

Final Evaluation Report

Your Details	
Full Name	Miloš Popović
Project Title	Endangered Serbian Butterflies - working together
Application ID	24652-B
Grant Amount	£9899
Email Address	mpopovic@pmf.ni.ac.rs
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1. 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
Efficient online data entry facilities providing better knowledge on butterfly distribution and trends				Web page biologer.org now provides a multilingual, open access resource about Serbian butterflies and also serves as the data collecting facility.
An active and more strongly connected network of butterfly enthusiasts working together to achieve better conservation of butterflies				
A georeferenced database with all available literature records				About 42,000 literature data points have been georeferenced. We just developed a system for importing literature data in Biologer, so you can expect this data to be available online soon.
An updated Red List of butterflies of Serbia submitted/published in the scientific journal				Red List is published as part of the manuscript in Journal of Insect Conservation, DOI: 10.1007/s10841-019-00127-z
Insights into ecology and potential competition between two sympatric <i>Zerynthia</i> species				Results were presented on a symposium of Serbian Entomological Society, will be a part of Milan Ilić' master thesis and will be presented in more details on the upcoming symposium Future for Butterflies in the Netherlands.

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

Unfortunately, some of the team members that I counted on for the project implementation could not participate full time in the activities. Thus, I took some of the activities on my own and during the project new volunteers joined, taking over some of the tasks. At the end we had four teams working with Festoon butterflies instead of five and the people that we plan to involve in Facebook promotion were not able to participate.

The number of volunteers taking small grants for the field survey was lower than expected. In my previous project this was one of the most welcomed activities, and I

find hard to explain why people didn't participate this time. On the small conferences at the end of the project I realised that some of the students were just too shy and they needed someone to tell them this information in person. I guess we should make more effort in spreading the word about the grants and not to rely on online promotion.

The weather conditions were also bad in 2019 and we had to reduce the field effort. However, this was carefully planned with project time schedule and covering two seasons we managed to collect enough data.

Overall, the scope of my project was too broad (again!) and it was hard to work on such wide range of tasks with so many people.

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

Biologer – The online open source, open access database for biodiversity is up and running in Serbia (biologer.org) and Croatia (biologer.hr), providing valuable data for conservation purposes.

Red List – For the first time we have objective, data driven, national red list of butterflies and will use it as a base for changes in legislation and to make realistic priorities in nature conservation.

Networking – This project made a tight bound between people, nature-oriented projects, organisation (both governmental and civil), Universities and managers of the protected areas.

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

The impact is a bit broader, since the project covered the entire country.

Some examples of the benefits include:

- Institute for Nature Conservation of Serbia used the results of the Rufford project (Red List, literature data and Biologer database) as a base for ecological network planning;
- several Rufford projects and CSOs used Biologer platform for collecting data;
- our Wikipedia got short texts about butterflies living in Serbia;
- managers received the reports about butterfly species recorded within the protected area and could use this data for promotion and conservation planning (i.e. Pčinja Valley got new info tables about butterflies);
- researchers/students worked together on networking during the annual meetings at my home place and at the mini conferences organised in four major Universities;
- we shared knowledge with local people during our field studies;
- we trained students and volunteers accompanying us during the field surveys; etc.

Monitoring of this project is mainly based on tracking the promotional activities and impact of the project on the community. This is a short summary of evaluation metrics:

- one brochure, one poster, two scientific papers, five symposium presentations.
- two team meetings, four mini conferences (Kragujevac, Belgrade, Novi Sad and Niš).
- Total of 1,210 members on Facebook page Butterflies of Serbia.
- 277 users on biologer.org and additional 85 on biologer.hr.
- 42,030 literature data digitalised.
- 56,000 field observations in biologer.org.

5. Are there any plans to continue this work?

First, we plan to further develop Biologer software platform and make it available in the wider region of Eastern Europe. Also, we plan to promote butterfly monitoring using transect walks and collect even more occurrence data from the field through our network of volunteers.

A work on data collecting and legislature dealing with nature conservation is continued through Natura 2000 designation projects where I have been engaged as butterfly expert.

There are some ideas that students involved in this project continue work on Festoon butterfly ecology/conservation (Milan Ilić from the University of Niš) and to map the threatened habitats of the Freyer's purple emperor (Ivan Tot, from the University of Kragujevac).

On the long term, we plan to continue with promotion and education, to work with stakeholders in solving conservation issues and to undertake active conservation measures if needed.

