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	Milica Aleksić
Project title	Conservation of the spring ecosystems in the area of Vlasina plateau
RSG reference	25798-1
Reporting period	June 2018-June 2019
Amount of grant	1.707£
Your email address	milicaaleksic94@yahoo.com
Date of this report	22.6.2019

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
Assessment of distribution and conservation status				The most abundant species are *Gammarus balcanicus*, *Gammarus fossarum* (family Gammaride); *Chironomus* sp. (family Chironomidae); *Tubifex tubifex* and *Limnodrilus hoffmoesteri* (family Tubificidae); Drusus sp, *Limnaphilus* sp. (familly Limnaephilidae). Order of Plecoptera is less frequent and presented with families Nemouridae (*Nemoura cinerea* i *Nemoura* sp) and Leuctridae with the most common species *Leuctra* sp. i *Leuctra nigra*. The presence of the taxa Amphipoda, Plecoptera and Trichoptera are associated with high quality of spring ecosystems in this area. Based on our research, which lasted 1 year, it was observed that the composition of the macroinvertebrate community is associated with position of the springs. Species biodiversity is greater in the springs which are located in the open habitats compared to the springs which are located in the forest. We observed that biodiversity of species is lower in captured springs than in natural (non-captured) ones, where the springs captured in a tap form have the

				highest negative influence on biodiversity. *Aphinemura sulcicollis* is an endangered species that was identified in this area. Individuals of Ephemeroptera were not found in the springs which could be one of the indicators of the degradation of spring habitats.
Assessment of the state of habitats				Water temperature of springs varies in range between 6.4 °C and 13 °C. Oxygen concentration varied from 8.30 mg/l to 10, 32 mg/l, saturation from 7.5% to 100.32%. Value of conductivity was between 44 µS/cm and 218 µS/cm. pH value varied between 7.086 and 7.98, meaning all biotopes have alkaline pH value. Concentration of nitrates had values from under range in the springs which are located in the forest to 9.9 in the springs which are surrounded by grassy vegetation. Concentration of phosphates varied between under range in the springs located in forest to 1.181 in the springs which are surrounded by grassy vegetation. Concentration of nitrites and ammonia ions were under range in all 12 springs. BOD5 were between 0.1 to 4 in the springs in riparial zones near Vlasina lake. The most dominant substrate types are stones, gravel, leaf litter, dead branches and moss. A lot of springs are captured for water supply and watering animals in a different way, and in these springs concentration and saturation of

				oxygen had the lowest rate, but the highest conductivity value. We noticed higher concentration of nitrates in the springs which are in the area of camp as the consequence of the development of tourism, which is associated with the pollution of this natural resource.
Conservation outputs				We established cooperation with the Biological Society "Dr. Sava Petrović" and with the Institute for Environmental association "EKO Mountain". We have informed and suggested protection and conservation of the spring habitats to Institute for nature conservation of Serbia, with the aim of preserving natural and non-polluted springs and protection from anthropogenic influence. Through education lectures, presentation and contact with local inhabitants, we worked on raising human awareness about the degree of vulnerability of springs and importance of protection and conservation the springs.
Project promotion and education				During the project, we organised promotion activities in Primary schools and Faculty of Science and Mathematics in Niš, by sharing brochures, presenting poster and PP education presentation. We organised lectures for the pupils, students and local people, presented them the project, and our aims, as the presentation of achieving results. Raising the consciousness of the pupils and local people

				was one of the main goals of promotion as the importance of protection and conservation the springs. Local people was very interested in all steps of researching.
Camp in Vlasina				We organised camp in Vlasina plateau during summer months with Masters students and volunteers, where we presented the methodology of sampling and data processing. The aim was introducing them to the springs as habitats, their importance, but also to their vulnerability and need of protection and conservation.

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

During winter months, we could not go twice in the field trip because of the deep snow.

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

1. Establishing the cooperating with the Biological Society "Dr. Sava Petrović"

2. The scientific contribution of researching the spring of the Vlasina plateau, considering there are insufficient data in literature.

3. Presenting the results of researching of this project in schools and faculty and raising ecological awareness of local people and pupils

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

Local people had been familiar with the endangered species and the high level of endangered the biotope, and importance of conserving these habitats. They realised the importance of negative anthropogenic impact on the springs in a way of pollution and capturing. All equipment used in this project will be able to use for science and education in schools and faculty.

5. Are there any plans to continue this work?

We planned to continue with researching a many of springs on the area in the wider area of Vlasina, especially the endangered species due to insufficient research and commitment to these natural resources. These results will be used for my PhD thesis.

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

It is important to rise human conscious about nature and importance of protection and conservation as motivating the students for researching. I plan to publish the results in science journal.

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 Rufford Foundation grant was used for a period of 12 months. Anticipated and actual length of the project are in line.

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
Printing of posters	50	154	+104	The price was bigger than we planned
Printing of leaflets- 2000 units	180	237	+57	The price was bigger than we planned
Costs of website creation	190	190		
Date processing and project report preparation	510	510		
Lovibond Phosphate Low Range No 2 Tablets Lovibond & Phosphate Low Range No 2 Tablets	620	216	-404	
Lovibond Phosphate Low Range No 1 Tablets	620	216	-404	
Lovibond Ammonia No 210 2 Tablets	235	698	+463	

NitriVer 3 Nitrite reagent powder pillows	215	172	-43	
NitraVer Powder pillows	182	597	+415	
Nessler's reagent	28			We borrowed from the Faculty
Rubber boots Maniera – 4 person x 20 £	80	52	-28	
GPS device Garmin DRIVE 40	156	185	-29	
Lap top DELL Inspiration Lap top 15 3567-NOT 10495	458	428	-30	
Camera Nikon Coolpix B 500	280	370	+90	We decided to buy more expensive camera from money that we saved from other activities
Food cost- 4 persons x 16 days x 7 £	448	222	-226	We could not precisely predict food coast for a whole year
Traveling cost-8 x 2 trips, fuel 1.2 £/l x 4800 km	455	423	-32	We could not precisely predict traveling cost for a whole year
Total	**4,707**	**4,670**	**-37**	

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

Due to insufficient research this area, and existence of endangered species, it is important to continue the researching many of springs in the Vlasina plateau and research the many factors that may have a negative impact on the springs.

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?

The Rufford Foundation logo is used in all promotion materials, posters, PP presentation, leaflets. Before any promotion activity we presented the Rufford Foundation, the aims and goals of the organisation and encouraged students to apply and to take part in our project.

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

Vladimir Nikolić, Master student, laboratory work

Dragan Vulić, Master student, laboratory work and presentation the project

Dimitrija Saviić-Zdravković, PhD student, organisation of travelling

Jelena Ranđelović, creation of web site

12. Any other comments?

We would like to thank the Rufford Foundation for financial support in the realisation of this project. The results will be used for PhD thesis. With this researching, it is made an important step in the searching of springs that would not have been possible without this project and your help, and there is a many possibility for further study.