

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

Thank you for your help.

**Josh Cole, Grants Director**

---

Grant Recipient Details	
Your name	Hung Manh Pham
Project title	Diversity and conservation of fish community in the Krong No River, Langbiang Plateau, Vietnam
RSG reference	18629-1
Reporting period	June 2016-January 2017
Amount of grant	£4987
Your email address	pmhung@hcmus.edu.vn
Date of this report	28 February 2017

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
Provide the morphological and molecular characters useful for the identification of fish species				<p>From the project update 2 in January 2017, we recorded 15 fish species, but we just received some new fish specimens from our team member Mr. Nguyen Sy Quang in Bidoup National Park. After analysis, total the fishes we collected including 20 species (62 specimens collected) of family Cyprinidae (11 species), Nemacheilidae (2 species), Balitoridae (1 species), Botiidae (1 species), Gyrinocheiridae (1 species), Sisoridae (2 species), Mastacembelidae (1 species) and Channidae (1 species) in the Krong No River. 18 species were provided the characters to identify to species level. Only two species of family Nemacheilidae have characters to identify to genus level. In addition, we recorded four specific fishes for the Krong No River: <i>Onychostoma krongnoensis</i>, <i>Tor mekongensis</i>, <i>T. sinensis</i>, <i>Neolissochilus stracheyi</i>. We analysed COI sequences to identify these species and provided them to Bold system v3 and Genbank for publication. <i>Onychostoma krongnoensis</i>, Mahseer <i>Tor mekongensis</i>, <i>T. sinensis</i> and <i>Neolissochilus stracheyi</i> are the important species for conservation</p>

				this region because of their high economic and ecological value.
Provide a first species checklist useful for conservation management				We provided a checklist and a poster including the life fish photos and their habitat with conservation status for Bidoup-Nui Ba National Park in December 2016. This is the first record for this region because there is no any ichthyologist study on fishes in Bidoup-Nui Ba National Park in the past.

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

For the sampling in the Krong No River, we had to trek through the forest to make camp, the time for which depended on the site distance. The site in the headwaters, we may have had to climb up through many hills, taking 5-6 hours carrying 10-15kg packs. The site in the middle of Krong No River, we had to trek 3 days to reach the river for sampling. And to bring the samples back to the laboratory for analysis is more difficult.

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

A. We provided habitat inventory with description for 20 wild fishes in the Krong No River. This is very important for conservation in this region because our investigation firstly provided the checklist of fish species for managers of Bidoup-Nui Ba National Park to know what the fishes we have in the nature.

B. We analysed mitochondrial genes COI, 16S rRNA of 53 fish samples and publish to the Bold system v3 and Genbank for DNA barcoding that will help for identifying to species level exactly. The expected result will provide more information for researching on phylogeny and assessing genetic endangerment of these species in the future.

C. This fund supported for me Mr. Hung Manh Pham to conduct my master thesis. I have finished my Master by this study and my thesis about this study stored at library of University of Science – VNU.HCM with the Vietnamese title: “PHÂN LOẠI VÀ SỰ PHÂN BỐ HỌ CÁ CHÉP CYPRINIDAE TRÊN THƯỢNG NGUỒN SÔNG KRÔNG NÔ, CAO NGUYÊN LANG BIANG”; English title: “Taxonomy and distribution of cyprinids (family Cyprinidae) in the Krong No River, Langbiang Plateau”. This thesis also stored at Bidoup-Nui Ba National Park for providing the new information to conserve the fishes

in this area. We also presented the result as a poster (see the figure in the end of this report "Fig. Poster of Fishes in the Krong No River" with logo of Rufford foundation to donate National Park for local people, tourists and other visitors can recognise the importance of this fish resource in the wild to heighten awareness of environmental protection.

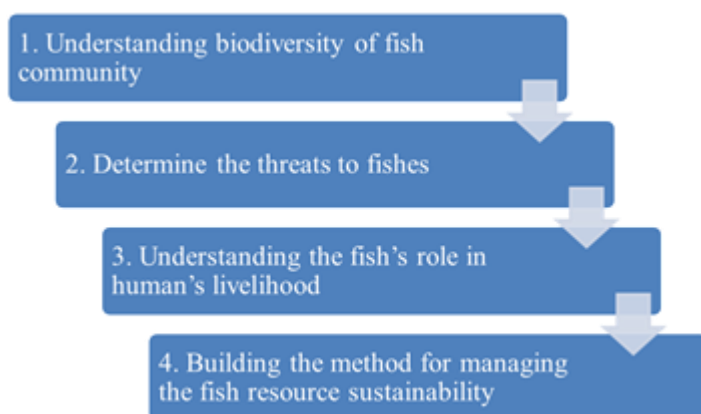
#### **4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).**

The people have benefitted from the project are the local technicians and people who assisted us to conduct this study in the field. During the time we study in the field, they were trained many skills to identify the fishes and they had opportunity to understand fish conservation value. Mr. Nguyen Sy Quang (team member, a young local technician from National Park) is important people who will use his knowledge given from this project to build conservation programs for the wild fishes in this area for long term.

The managers also have benefitted from the information of fishes in Krong No River. This helps them for identifying importance of conservation and development of fish resource in Langbiang plateau. Because many dams have been building in this plateau, habitat of fishes are been damaging.

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

This is our plan for the study on fishes in Langbiang Plateau:



For this project, we conducted the first step. In the next time, we would like to build more other projects (step 2, 3, 4 in the plan figure) to conserve the fish fauna for long term.

