Rufford logo in my presentation.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Pham Nhat Tan: Project coordinator, I was responsible to leading the team, mapping, planning, and data collecting and reporting

Alexander L. Monastyrskii: Expert and field assistant, he supported me for butterfly identification at lab, and provide the technical solution for my team

To Van Quang: Expert, field assistant, he assisted butterfly identification for me during fieldworks

Pham Anh Tuan: Research assistant

Dinh Khanh Toan: Ranger staff, field assistant

Nguyen Tan Dang Trinh: Scientific staff, field assistant

Dinh Van Pap, Pne & Le Quoc Cuong: Porters and field guides.

12. Any other comments?

I am grateful to the Rufford Foundation for their support as it supported me to study butterfly diversity that results were contributing to biodiversity conservation in Vietnam.







Meandrusa lachinus