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

There are various ways we used to promote our results to the different stakeholders. Regarding the general public, we are happy to appear several times on TV and in newspapers. There was also a Facebook promotion and several interesting texts about the project appear on wildbalkans.com. And as always, t-shirts were gone like crazy! People love t-shirts :)

The best promotional activities turned out to be small conferences in four university cities. My team members shared different part of the project results to the students and the students had a chance to present their conservation-oriented activities to us. During the conferences, we had a lot of discussions and make some plans for joint actions in the future.

Students and scientific public had a chance to be informed about the projects through posters, brochures, conference presentations and scientific papers. We are

glad that scientific and governmental institutions accepted our new red list and Biologer platform for open data.

And this is just the beginning. More results will be published in the future on the social networks, on the web, in the news and as scientific publications. Also, Biologer platform speaks for itself, with our members and moderators spreading the word about this software. NIDSBE „Josif Pančić “even organised a small competition for the members contributing the most of data to Biologer and we donated some promotional material for this purpose.

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

Overall the project was going according to the plan with some shifts due to bad weather and/or involvement of many people. It was planned and realised over two years, saving us some troubles with bad weather and allowing people to dedicate some more time for the project.

8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Two team meetings	445	531	+86	We had more people than planned.
Digitalisation and georeferencing of published literature	749	749		
Mapping the distribution of <i>Zerynthia</i> species	1871	1672	-199	Money was reserved for 2019, but entire spring was rainy.
Software development	1482	6804	+5322	Additional funding was obtained.
Targeted field surveys	3680	4152	+472	
Field survey grants	599	187	-412	Unfortunately, not enough people has applied for the grants. Money was transferred to the previous budget line.
News	213	213	0	
Promo material	705	705	0	
Academic presentation	629	478	-151	Presentations followed

				one another, lowering the travelling costs.
Equipment – PC for modelling	675	776	+101	
Equipment – Field equipment	457	513	+56	
Accommodation	150	150	0	NOTE! No bills could be obtained for accommodation.
Other expenses	449	444	5	
Total	12104	17374	+5270	

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

Legislation. We have to lobby for changing national legislature (since some common species are strictly protected, while the ones of conservation importance are omitted). This should help all the parties to better prioritise resources required for butterfly conservation. Collaborating with governmental institutions, we are informed that the changes to the law on nature protection are coming soon. And just in time! Since we now have a strong argument based on real data.

Next important step (more like a series of steps) is wrapped around rising capacity of our team and involving volunteers. The team members will have to be able to tackle conservation tasks on their own and to communicate with the volunteers involved in data collecting. We need a strong team, ability to share conservation tasks and to involve new people and ideas. In the long term we should be able to create a scheme for monitoring butterfly species. Although Rufford projects have helped a lot, this process is very slow in the Balkans and requires a lot of constant efforts.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, the logo was used in all promotional material (shirts, brochures, posters, presentations for symposium, on the web including the social networks, etc.). We always tried to acknowledge Rufford Small Grants while working with institutions and organisations and we call our students and volunteers to think about their own application. We tried to include the grant number in scientific publications where possible and always mentioned Rufford foundation to the journalists.

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

Beside myself, the teams for surveying *Zerynthia* sp. distribution/ecology were led by:

- Milan Ilić
- Ivan Tot

- **Aca Đurđević**

They were also preparing conference presentation for our national entomological symposium. Other scientific contributions were prepared by **Ana Golubović** and me and were usually dealing with Biologer.

Software development was led by **Nenad Živanović** and he is held the most responsible for our biologer progress. Ana Golubović, **Toni Koren**, **Ivona Burić**, **Marko Nikolić** and me were involved in designing the overall database. Coding the Android application was made by **Branko Jovanović**, **Boris Bradarić** and me.

Bojana Nadeždin was mostly in charge for organisation of the meetings and logistics. Marko Nikolić was trying me with the promotional activities (replacing two team members that couldn't be involved as planned). **Aleksandar Popović** was in charge for design of the project logo and overall visual identity of the project.

Organisers of the small conferences at the Universities were:

- **Filip Vukajlović**, University of Kragujevac, Faculty of Sciences and EID „Mladen Karaman “
- **Jovo Pokrajac**, University of Belgrade, Biological Faculty and BID „Josif Pančić “
- Bojana Nadeždin, University of Novi Sad, Faculty of Sciences and NIDSBE „Josif Pančić “
- **Slobodan Marković**, University of Niš and BD „Dr Sava Petrović “.

Seven people received several small grants for field surveys in the vicinity of their home. Many others were involved in various parts of the projects, but not leading the project activities.