

## The Rufford Small Grants Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Emina Šunje
<b>Project title</b>	Establishment of regional conservation plan for endangered populations of black salamander from Mt. Prenj
<b>RSG reference</b>	17459 - 2
<b>Reporting period</b>	June 2015 – June 2016
<b>Amount of grant</b>	£5000
<b>Your email address</b>	sunje.emina@gmail.com
<b>Date of this report</b>	05.07.2016

**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
Providing new distribution data		X		Not all planned and investigated areas throughout fieldwork revealed new distribution locations. Field activities in Croatia resulted in confirming two abundant salamander populations in area of Gorski Kotar. Field activities in B&H revealed a new salamander population on Mt. Čvrsnica. A systematic literature analyses combined with regional cooperation revealed new distribution areas in Montenegro. Unsuccessful field work, in terms of finding corridors connecting fragmented salamander populations, were conducted in area of Mt. Treskavica and Mt. Maglić (B&H) where we are trying to confirm their existence for past 3 years, since ecological distribution models and literature data give strong support for their presence there. Due to intense field work for priority areas, we did not manage to investigate Mt. Visočica as primarily planned.
Establishment of regional and international cooperation			X	Thanks to this project we managed to establish regional cooperation necessary for both establishment of regional conservation plan, and collection of biological data that will contribute to the recognition of the uniqueness of this subspecies leading to the reinforcement of its legislation. Collected biological data are analysed through my PhD thesis supported by Erasmus Mundus Scholarship (Join EU – SEE Penta) and thanks to this interest we managed to establish an

				international cooperation with University of Antwerpen (Belgium). Other collected biological data will be topic of regional bachelor and international master thesis.
Collecting research data		X		Throughout fieldwork we managed to collect data for both Croatian and BiH populations necessary for conducting a comparative ecological study. Collected data are the following: 1) Transect data – used for population monitoring and estimation of density, dispersal and abundance. 2) Body temperature data – for thermal ecology study and modelling impact of climate change on population survivorship. 3) Stomach flush data for diet study. 4) Croatian collaborators started with first monitoring activities of populations of black salamanders in Gorski Kotar (CRO). We did not manage to conduct planned reproductive analyses.
Rising awareness: Educational lectures and promotion of resource			X	Educational lectures were conducted in Sarajevo, Croatia, Montenegro, Antwerpen in Universities and elementary school (Croatia). Promotion of the project was done through the website of our Association ( <a href="http://www.bhhuatra.com">www.bhhuatra.com</a> ) Additional promotional material: notebooks, t-shirts, leaflets were distributed to local, regional and international partners and collaborators.

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

Thanks to the previous experience through the first Rufford grant we did not encounter any difficulties during the realisation of this project. Everything proceeded almost as planned. The only exception is that we did not manage to conduct the planned reproductive study.

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

**Establishment of regional and international cooperation:** We managed to establish successful regional collaboration with colleagues in Croatia and Montenegro. In Croatia local researchers with whom we collaborated throughout this project initiated activities and project applications for protection of black salamander populations in Croatia. With colleagues of Montenegro we managed to attract interest of local students for furthering research of salamander population in Montenegro (starting in July 2016) that will bring two bachelor thesis related to this project. Until the realisation of this project populations of black salamander were mostly neglected in Balkan region and now the situation is clearly changing.

An international collaboration has been established with the University of Antwerpen (UA, Belgium) where I have been continuing my PhD study related to the ecology of black salamander populations (in broad sense). During my time spent at UA (September – June 2015/2016), two new studies are designed and offered as „master projects“ for students of UA. Details of these new studies are given in the following links:

1) Study of genetic divergence and diversity of Alpine salamander populations:  
<https://www.uantwerpen.be/en/rg/funmorph/education/student-projects/master-project-subje/alpine-salamander-ge/>

2) Venom variation in Alpine salamander populations:  
<https://www.uantwerpen.be/en/rg/funmorph/education/student-projects/master-project-subje/alpine-salamander-to/>

Through the design of these master research projects, an enforcement and collaboration is established on a long-term basis. UA is currently financially supporting the ongoing research of the black salamander from Mt. Prenj.

