

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	Nada Cosic
Project title	Distribution and conservation of the European ground squirrel (<i>Spermophilus citellus</i>) populations in mountain regions of East and Southeast Serbia.
RSG reference	19759-1
Reporting period	May 2016 - August 2017
Amount of grant	£4704
Your email address	nadacosic@yahoo.com
Date of this report	05.06.18.

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
Collect data about current distribution of mountain populations of the European ground squirrel (EGS) in Serbia				We have successfully explored all previously known EGS habitats, as well as a number of potentially suitable new habitats. From 30 populations noted in literature we found only three which are still active (one on Stara Planina Mountain, and two on Dukat Mountain). Additionally, we have found five new small populations (one on Vlasina Plateau, one on Gloška planina, one on Besna Kobila, one on Dukat and one on Bele Vode Mountains). Also, on two localities (village Ploča and another on Besna Kobila Mountain) we found just a few single holes. In all cases area of occupied habitat patches was considerably smaller than the total area of potentially suitable habitat. These data will be useful for defining the Natura 2000 habitats in Serbia.
Estimate the size of occupied habitat patches and size of all recorded populations				We have successfully estimated the size of all occupied habitat patches, as well as the relative size of all recorded populations.
Provide DNA samples for future genetic analyses				We collected samples from five populations. Other populations were too small for sampling.
Identification of the main negative factors				During field research, we also noted threats present on investigated localities, of which the most obvious have been lack of grazing followed by succession and frequent fires. Insufficient livestock grazing was observed just on three localities. All recorded EGS habitats have been in bad condition and improvement of habitat quality is necessary on all localities.

<p>Raise public awareness about the importance of conservation and protection of this endangered species</p>			<p>In parallel with fieldwork, we communicated with local communities and authorities about importance of protection of endangered species like EGS and their habitats, and whether and how the local community can help to protect it. We gave lectures to the children from local primary schools and to students. We prepared and distributed leaflets and badges, and made several short movies about EGS which are available on the internet. Also, web page about project activities is posted on http://www.endemit.org.rs/aktivnost/projekat_tekunice.htm</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

We had problem with the bad weather condition during summer season 2016 so we were forced to prolong/extend some fieldwork activities until the end of active season of EGS, i.e. beginning of October. Besides, some fieldwork activities were moved for the next season.

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

1. We collected valuable data about past and present distribution of mountain populations of EGS. Also, we provided enough samples for genetic analyses. All these data are very important for future steps in conservation of this endangered species, as well as potentially reinforcement and reintroduction plans in the future. Data about current EGS distribution will be notable for defining NATURA 2000 sites in Serbia too.
2. Establishing a long-term monitoring of all discovered populations. Additionally, we have provided support for future research and monitoring of two populations which are inside protected areas Landscape of outstanding features Vlasina and Nature Park Stara Planina.
3. Local community education. Local community, especially children were interested to listen and learn about the European ground squirrel, its importance in the ecosystem, the main threats that effect populations and how we can protect this species and its habitats. This is important given that the large part of the locals, especially youngest one, were not aware of the presence of this species in their surroundings, or if they did they thought that EGS completely disappeared from these areas.

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

In general, local community was interested to listen about EGS. Some locals remember EGS from the time when it was widely distributed, but most of them thought that EGS completely disappeared from these areas during the last decades. Data about EGS distribution in southeast part of the country are scarce (exception are Stara Planina and Vlasina), therefore local people provided us valuable data about past distribution of EGS.

We talked with livestock owners in order to ensure the grazing on the locality where EGS is still present, but it turned out that this was not easily feasible as we thought. Namely, as the area occupied by EGS make just a small part of much larger habitat it is impossible to force animals to graze exactly on the area where EGS is present. Only solution is to enclose the part of habitat occupied by EGS, but we were not able to do such a thing. Another option, mowing the grass by machine, was not easily feasible too. Given that the terrain is rugged and thus difficult for mowing, the locals were not interested in doing it even for money.

5. Are there any plans to continue this work?

This is just a beginning of effective conservation efforts that must be continued in the future if we wish to save these rare mountain populations. Long-term monitoring of all remaining mountain populations will be established. We will work on improvement of habitat quality too. Genetic analyses should be done in near future. Along with that, we will continue with education of local communities.

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

Results of this project are shared on website of Ecological Society "Endemit" (http://www.endemit.org.rs/aktivnost/projekat_tekunice.htm) and at 6th European Ground Squirrel Meeting that was held in Serbia. Also, we send project results to managers of Landscape of Outstanding Features Vlasina and Natura Park Stara Planina. Additionally, results of this project will be included in future manuscripts.

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

Grant was used from mid - May 2016 to the end of August 2017 and the duration of the project was longer one month than anticipated.

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
Fuel costs and road tolls	880	1220	+340	Bad weather conditions during summer 2016 forced us to stay shorter on almost every field trip than it was planned in the start, thence we were forced to organize more field trips. In addition, fuel price and road tolls prices increased.
Food and accommodation for the field work	2300	2060	-240	In some cases we had three field workers
Production of educational brochure (design and printing of brochure)	400	370	-30	Printing was cheaper than we expected so we decided to make a badges too.
Tablet	230	200	-30	We found cheaper one
2 camera traps (for making movie clips of animals in the field)	330	260	-70	By the end we bought one more expensive camera trap, as well as one tripod that was not been planet at first
Garmin GPS	320	330	+10	Exchange rate fluctuations
Pesola scale	44	37	-7	
Car reparation or other unexpected expenses	200	200		
Total	4704	4677	-27	

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

Huge areas are still under mountain grasslands, but without livestock grazing or appropriate management these habitats will quickly revert to their natural forest state. Although, the habitat restoration would be quite easy at this moment, the local community is poor and reviving livestock activities without the inclusion and support from the relevant governmental organization is almost impossible. Thence, the one of the next steps will be negotiation with all relevant institution (Institute for Nature Conservation of Serbia, Ministry of Environmental Protection of the Republic of Serbia and Ministry of Agriculture, Forestry and Water Economy of the Republic of Serbia) and their inclusion in process of restoration of mountain pastures. Along with

that we will continue with monitoring of mountain populations of EGS, as well as with education of local communities.

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?

The Rufford Foundation logo was used on leaflets, badges, PowerPoint presentations, poster presentation on the 6th European Ground Squirrel Meeting that was held in Serbia (November 2016) and project web page at Endemit website. Rufford support was highly acknowledged at all occasions and meetings related to the project.

11. Any other comments?

We would like to thank Rufford for given us the opportunity to collect data about distribution of mountain populations of EGS. This data are bases for future research and protection measures that must be taken.