

Final Evaluation Report

Your Details	
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Project Title	True Bugs of Halophytic Habitats in Vojvodina (part III) – Elaboration of Rapid Assessment and Monitoring of Pannonian Saline Grasslands Based on True Bugs
Application ID	27761-B
Grant Amount	10,000 GBP
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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
To investigate the potential of using rapid assessment as a method in evaluating the conservation status of saline grasslands.				We found this method to be very useful in situations when the focus group and related taxa are well known. It seems that our previous experience in the field was crucial in executing this part of the project smoothly.
Carrying out the experiment on grass cutting in small plots of saline grasslands, aiming to show its effects on present true bug communities.				Regardless of whether issues we had in season 2019, we were able to finish the experiment in 2020 having satisfied final results.
Promotion of conservation of saline habitats and true bugs.				All promotional activities are postponed until the coronavirus crisis in Serbia calms down. The prepared brochures and a photo exhibition await to be presented to the public.
Publication of the scientific results.				Results of the rapid assessment part of the project are covered by our recently accepted paper. The manuscript related to the grass cutting experiment has not yet been finished by the end of this project.

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

The biggest obstacle in 2019 (the first year of the project) was bad weather at the beginning of the season. Heavy rains and the long period of cold weather during May and June prevented us to start the experiment on grass cutting. We missed the critical point of the season and it was pointless to start later. We decided to postpone the experiment for the next year and make slight changes in the plan of our field activities. Instead of doing both (the rapid assessment evaluation and the mowing experiment) concurrently for two years, in 2019 we were focused on finishing all activities related to rapid assessment evaluation, while in 2020 we were dedicated to the mowing experiment.

In 2020 (the second year of the project), the coronavirus crisis had not influenced our work in the field particularly but carrying out promotional activities was either impossible (at the beginning of 2020) or too complicated (in the last few months).

We could organise online lectures, but one of the aims of planned lectures was to introduce a photo exhibition as well. We think that an online exhibition would not gain the same attention and involvement of the public, so this part of the project is postponed for autumn this year. Later activities will not bring new costs.

The plan to involve biology/ecology students in 2020 in our field and lab work was also rejected because of the pandemic. Only the team members were meeting to carry out or conclude the project activities.

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

a) In terms of scientific recognition of our work, we did a good job. With the results from our previous and latest projects, two articles in peer-reviewed journals were published and we gave presentations on three international conferences.

b) The rapid assessment proved to be a very effective method for fast screening of saline grassland habitat fragments. For example, we found a lot of new locations for species that were considered as rare in Serbia before this project: *Phimodera flori* (2/8), *Crypsinus angustatus* (3/16) and *Solenoxyphus fuscovenosus* (3/45) (numbers in brackets refer to number of known records/locations before and after our project). Furthermore, the species *Phimodera flori* and *Solenoxyphus fuscovenosus* were recorded for the first time in our country during our earlier projects.

c) The scientific outcome of this and previous projects on saline habitat true bugs will be included in my PhD thesis.

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

The project was not meant to involve local communities, but the result of our research could be indirectly beneficial for them. Our evaluation reports can help the Institute for Nature Conservation of Vojvodina Province to designate new protected areas or to extend old ones where valuable saline grassland fragments are present. The authorities in certain cases support herders and people who manage saline pastures in the proper way by subsidies. Also, there are attempts of provincial authorities to restore some saline grassland fragments in Vojvodina and traditionally local communities can use habitats of good quality to collect medical plants or for beekeeping.

5. Are there any plans to continue this work?

Plans to continue this work certainly exist. My current position as a student/researcher in Hungary brought a new perspective and knowledge on how to preserve and maintain saline grasslands of the Pannonian Region. Hungarian conservationists and ecologists have a long history of studying saline habitats and I hope their experience could be implemented in Serbia, too. However, it will be challenging to adapt their practice in an environment with a slightly different history of management, landscape composition and vegetation-climate factors.

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

As in the previous project, a web presentation for the general public in Serbian and English languages is available on HabiProt's website. We shared a notification about it via Facebook personal and several group pages (the HabiProt Association, Insects of Serbia, etc). On these online locations, a pdf form of our brochure is available for download. The brochure explains the importance of the conservation of saline habitats for true bugs. Unfortunately, the last part of promotional activities – the photo exhibition and related lectures will be organised after the project ends.

All published papers and conference abstracts can be found on the Research Gate accounts of team members who participated in the projects. One more manuscript on the grass cutting experiment is in preparation and will be shared in the same way. The data on true bug distribution and related photos collected during our field activities were imported in the Alciphron database and available to all people interested.

