

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. 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. 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	Nana Gratiashvili
Project title	Investigation of threatened ants and ant associated butterflies and education of local people for insect conservation in Samtskhe-Javakheti region, Georgia
RSG reference	14711-2
Reporting period	From the end of April, 2014 till the end of April, 2015
Amount of grant	£4824
Your email address	nanagratiashvili@yahoo.com
Date of this report	23.04.2015

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
1. To organise excursions and seminars			+	During the seminars we educated school pupils about the life history of the threatened insect species, their importance as bioindicators for assessment of ecological conditions of forests and meadows and the influence of anthropogenic factors.
2. To investigate ant and butterfly habitats and ant distribution in the Lesser Caucasus mountain			+	Habitats of ants and ant associated butterflies were investigated. Distributional patterns for ant species (<i>Formica aquilonia</i> , <i>F. pratensis</i> , <i>F. rufa</i> and <i>Harpagoxenus sublaevis</i>) and for butterflies (<i>Phengaris alcon</i> , <i>P. arion</i>) were revealed.
3. To use ant and butterflies as bioindicators			+	There was correlation between presence/absence and number of the ants (<i>Formica aquilonia</i> , <i>F. pratensis</i> , <i>F. rufa</i> , <i>Harpagoxenus sublaevis</i>) nests and destroying rate of the forest habitats. Correlations were revealed between the fragmentation of meadow habitats and number of pupae of <i>Phengaris</i> butterflies in the nests of <i>Myrmica</i> ants.
4. To study the ecological parameters of <i>Phengaris</i> butterflies			+	The quantity of host <i>Myrmica</i> species, number and percentage of <i>Myrmica</i> nests with pupae and larvae, F specificity in each locality for each <i>Phengaris</i> species were calculated.
5. To carry out statistical analysis of received data			+	Based on the ecological parameters of investigated insects, statistical analysis was performed.
6. To distribute booklets to local people			+	Illustrated booklets about the ants and ant associated butterflies: their life history, reassessed conservation status, their role and importance in the bioindication and threats caused by anthropogenic factors were published and distributed in local schools of Samtskhe-Javakheti region.

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

There were no arisen any unforeseen difficulties during the project.

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

1. Habitats of ants and ant associated butterflies were investigated. Ecological parameters of *Phengaris* butterflies: such as, number of host *Myrmica* species, number and percentage of *Myrmica* nests with pupae and larvae, F specificity in each locality for each *Phengaris* species were studied.
2. Seminars and excursions which were held during the project in the local public schools made an important impression on the pupils. I can convincingly say that, such projects and among them our project will make influence on their future decision to choose the profession in the biological disciplines such as zoology, conservation biology and ecology.
3. This project will help to decrease the influence of the anthropogenic factor (pollution, logging, fire and overgrazing) on the forest and meadow habitat. Based on the information from the seminars and field investigations, local people and school pupils will formulate correct opinion about the necessity of the insect conservation generally and their role in this action.

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

Seminars and field trips have made positive influence on the involvement of local school pupils. From the seminars they got more information about the insect conservation, life history of the threatened insect species, their importance as bio-indicators for assessment of ecological conditions of forests and meadows and the mostly negative influence of anthropogenic factors on the nature.

5. Are there any plans to continue this work?

It's my second project in Rufford Foundation and I see how works such projects on the new generation and their education. From such activities pupils receive much more knowledge, interest and are trying to keep and protect the nature. Abovementioned project provoked interest in conservation actions of the insect habitats in the school pupils and teachers, also in local people of Samtskhe-Javakheti region, Southern Georgia. They expressed activities during the field investigations and after the seminars asked a lot of questions about the life histories of the investigated insects, their conservational status and main reasons of their habitat fragmentation. I'd like to write another scientific-educational project proposal which will continue this work in the other regions of Georgia.

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

I and my co-workers plan to make presentations about our work with my colleagues and students of Ilia State University. Besides, we will prepare publications on the ecological parameters of *Phengaris* butterflies. It will help us to share results of our investigation with the other colleagues.

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

RSG was going during 1 year, from the end of April, 2014 till the end of April, 2015. This period was corresponding with the actual length of 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
One laptop	500	500		
Two aspirators	50	50		
Eppendorf tubes – 300 units	90	80	10	The tubes cost £10 cheaper
Insect pins – 10 packs (1000 pins)	30	30		
5 entomological boxes-5x25	125	125		
alcohol – 5 lx3	15	15		
food for pupils during field excursions	600	600		
Travel expenses	200	180	20	Because of the competition of bus companies, travel expenses were decreased a little
Minivan rent	500	500		
Fuel for local travel	153	153		
Lodging	1500	1530	30	For the last trip due to inflation cost of the accommodation was increased a little
Per diem	600	600		
Block of printing Paper 2 units	16	16		
150 block-notes (for pupils)	150	150		
150 pens (for pupils)-	45	45		
Booklet publishing	250	250		
TOTAL	4824	4824		

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

As I mentioned above, I'd like and I think it's important to fulfil such scientific-educational projects in another regions of Georgia.

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 always posted RSGF logo during the seminars in the public schools. Besides, this logo always was on the front slides of our presentations. Active school pupils were rewarded by the cups with the RSGF

logo. In addition, it was used in the published booklets, which were distributed in the public schools of Samtskhe-Javakheti region.

11. Any other comments?

I and my co-workers are grateful to the RSGF, which gave us opportunity to accomplish our goals in Samtskhe-Javakheti Region, to educate local population, stimulate school pupils to choose correct profession, to formulate correct opinion about the necessity of insect conservation and their role in this action. We hope that these activities will cause weakening of anthropogenic influence on the threatened species in Samtskhe-Javakheti region.