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

In fact, we already shared the results to Bidoup-Nui Ba National Park. In August 2017, our Department will hold a conference the Asian Society of Ichthyologists (ASI 2017). The ASI 2017 is an opportunity for ichthyologists to present their recent studies and to exchange new ideas and research experiences with others ichthyologists from Asia and other countries. I am going to present our research for this conference to share information with ichthyologists. This will help us to improve our works and exchange new ideas for conservation of these fishes in the future.

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

Our study was conducted as the schedule we submitted. Please see our actual timescale we conducted this project:

Activity	Duration	2016														
		1	2	3	4	5	6	7	8	9	10	11	12			
Review and collect fishes data and the information from all the ways including species photos, papers, official materials, scientists	2 weeks															
Design the general survey: selecting three main areas for sampling	2 weeks															
Field Trip I (2 trips in dry season)	6 days/trip															
Laboratory Analysis	2 months															
Field Trip II (2 trips in rain season)	6 days/trip															
Laboratory Analysis	2 months															
Preparing report	6 months															

**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 from Ho Chi Minh to Bidoup-Nui Ba National Park (30£/person/time * 2 persons* 8 times)	480	480		
Vehicle rental and fuel costs during the field work (7£/person/day * 3 persons * 16 days)	336	336		
Food for team in field trip (6£/person/day * 6 persons * 40 days (in forest) + 6£/person/day * 3 persons * 16 days (travel time))	1728	1728		
Rest house for team (7.8/person/day * 3 persons * 48 days)	1123.2	1123.2		
Stipend for forest ranger (10/person/day * 1 persons*40 days)	400	400		
Stipend for fishermen (10/person/day *2 persons* 40 days)	800	800		
Field expenses (formaline, alcohol, ependorf, map, book, stationery)	120	120		
<b>TOTAL</b>	4987.2	<b>4987.2</b>		

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

I am preparing the plan to study on determining the threats to fishes and understanding the fish's role in human's livelihood. I think this next step is very important to use the basic data from this project we just conducted. This next step will be necessary strategic conservation to building the method for managing the fish resource sustainability as soon as possible because many dams have been building in this region, habitat of fishes are been damaging without any concern of people.

**10. Did you use The Rufford Foundation 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 RF logo for our poster (see Figure in the end of this report "Fig. Poster of Fishes in the Krong No River") to donate the Bidoup-Nui Ba National Park. This poster is also presented in our laboratory for student can learn about fish resource from that. I will use the RF logo for my presentation in this August 2017 Conference as I mentioned above.

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

**12. Any other comments?**

I would like to thank The Rufford foundation for giving me this opportunity to conduct this project. This is very necessary for me to improve my knowledge and very important for people to heighten their awareness of fish resource protection in the nature. Now, I am preparing our proposal to use the database from this project for studying more on determining the threats to fishes and understanding the fish's role in human's livelihood. I hope that we are received approval of Rufford Foundation in the next step.

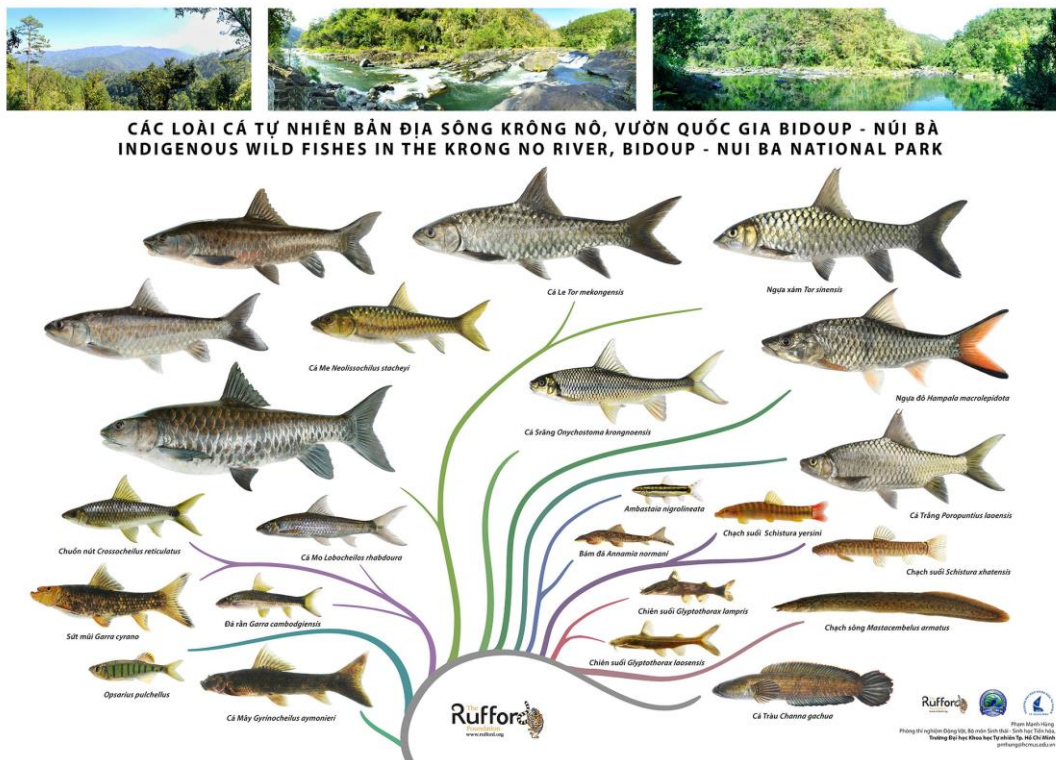


Fig. Poster of Fishes in the Krong No River