

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	Shalva Barjadze
Project title	Cave investigations and education of local people for cave conservation in Samegrelo Region (Western Georgia)
RSG reference	17990-B
Reporting period	September, 2015 – February, 2017
Amount of grant	£ 8756
Your email address	shalva.barjadze@yahoo.com
Date of this report	17.05.2017

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
Seminars at schools				Information about the genesis of the karst caves in Samegrelo Region, their microclimatic conditions, cave-dwelling fauna, fossil records and the negative impacts of the anthropogenic factors on the cave environments were presented during seminars at public schools.
Excursions in the caves				School pupils were involved in the speleological and biospeleological investigations to learn methodologies of the cave research and principles for the sound management and conservation of cave ecosystem.
Laboratory treatment				Materials sampled in the different zones of the caves were treated in the laboratory according to widely used methodologies used in biospeleology and palynology.
Statistical analysis of the received data				Correlations between microclimatic conditions and Invertebrate animals' communities in each cave zone (entrance, twilight, dark) between different caves were processed statistically. In addition, faunistic similarity cluster between invertebrate communities of the investigated caves in Samegrelo Region was compiled.
Publishing and distributing of the booklets				Illustrated booklets on microclimatic conditions of the local caves, invertebrate animals associated with each karst cave in Samegrelo region, organic remains (pollen and non-pollen remains) found in the caves and threats caused by anthropogenic factors

				were published and distributed among the school pupils in Chkhorotsku, Khobi, Martvili, Senaki, Tsalenjikha and Zugdidi districts (Samegrelo Region, Western Georgia).
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

During the project no any unforeseen difficulties arose.

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

1. Cave microclimatic conditions, cave biodiversity and palynological materials found in the caves were investigated in the disturbed and undisturbed caves of Samegrelo Region, Georgia;

2. Seminars and excursions which were held during the project decreased the influence of the anthropogenic factor (pollution and vandalism) on the cave ecosystem. Correct opinion about the necessity of the cave conservation and role of the local people in the conservation activities were formed in local people and school pupils of Samegrelo Region;

3. This project provoked interest in the disciplines associated with the cave investigation (geography, biology and palaeontology) among local school pupils in Samegrelo Region.

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

In our opinion, seminars and excursions have made positive influence on local school pupils. From the seminars they got more information about the caves, cave-dwelling invertebrate communities and their conservation, anthropogenic factors that affect cave biodiversity and block conservation actions. School pupils expressed interest to get bachelor's degree in specialities which are associated with cave investigation - biology and geography.

5. Are there any plans to continue this work?

It's the third project in RSG Foundation and we plan to write proposal for the 2nd Booster Grant to start educating local communities about long caves (more than 100 m long) ecosystems and their importance to protect caves from the influence of anthropogenic factors in different karst regions of western Georgia. Besides, we plan to write project proposal for programme: "Science is begun from the school research with participating of the school pupils" of Shota Rustaveli National Science Foundation (SRNSF) to investigate caves invertebrate communities and influence of the anthropogenic pressure by tourism on the cave fauna in Tskaltubo district,

Imereti Region, Georgia, where are located Prometheus and Sataplia I caves. These caves are used for touristic purposes and several local endemic invertebrate species live there.

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

My co-workers and I made and plan to make presentations about our research for my colleagues and students of Agricultural University of Georgia. I plan to have short presentation of the results of the project during course of biospeleology at the Bachelor's School of Ilia State University.

Besides, we plan to prepare publications based on biospeleological investigations and publish them in peer-reviewed journals, such as *Zootaxa* and *International Journal of Speleology*. It will help us to share results of our investigation with the other colleagues.

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 RSG was used from September 2015 to February 2017. This period corresponds to the anticipated length of the project.

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
Two Laptops	1100	1100	0	
Three Speleo suits	300	300	0	
Three Speleo helmets	510	510	0	
Plastic tubes- 400 units	80	80	0	
Alcohol -10 L	20	20	0	
Chemicals for palynological investigation	400	400	0	
Food for pupils during field excursions	960	960	0	
Travel expenses from Tbilisi to field area and back	396	396	0	
Minivan rent (for field excursions)	672	672	0	
Fuel for local travel	216	216	0	
Lodging	2250	2250	0	
Per diems	1080	1080	0	
240 block-notes (for pupils)	240	240	0	
240 pens (for pupils)	72	72	0	
Booklet publishing	300	300	0	

Cups with RSGF logo	80	80	0	
Calendars with RSGF logo	80	80		
Total	8756	8756	0	

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

I think that two important next steps should be started:

1. To investigate long caves (more than 100 m long) in different karst regions of Georgia for assessing cave biodiversity, endemism, microclimatic conditions and palynological and non-palynological remains existing in the caves and to reveal the negative impacts on the caves caused by human activities.
2. To establish protected territories - natural Monuments of Garakha and Shurubumu caves by taking into account their biospeleological, speleological and paleontological aspects.

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?

RSGF logo was always posted during the seminars in the public schools of Samegrelo Region, Georgia. Besides, this logo always was on the title slide of the presentations. Active school pupils were rewarded by the cups and calendars with the RSGF logo. In addition, the logo was used in the published booklets, which were distributed in public schools of Samegrelo Region.

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

Dr. Shalva Barjadze – Biospeleologist, researcher at Institute of Zoology of Ilia State University, project team leader, Member of IUCN SSC Cave Invertebrate Specialist group.

Role: He gave a lecture in public seminars, participated in excursions and carried out biospeleological investigations in the caves.

Dr. Eliso Kvavadze – Paleobiologist, Researcher in Georgian National Museum; participant of 45 scientific conferences and 12 projects; author of 254 scientific papers and 6 monographs; supervisor of 2 diploma and 2 doctoral works.

Role: Dr. Kvavadze gave a lecture in public seminars about the environment and paleoecology of the caves, participated in excursions and carried out palynological investigations on material from the caves.

Gigo Oniani M.Sc. in Geography – Speleologist, Ranger at Imereti Caves Protected Areas. Member of NGO "Speleo Club of Georgia".

Role: Gigo Oniani gave a lecture in public seminars, participated in excursions and carried out microclimatic investigations in the caves.

12. Any other comments?

We are grateful to the Rufford Foundation, which supported financially our educational activities for local people in Samegrelo Region about the importance of cave conservation to avoid extinction of the local endemic invertebrate species and about local people's role in reducing human pressure on the karst caves of the region.