**Established Communication with relevant regional Ministries of Environment and Nature Protection:** Through our work we managed to get all the necessary permits for collecting data along the entire area of this salamander - relevant ministries from Croatia, BiH, Montenegro are interested in the output of our research. We established a communication system with all of them that will be used to share necessary data for legalisation and concrete protection of this resource.

**Establishment of the web site of our Herpetological Association – a platform for independent research and outreach:** Through the financial support of this project we created and realised (May 2016) the website of our association (Herpetological

Association in Bosnia and Herzegovina: ATRA: <http://www.bhhuatra.com/en>). This website serves as a platform for reporting, linking and simplifying our further work.

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

During 2015/2016, we conducted several lectures for promoting the work of ATRA Association in BiH where we presented our work primarily to students among faculties related to natural science. Students from the Veterinary and Biology Faculty showed the biggest interest and motivation to join us in fieldwork and data collection. By doing so we spread this trend of research and inspire interested people which benefit from getting free education of fieldwork techniques and used methodologies in fundamental and applied research such as this one.

We organised an exhibition related to our work for local community in within the organisational programme under the European Scientific Research day (25.9.2015). We designed it mostly to be suitable for children of age 7 – 13 (<http://www.bhhuatra.com/en/gallery/promotion-and-education>).

**5. Are there any plans to continue this work?**

The prolongation of this work is currently supported by the University of Antwerpen (UA). UA is financially supporting all field trips and equipment for fieldwork in 2016 along the entire distribution area of the species. New fieldwork analyses started in June 2016 with the aim to screen all distribution area and collect new data which, when analysed, will be finally used as arguments for reinforcing protection plans (more info: <http://www.bhhuatra.com/en/project/salamandra-atra-prenjensis-1>).

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

The results of the work are being disseminated through our Facebook page: <https://www.facebook.com/BHHUATRA>,  
web page: [www.bhhuatra.com](http://www.bhhuatra.com),

and by publishing articles related to our work :  
[https://www.researchgate.net/profile/Emina\\_Sunje/contributions](https://www.researchgate.net/profile/Emina_Sunje/contributions)

Two articles related to previous Rufford grant are currently in the last phase of publishing.

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

The funds of RSG have been used from June 2015 till May 2016. This is in timing with planned project timescale.

**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
Promotion material	381	632	251	We decided to get more quality prints for the notebooks then the once primarily designed
Equipment (field + technical)	2109	1410	699	We did not purchase the planed macro-objective and we did not purchase the terrariums planned for the reproduction studies.
Travel expenses	425,32	426	0.68	/
Educational lectures and promotion of project	9.68	275	165.32	Organisation of unplanned trips.
Website set up	0	400	400	Initially we did not plan this expense but due to amount of work we generated (mostly thanks to RSG - <a href="http://www.bhhuatra.com/en/projects">http://www.bhhuatra.com/en/projects</a> ) we decided to promote our work in this way, thus contributing in parallel setup of international collaboration.
Daily allowance	2048	2186	138	/
Bank charges	0	220	220	Due to lack of experience we underestimated the true amount of these costs.
<b>TOTAL</b>	4973	<b>5449</b>	476	

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

The most important steps are the analyses of collected data and their publication. The collected data will prove the specific taxonomic status of *Salamandra atra prenjensis* and the scientific publications will lead to accepting its (currently doubtful) subspecies status thus leading to its potential transfer from Annex IV to Annex II of habitat Directive and classifying it as a Natura 2000 species.

Once the special status of *prenjensis* is accepted it will be easier, with already established collaboration of local Ministries, to set up an active regional protection plan.

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

RSG logo was presented during all held educational lectures; in designed and distributed promotional material (notebook, t-shirts, leaflets), and all other promotional activities of ATRA Association. The logo has been actively advertised thorough our website ([www.bhhuatra.com/en](http://www.bhhuatra.com/en)).

**11. Any other comments?**

I would like to thank RSG for your support and for showing again trust in us by providing financial support for realisation of our projects which opened new doors and perspective to the work. We hope you are satisfied.