Working reports about our field activities in 2019 and 2020 were delivered to the managers of protected areas and to the Institute for Nature Conservation of Vojvodina Province. In those reports, we gave a list of recorded species with precise coordinates of the locations, but we also provided recommendations how to maintain sensitive true bug species based on the habitat status we observed in the field.

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

The grant was used for a 2-year period (April 2019 - March 2021) which was enough time to finish all field activities very smoothly. However, the mentioned photo exhibition will extend the actual length of the project for a few more months but without additional costs.

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
Bank and postal costs	300	275	-25	Here some small expenses are also included like taxes we had to pay, translation of documents and the Alciphron database upgrade. Taxes related to

				microsensors are given with the price of gadgets.
Bookkeeping costs	120	230	+110	With our project, the budget of HabiProt enlarged significantly so bookkeeping costs increased accordingly.
Printing of brochures (200 pieces)	400	370	-30	
Preparation of brochures	120	120		
Preparation of a photo exhibition and printing of photos	1100	350	-750	Because of our lack of experience in preparing photo exhibitions, we did not know about some cheaper alternatives for picture frames, but our designer helped us to save a lot of money.
Stereomicroscope		750	+750	With the money we saved on the exhibition we decided to buy a new microscope to speed up our work on identifications of true bugs.
Subsistence payments for field work (70 days x 4 persons)	2000	1625	-375	The team agreed to spend extra money on the necessary field equipment, which is why we have a bit higher budget difference.
Landscape lens for the camera	540	590	+50	
Microclimate sensors (10 pieces)	700	790	+90	We had to import ambiantal data loggers (i.e., microclimate sensors) and here are given the tax-free price of equipment and taxes after it was imported in Serbia.
Computer (laptop)	680	650	-30	
Equipment and materials for field and laboratory work	570	700	+130	We spent a bit more on expendable materials and equipment than expected.
Food costs on field trips (6 £ x 70 days x 5 persons)	2100	1960	-140	On some occasions (because of the covid virus pandemic) we had fewer people in the field than was planned.
Traveling costs during the promotion and preparation period (fuel, bus and train tickets)	300	300		We saved this money in our account because this part of the project is postponed.
Car maintenance	270	370	+100	We had a bit more things to fix

				on our car during the fieldwork than expected.
Fuel costs for field work (900 km x 10 field trips)	800	920	+120	Fuel expenses are usually unpredictable, because of the constantly changing prices.
Totals:	10000	10000		

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

Now we have knowledge and tools for true bugs monitoring, but also for basic screening of saline vegetation and anthropogenic pressures. The next big step would be to create locally adapted management and conservation plans for saline habitat fragments in Vojvodina. This individualistic approach is needed because saline patches are separate units that differ from each other in many aspects like size, patch shape, surrounding landscape matrix, biodiversity, threats, etc. At the same time, these plans have to be based on a collaboration of experts from different fields of ecology, zoology, vegetation science, but also interdisciplinary researchers. All previously mentioned should help to find the optimal solution for local biodiversity of saline habitat fragments and not just for true bugs.

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?

We used the Rufford logo in all promotional materials, in printed (brochures) and in electronic (web and ppt presentations) as well. In the acknowledgement section of our scientific articles, the Rufford Foundation was mentioned as supporter of our research work.

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

Jelena Šeć (project coordinator) – Research design, true bugs collecting and identification, data analyses and writing of scientific papers, reporting to authorities, writing of web presentation and brochure.

Bojana Nadaždin – Organisation of fieldwork activities, administrative and financial management, assisting in true bugs collecting and identification, assisting in writing scientific papers and brochure.

Mirjana Ćuk – Vegetation data collecting and related analysis.

Attila Torma – Supervising research activities and scientific writings.

Kalman Moldvai – Photo exhibition preparation and brochure design.

12. Any other comments?

The coronavirus crisis really had us worried when it started in March 2020. We were afraid that a complete lockdown in Serbia at the beginning of the season would completely ruin our project by putting all activities on hold. Fortunately, it did not happen, and we could finish our fieldwork safely without any big issues. However, we did not want to push through with the photo exhibition, even though a proper promotion of the project is one of our biggest interests. We hope the members of the foundation understand our decision. However, the official end of the project will not disturb us in our intention to organise the photo exhibition as it was originally planned. As members of the HabiProt association, it is our job to share our knowledge on insects with all interested parties and communicate publicly about nature conservation issues in Serbia.