Final Evaluation Report

Your Details	
Full Name	Nguyen Dang Hoang Vu
Project Title	Documenting cave herpetofauna of Southern Vietnam: exploring lava tube and karst caves
Application ID	30710-1
Date of this Report	29/06/2024

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieve	Partially achieve	Fully achieve	Comments
	ed	ed /	ed	
(1) Primarily			Х	We documented seven
document the				amphibians and five reptiles
herpetofauna of the				inhabiting lava tubes. None of
lava tubes (Dong				these species are considered
Nai and Dak Nong				threatened. Additionally, we
provinces) and karst				recorded one amphibian and
caves (Kien Giang				three reptiles in karst caves, and
Prov.) to create and				similarly, none of them are at risk.
share the baseline				The findings on cave
data as taxonomic				herpetofauna are currently being
descriptions, photos,				prepared for submission to the
conservation status				Journal of Cave and Karst Studies
especially to local				
authorities.				
(2) Species richness			х	Both cave habitats harbour
in each cave will				surprising biodiversity,
outline the capacity				comprising eight amphibians
of herpetofauna				and nine reptiles. However, they
hotspots. This				face threats from uncontrolled
reasonable				human activities such as
evidence will be				pagodas, tourism, and
used as a				poaching. We recommend that
foundation to				local authorities focus on
protect the cave				protecting biodiversity in
from human				specific caves.
activities by				
suggesting the				
official sustainable				
management.				
(3) The capture-			х	We successfully applied the
analysis-release				capture-analysis-release
method which has				research methods. For all
been successfully				reptiles, we employed the
applied in reptile				capture-analysis-release
study in Vietnam will				method. Additionally, a journal
be thoroughly tested				article utilising data from
for commonly used				uncaptured reptiles has been

Objective	Not achiev	Partially achiev	Fully achiev	Comments
	ed	Y ed	ed	
in the future.				submitted and is currently
				pending revision. We recommend employing this
				method for most reptile research.
(4) In addition to			Х	We have successfully trained
sharing data, at				three local rangers in
least one local				herpetotauna identification,
ranger in each site				Cuopa Mr. Nguyen Mann
field works and				Nauven Van Dung, and Mr. Vo
he/she will be				Van Lam
instructed the basic				
skills to identify				
amphibians and				
reptiles in the caves.				
(5) Three posters of			Х	We have shared three posters
amphibians and				featuring cave amphibians and
reptiles				reptiles with local authorities to
corresponding to				support their environmental
results obtained in				education efforts.
the lava tubes (in				
Dong Nai & Dak				
Rong) and Karsi				
Giana) will be				
supported for local				
authorities to fill the				
herpetofauna				
knowledge gaps of				
the public.				
(6) Provide the	х			We found that all amphibians
conservation				and reptiles inhabiting caves
assessment for				are non-threatened species
specific species (if				according to IUCN
any endemics or				categorisation.
the IIICN eriterie				
Version 3.1 /B1 EOO				
or B2-AOO) and				

Objective	Not achieve	Partially achieve	Fully achieve	Comments
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determine the significant important species (if any based-on Vietnam Red List Book 2007, CITES 2017, and IUCN 2020) giving support for local management authorities on conservation actions in future.				
(7) New findings on taxonomy, ecology, and distribution of amphibians and reptiles are expected and will be submitted to peer-review journals.			x	We have documented a novel reproductive observation of the snake Coelognathus radiata in the lava tube cave. This snake partially inhabits the cave and has laid a clutch of nine eggs within it. The dietary observation has been submitted to the Herpetological Review and is currently pending revision. Furthermore, we have reported a new record of the skink <i>Micryletta erythropoda</i> in a lava tube cave. The record has been prepared to Taprobanica and is currently pending revision. Additionally, we reported another new record of the skink <i>Scincella nigrofasciata</i> in the same lava tube cave, which has been prepared to the International Journal of Speleology and is also awaiting revision.

2. Describe the three most important outcomes of your project.

a). We have documented seven amphibians and six reptiles inhabiting lava tubes. Additionally, we have documented one amphibian and three reptiles inhabiting karst caves.

b). We recommend that local authorities focus on protecting biodiversity in specific caves from human activities. We have compiled a list of these caves.

c). We have shared three posters featuring cave amphibians and reptiles with local authorities to support their environmental education efforts.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Being the first scientists to study amphibians and reptiles in caves at night has been met with skepticism by local authorities. Consequently, the permission process has become more challenging and time consuming than usual. Particularly during the Covid-19 pandemic, authorities express concerns about diseases transmitted by bats in caves. Fortunately, obtaining permission for our most recent trips was easier, as the local authorities have become accustomed to our work.

4. Describe the involvement of local communities and how they have benefitted from the project.

The local authorities are actively engaged in a project to enhance their knowledge and improve their efforts in cave and forest protection. They utilise visually appealing posters for environmental education among ethnic communities in the area. Additionally, local eco-tourism agents have adjusted their tour programmes to focus on protecting biodiversity in specific caves. These efforts not only safeguard the local ecosystem but also create a positive impression for visitors.

5. Are there any plans to continue this work?

We are planning a forest regeneration project in the agriculturally abundant areas within lava caves. The goal is to restore the forest cover across 35,000 ha that have been depleted due to logging by local communities. This deforestation has led to the rapid deterioration of cave ceilings and the destruction of habitats for numerous subterranean species. Additionally, we are developing an educational project for monks and other local individuals who practice Buddhism in various pagodas within karst caves. The aim is to raise awareness about conservation within the Buddhist community and promote the protection of biodiversity in these unique cave ecosystems.

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

We are currently preparing all the scientific data from the project for submission to an international journal. Additionally, the physical results, in the form of posters, are scheduled to be presented at the Vietnam Academy of Science and Technology Museum and the University of Science in Ho Chi Minh City.

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

The next step is of immense importance because it directly contributes to the protection of all biodiversity and the unique natural geological heritage represented by karst and lava caves in Vietnam. By completing these next steps, we will significantly influence local authorities, ethnic communities, international visitors, and the general public in terms of biodiversity conservation.

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

Yes, I use the Rufford Foundation logo for all photos, posters, and other materials related to the project. Additionally, we acknowledge The Rufford Foundation in every journal article we have submitted and are currently preparing for submission.

9. Provide a full list of all the members of your team and their role in the project.

Nguyen Dang Hoang Vu Nguyen Thanh Luan Tran Gia Thinh Lam Quang Ngon

10. Any other comments?

The new law in Vietnam (implemented since 2019) is quite complex regarding the use of funds from other countries, especially for government sectors like our institution. The Rufford Foundation might want to consider directly funding the scientists responsible for the project in future. As an illustration, to utilise the funds for our project, our institution must obtain permission from seven other sectors. Each of these approvals involves significant paperwork, waiting time, and effort. The entire process takes approximately 18 months.