

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	Jelena Šeat
Project title	True Bugs (Heteroptera) of Halophytic Habitats in Vojvodina – Providing data for conservation and popularisation of a neglected insect group
RSG reference	17041-1
Reporting period	March 12, 2015 - March 1, 2016
Amount of grant	£4940
Your email address	jelenaseat@yahoo.com
Date of this report	March 3, 2016

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
Census of true bug fauna in halophytic habitats of Vojvodina		+		We collected a thousands of specimens of true bugs but identification to species level requires a lot of time and experience. For correct IDs and complete list of species, we need to consult expert heteropterologists who will help us as soon as they can.
Propose species, candidates for future Red List of true bugs of Serbia		+		The same as above mentioned applies here: we will be able to propose candidates for the Red List when we complete a list of species.
Examine the possibilities of using true bugs for the purposes of monitoring in grasslands such are halophytic habitats			+	According to relevant literature and our own field experience, true bugs are some of the most abundant and diverse group of insects in halophytic habitats. This group would be very useful in monitoring programmes of grasslands, such as salt steppes and salt lakes, where butterflies, beetles and dragonflies are scarce.
Promotion of halophytic habitats as key habitats for insect conservation in Vojvodina			+	Our promotional leaflet is aiming to introduce the problem of degradation of halophytic habitats (mostly by agriculture), the importance of these habitats for local biodiversity and how we can conserve them. These issues were also highlighted during lectures.
Promotion of the true bugs and entomology			+	This activity was mostly dedicated to school children and teenagers, and responses were highly positive. Demonstration of true bugs collecting, examination of the true bug collection and the possibility to see the equipment for field work, was a real hit.
Forming a team that would continue the faunistic and ecological research on true bugs in Serbia			+	We had a great collaboration with students from the student society "Josif Pančić", and the team created for this project continues to work together. Two students were participants of the Symposium of entomologists of Serbia in September, 2015. This year, we applied, with the same team of students, for a new project.

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

Shortly after the start of the project, one of the team members, Milena Kardum, was prevented to pursue further participation on the project due to family obligations. However, students, especially, Bojana Nadaždin and Ivan Tot, were very dedicated, and covered most of Milena's duties and responsibilities.

The main retreat of the planned activities was the duration of the field work. One field trip was planned to last for 3 days, but in real time, it lasted 5 days. We spent more time per location than we expected, but that didn't affect the budget of the project significantly.

It was expected that we will not be able to identify all specimens of true bugs, and the only experienced heteropterist in Serbia, who can help us, is the retired curator dr Ljiljana Protić from the Natural History Museum in Belgrade. But even the Serbian Natural History Museum does not hold specimens from halophytic habitats from Vojvodina, so some specimens need to be sent to the Hungarian Natural History Museum in Budapest for identification. In the worst case, we expect to have the complete list of species until July 2016.

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

- a) An extremely valuable biological material was collected, which will be deposited in the Natural History Museum in Belgrade, and be available to all interested parties in true bugs. This material will provide us with numerous information for purposes of conservation of halophytic habitats and important species.
- b) We have managed to draw attention of the local people on halophytic habitats in their vicinity. Most of them would never have had the opportunity to be informed about these habitats and their values.
- c) Building a team of young people in Serbia willing to continue to study on true bugs.

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

Halophytic habitats in Gakovo and Srpski Miletić are planned to be connected with the nearby protected area, the Special Nature Reserve "Gornje Podunavlje", which is proposed to be affiliated to the UNESCO Biosphere Reserve "Mura-Drava-Danube", popularly known as the "Amazon of Europe". The area around Gakovo and Bački Vinogradi (SNR "Selevenjske pustare") are on the route of the European Green Belt, and all visited localities represent parts of the Ecological network of Serbia. The main goal of all these initiatives is to sustain a local biodiversity in coexistence with human activities, and local people are encouraged to run small rural or ecotourism family business in these areas.

Halophytic habitats (grasslands and marshes) in Vojvodina, and in the whole Pannonian region, are of a semi natural origin, and for sustainability of their biodiversity they must be maintained by grazing or proper mowing regime. Through promotional activities we tried to motivate local people, and provide them the idea about extensive livestock breeding, as a possible future vocation. Pastures are there and they need to be grazed, otherwise we will lose halophytic habitats and their unique species. It is now on the state, local authorities and the managers of protected areas to

provide support for local communities and involve them in conservation management activities in halophytic habitats.

