

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	Adi Vesnic
Project title	Wood Ants as indicators of Virgin Forests of Spruce and Fir in Bosnia-Herzegovina (<i>Formica rufa</i> group)
RSG reference	18632-2
Reporting period	December 2015 – February 2017
Amount of grant	£4767
Your email address	vesnic.adi@gmail.com
Date of this report	February 13, 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
Competition in art on the theme "Protecting the diversity of spruce and fir woodlands"				
Celebration of the International Forest Day on March 21 st 2016. Workshop "Vilsonovo arbore walk"				Art gallery was organised with the theme of nature protection. Student art works were promoted on Facebook page Ants of Bosnia and Herzegovina
Field work in virgin forest Ravna vala (Mt. Igman)				Field investigations were carried out in May, July and September 2016. Final results indicated that the forest is degraded and deforested. It is not a virgin forest anymore.
Field work on protected site Bijambare				We planned to work for 2 months (in June and August 2016.) but due to good cooperation with management of the protected site in Canton Sarajevo we worked for 4 months, from May to August 2016.
School in nature on Bijambare protected site				
Project presentations at Faculty of Science and Mathematics Sarajevo				
Web page design and construction.				http://biolog.ba/mravi/

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

During the Project realisation we did not have difficulties. Unfortunately, four of data loggers were destroyed by foxes. Data loggers embedded in ground attracted the

foxes, and they destroyed them by chewing. In our field work on Mt. Igman we discovered that site described as virgin forest was deforested and ecosystem degraded. The site cannot be classified any longer as virgin forest.

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

Three most important outcomes of the project are:

- Development of the standardised monitoring field protocol for wood ants monitoring. The wood ant monitoring programme was developed with students that were included in field activities and were encouraged to explore woodland invertebrates. The wood ant monitoring programme will be offered as an undergraduate research project for students at Faculty of Science at Biology Department.
- Through the project I had the opportunity to present Rufford project at the first professional education of biology teachers in Sarajevo Canton. During the presentations teachers were educated how to include field investigations of ants in their curricula for primary and high school.
- Collected scientific data were used and in the future will be used as a basis for woodland and wood ant conservation. We identified sites with highest wood ant density. Data were used for promotion of habitats important for EU and Natura 2000 species. With newly collected data we can protect wood ants and ask forestry companies to protect sites with high density of wood ants.

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

The target groups defined in this project included elementary and high school children and students at Biology Department in Sarajevo. We did not work with local community, but this project allows us in future to work with the local elementary school near Bijambare protected site, and other local communities where we have observational plots for wood ants. We are also planning to organise field trips for local school children from Vares municipality and for earlier defined target groups: scout groups and mountaineers.

5. Are there any plans to continue this work?

The wood ant monitoring activities and education programmes will be carried out as NGO BIO.LOG educational programmes. The educational programme was

developed in first RSG project and tested in the second project. The wood ant monitoring programme is integrated as project in BIO.LOG activities. The first and second RSG also provided the technical means for students at the Biology Department Sarajevo for field research.

We are planning our work with local forestry agencies and education of school children from local communities near conifer forests. We already made contact with local forestry department in Vares municipalities, and we are planning to expand our educational programs to the local communities with schools, scout organisations and young people from mountaineering organisations.

Thanks to our monitoring programme we are planning to temporary protect one site on Mt. Perun for 5 years, in order to monitor how wood ants and protect conifer woodland from bark beetle. We hope to continue our research and to make long term wood ant monitoring project, to investigate influence of wood ants on healthy forest maintenance.

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

Scientific data gathered in this project will be published and promoted on websites of NGO. We are using social media and direct communication with target groups (educational lectures) to make our results visible. We are also planning to publish second scientific paper on wood ants as a direct result of research conducted during this project funded by Rufford Small Grants.

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

I received the RSG on the December 10th 2015. We planned to finish promotional activities till the end of May 2017 in order to mark the biodiversity day and international day of forests. All field work investigations and laboratory work was finished in time. For further analysis of our results we plan to complete scientific paper and article regarding wood ants conservation and woodland habitats.

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
Rent a car (fuel included)	663	703	-40,01	Differences were compensated from other items
Accommodation and food costs	277	77	199,79	Free accommodation, donation from Bijambare protected site administration
Temperature and moisture data loggers	568	748	-179,52	Differences were compensated from other items
Field equipment (entomological net, tubes, fixative)	220	163	57,45	
Ant hill marking equipment	95	122	-26,91	Differences were compensated from other items
Entomological boxes	530	569	-38,91	Differences were compensated from other items
Literature	300	406	-106,36	Differences were compensated from other items
Helicon focus license	208	0	208,00	Photo focus stacking software license was not purchased because during the project I received the Adobe photo shop that has photo stacking image options.
Forest day promotion	120	106	14,35	
Pamphlets, posters, info tables, Promotional bags for field school	426	423	3,38	
Brochure	600	683	-82,69	Differences were compensated from other items
Bus rent, Food and drink	400	408	-8,40	Differences were compensated from other items
Binoculars, magnifying glasses	360	305	55,23	
TOTAL	4767	4712	55	We are planning to buy fruit seedlings and to donate them to the schools to celebrate the international forest day in 2017.

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

Thanks to the Rufford Small Grants we were able to define two main threats to Bosnian spruce and fir forest; deforestation (includes also soil loss) and bark beetle infestation. We must continue with monitoring programmes and raise awareness of local communities.

In the future we have two important tasks:

- To continue with monitoring programmes of coniferous forests habitats with wood ant nests and include monitoring of mammals and birds in this programme. Mammals and birds also use wood ant larvae as food or wood ant's acid and having that in mind it is important to include them as a part of future investigations.
- To implement educational programmes in local communities, educate school children and request from the local logging companies to obey the law.

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?

We used RSGF logo in our promotional activities and we did receive the TV publicity (Hayat, N1 news) especially during our promotion of international days of nature protection. Also we used official sites of Agency for Nature conservation of Sarajevo Canton to promote the project activities.

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?

Thank you very much for funding my proposal.