

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	Brako Anđić
Project title	Distribution and Conservation Three New and Three Threatened Species of Moss in Montenegro
RSG reference	19270-1
Reporting period	March 2016 – March 2017
Amount of grant	£5000
Your email address	brankoan@yahoo.com
Date of this report	30 March

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
<p>Creating a database for three endangered and three new species of moss in Montenegro. As well as registration basic causes that threaten them.</p>				<p>Field research included the following sites: Durmitor National Park, National Park Biogradska Gora, Canyon River Cijevna, National Park Skadar Lake and Park forest Gorica in Podgorica.</p>
<p>Presentation of scientific data to the scientific and to the general public. Introducing the public to the importance of moss for the ecosystem and the environment.</p>				<p>One scientific publication: TORTULA MODICA R.H. ZANDER, NEW BRYOPHYTE RECORDS FROM MONTENEGRO is being presented at the 9th Conference of European Committee for Conservation of Bryophytes, abstract is available at: http://www.eccb-bryo9-prmuzej.me.</p> <p>Second scientific publication is under review: Fissidens fontanus (Fissidentaceae, Dicranales), candidate for the new European red list and few new records in Montenegro.</p> <p>During the workshops, lectures and presentations, promotional material were distributed in the form of brochures and posters.</p> <p>At the study sites were set up information boards with a description of mosses and its importance. Boards were placed on the busiest places on the investigated localities.</p>
<p>The first ex situ protection of moss in</p>				<p>The first ex situ protection of moss in Montenegro was performed in a</p>

Montenegro.			<p>botanical garden in Kolasin. In the garden was created a special area where the samples of the studied species of moss were brought, and which are from now located in the garden.</p>
Promoting the importance of moss and the project to target groups.			<p>The lectures were organised in primary and secondary schools in Montenegro. Schools received posters with information about the studied species of moss and their importance.</p> <p>The lectures were organised for students of Biology at the University of Montenegro. In the frame of the manifestation "Days of Science" presentation of project. A series of workshops was held for parents and children in cooperation with the "Association of Parents of Montenegro". One of workshops was conducted especially for biology teachers in schools, who are familiar with the project.</p>
Linking different institutions and strengthen inter-institutional cooperation through the project.			<p>During the project, cooperation has been established with several governmental and non-governmental organisations, such as Durmitor National Park, National Park Biogradska Gora, Canyon River Cijevna, National Park Skadar Lake, Municipality of Podgorica, University of Montenegro, the Natural History Museum of Montenegro, the NGO "Association of nature lovers and Gorica "and NGO" "Association of parents of Montenegro".</p>

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

Setting up the information boards within national parks is a long legal procedure. In order to maintain the boards for a longer period of time, they had to be cemented in order to protect them from layers of snow or gusts of wind, which could detach them from the substrate.

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

The project was achieved many aims of which the most important are:

- Mapping the habitats where they grow species that are endangered at the European level, such as *Buxbaumia viridis*, and the other studied species. At each habitat are registered potential patterns that threaten this species.
- The first ex situ conservation of moss in Montenegro by creating a mural of moss in a botanical garden. As well as the storage of one part of the plant material in the Herbarium of the University of Montenegro and in the herbarium of the Natural History Museum of Montenegro, where this material is stored.
- Education and raising public awareness of the protection of mosses and their importance.

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

Local communities have given a lot of support for the project, both in the field and in the work with information boards. National Parks of Montenegro in cooperation with the NGO sector supported the setting table and helped in the education of the local population. Also one of the important benefits is educational posters about moss, which received schools in local communities.

5. Are there any plans to continue this work?

During fieldwork conclusions were drawn that the mosses are most vulnerable in the area of River Cijevna. Also, this locality is still unknown in terms of mosses that grow in it. The plan is to declare this area for a monument of nature. So, creating a list of moss could help in the protection of areas and plant communities themselves.

Considering that River Cijevna flowing through the two states (Montenegro and Albania) benefits would be for both countries. So the further research would be focused in that direction. Also constant additional delivery of moss that are under protection within the botanical garden.

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

Via scientific publication in journal and conference, promotional materials, posters, information tables, with YouTube channels which is created during this project

(https://www.youtube.com/watch?v=-tP_Xq1hCco&feature=youtu.be), the Rufford site.

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 project began in March and finished in a year. All envisaged activities were conducted during this period. The scientific work is at the revision and we hope it will be released in the next month.

Timescale:

- May 2016 - first field trip and presentation on symposium.
- July 2016 - second field trip.
- September 2016 - installing information table and creating murals of moss with a description and information about the species and their environment in the botanical gardens.
- October 2016 - third field trip.
- December 2016 - lectures at universities.
- January 2016 - fourth field trip (7 days).
- February 2017 - lectures on the school.
- March 2017 - publication of scientific paper with the results.

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
Travel and accommodation (4 person x 7 days) x 4 season	1040£	1040£	0£	
Daily allowance	1280£	1280£	0£	
Informative tables (preparation, production, transport and installation)	800£	1300£	+500£	Because these are the first informational table of mosses in Montenegro, we set up two boards more than expected, which led to an increase in costs in this area.
Material for moss collecting (bags for field collection, material for herbarium mosses)	400£	300£	-100£	To obtain more money for the table, we have saved money on bags of moss, thus some bags we used repeatedly.

Garmin GPS and computer program for habitat mapping	450£	300£	-150£	Instead of two GPS purchased is intentionally one in order to save money for the information boards. Which are placed in all the country's national parks.
Leaflet print (1000 copies)	700£	570£	-130£	The intentional savings in order to obtain money for the information boards.
Mural of moss in Botanical garden	330£	210£	-210£	The intentional savings in order to obtain money for the information boards. Support in the creation of murals were contributed by the employees in the garden, so we save money for the information boards.
TOTAL	5000£			

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

During this research is beside topic species is collected and other bryophyte species. First next step is the determination of this material in the lab. First next step is the determination of this material in the lab. There is a big chance to find some interesting species, after that we have a plan for publishing a result. This result could contribute to a better knowledge of bryophlora of Montenegro as well as better protection in the future.

One of the most important next step is a research moss of Cijevna River, which could help in the proclamation of this area as the monument of nature. At this moment the data that we got during the research are the only knowledge of mosses of Rijeka Cijevna.

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?

Yes. The Rufford logo was used in all promotion material, such as: posters, presentation, information tables, in the part of the botanical garden which serves to protect the moss, brochure, books stops, TV shows.

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

12. Any other comments?

I am grateful to the Rufford Foundation to support this project, without which I could not complete this research. This research is important for the protection of moss both in Montenegro and beyond, since the formation of the European red list of moss is in progress, we believe that the data obtained in this project will be included as well.