5. Are there any plans to continue this work?

We are planning to visit halophytic habitats in the north-eastern part of the country (Banat region) and a few small areas in southern Serbia (Central Balkan saline areas). Halophytic habitats in southern Serbia are especially interesting to us, because they significantly differ from those in the Pannonian region by climate and floristic features, and we want to know how these ecological differences reflect on the fauna of true bugs.

Also, we will continue to work on the promotion of halophytic habitats, their conservation and protection of their biodiversity.

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

A comprehensive presentation on the website of the NGO "HabiProt" is dedicated to all results we will gain by this project, including results of our promotion activities and scientific results, already achieved and those we need to achieve. We shared a link of the web presentation on Facebook groups and forums interested in Serbian biodiversity and nature protection. For now, only a presentation in Serbian language is available, but we intent to translate it to English, as well. All scientific papers we plan to publish will be shared via Research Gate and will be available to the scientific community. Also, we have an obligation to submit a complete list of species to managers of protected areas and the Provincial Institute for Nature Protection. Preliminary results were already submitted in December, 2015 for mandatory annual reports of these institutions.

We will participate in the "Nature knows no boundaries" Rufford Small Grants Foundation Conference in Bosnia and Herzegovina in March, 2016, where all participants from the Balkan region will be introduced to our work.

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 grant was used over a 1 year period (March 12, 2015 - March 11, 2016). This period of time would have been enough if we would have had at least two experienced heteropterists, instead of one, working on species identification and preparation. Taxonomy of true bugs is quite difficult to learn, and it needs a lot of training. However, our students are very dedicated and some future identification work will be much easier and faster. This project activity was only time consuming, since no funding was needed, and will be shortened with gained experience. As mentioned above, we expect to complete species list latest to July, 2016.

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 for field work	405	480	+75	One field cycle was actually 500 km long, instead of 450 km. By this item costs of car maintenance and small repairs are also included.
Fuel costs for promotion	135	170	+35	Considering that all team members were from different towns, sometimes it was easier for some of them to travel by bus or train to reach the place where project lectures were held.
Food costs during field trips	900	1225	+325	As mentioned before, field trips were 5 days long, instead of 3.
Equipment and materials for field and laboratory work	380	480	+100	We spent much more consumable supplies in field and laboratory work than we expected.
2 GPS devices	320	340	+20	We decided to buy more expensive GPS devices with a few extra functions.
Photo camera	470	260	-210	During camera buying, we realized that kit lens will not be helpful in true bugs photographing, and decided to buy a modest camera body and macro lenses. The price is given for a camera body.
Stereomicroscope	810	625	-185	At the time we bought the stereomicroscope, the desired model was not available on the Serbian market, so we bought a model that was the closest match to our needs and the predicted price.
Preparation of promotion material	80	80	-	-
Printing T-shirts	630	570	-60	We got a discount on T-shirts, leaflets and posters printing, by the printing office, based on the amount of printed material.
Printing of brochures	550	200	-350	The team decided to print 2000 leaflets, instead of 500 brochures. In this way, the promotional material will be accessible to more people, since leaflets contain the most important points of the project in plain language.
Printing of posters	80	65	-15	-
Postal costs	180	160	-20	-
1 external hard disk	-	70	+70	External hard drive were needed for storing

				of photos made during the project.
Macro lens	-	345	+345	-
Camera adapter	-	75	+75	A DSLR adapter for photographing on a stereomicroscope is very useful for identification of true bugs.
Total	4940	5145	+205	

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

The most important task is to finish species identification, and propose Red List candidates. Submit the list to Provincial Institute for Nature Protection, competent authority for nature conservation in Vojvodina Province. After that, there will be a foundation on which future legal protection of these species and their habitats is possible. Generally more cooperation with this government institution and their entomology department is needed in future.

Working with all interested organisations and individuals on popularisation of conservation of biodiversity in halophytic habitats, and contribute to proclamation of new protected areas in Vojvodina and Serbia.

Publishing results of our research in scientific papers.

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?

On all of the printed material (leaflets, posters, t-shirts) The Rufford Foundation logo was prominent. We used the RF logo on our web presentation and PowerPoint presentation prepared for the lectures. The Rufford Foundation was also mentioned on the X Symposium of entomologists of Serbia 2015, during our oral presentation.

11. Any other comments?

Many young conservationists from Serbia had a great cooperation with The Rufford Foundation, and experiences of our colleagues was highly motivating for us to apply, run this project and plan new ones. This project supplied us with indispensable entomological equipment which will be very hard to provide without funding of The Rufford Foundations. Funding like these are badly needed in entomological research in Serbia, they gather similar minded young people, educating new entomologists and taxonomists, which really contribute to conservation of insects in our country.