

## The Rufford Small Grants Foundation

### Final Report

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. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
Your name	DUŠAN JELIĆ
Project title	Distribution and conservation of highly endangered karst viper ( <i>Vipera ursinii macrops</i> ) in Bosnia and Herzegovina and establishment of long term monitoring
RSG reference	10163-1
Reporting period	12 months
Amount of grant	£5990
Your email address	<a href="mailto:jelic.dusan@gmail.com">jelic.dusan@gmail.com</a>
Date of this report	01.08.2012.

**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
Promotional lectures at the University of Sarajevo, Banja Luka and Mostar to get students involved and invite them to a 3 day training in Zelengora National Park			X	All three lectures were held and for all three centres we have appointed a project focal point (Banja Luka – mr.sc. Goran Šukalo; Sarajevo – prof. Dr.sc. Suvad Lelo; Mostar – Benjamin Jusić) to who all of the interested parties can address about the project activities and materials. 17 students were selected for the training in the Zelengora National Park (list of presons, their contacts and impressum are noted in the “Guest book.xlsx”).
Leaflet preparation and print in 3000 copies			X	Leaflets have been distributed during the lectures and through partner institutions.
II. first trip - Zelengora, Baba planina, Somina mountains			X	All three localities have been confirmed as habitat of karst viper and tissue samples have been taken for the molecular analysis.
III. second trip – Hrbina planina, Čvrsnica, Bjelasica			X	Čvrsnica has been confirmed as habitat of Karst Viper and tissue samples have been taken for the molecular analysis. Small mountain next to Hrbina planina, called Golija has been additionally confirmed as habitat of Karst Viper, and we expect Hrbina planina is also.
IV. third trip - Viduša, Ljubuša, Tušnica			X	Ljubuša and Tušnica have been confirmed as habitat of Karst Viper and tissue samples have been taken for the molecular analysis.
V. fourth trip - Cincar, Jadovnik, Šator			X	Cincar and nearby mountain Krug have been confirmed as habitat of karst viper and tissue samples have been taken for the molecular analysis. It seems that Šator and Jadovnik mountains could be favourable habitat.
VI. fourth trip - Treskavica, Volujak, Velež, Lelija, Orijen			X	Volujak, Velež and Orijen have been confirmed as habitat of karst viper and tissue samples have been taken for the molecular analysis. Treskavica and Lelija have been rejected as potential habitats based on currently visited localities.

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

There were several difficulties that we encountered during the 2011. One of the problems was bad weather that pushed some of the field activities in 2012. This could not be foreseen and this is one of the main problems when working in mountains of Dinaric Karst. Other problem we had was with the lectures in Mostar as Mostar University recently split into two parts (Croatian and Muslim part) and we had problems arranging both university students to come to the same lecture. We decided to make a lecture only with smaller number of students from both universities that wanted to come to mutual lecture. Students that we want to join our team need to look past the former war activities as we have co-workers from many ex-Yugoslavia countries (Croatia, Serbia, Montenegro, Macedonia).

All this problems also made us move the final field trip and training on Zelengore into July 2012.

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

- we managed to confirm the presence of karst viper on 12 localities and with this we expanded its distribution significantly – this data will serve as a base for selecting 80% of areas to be protected under NATURA2000; from all localities tissue samples have been gathered for genetic studies
- ecological niche model that we produced, based on the distribution data, indicates that there are at least 20 additional localities that should be checked as they have favourable habitats
- Viper team for regional cooperation has been created with appointing project focal point person in each area (Banja Luka – mr.sc. Goran Šukalo; Sarajevo – prof. Dr.sc. Suvad Lelo; Mostar – Benjamin Jusić) and first group of 17 students that make a basic volunteer team

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

During the project we produced 3000 leaflets dealing with general status of karst viper and details about our project in Bosnia and Herzegovina. All of the leaflets have been distributed during the three lectures (Banja Luka, Sarajevo and Mostar), press releases, through the universities and during our field trips (in local communities around the mountains). Local communities were very surprised that someone is doing research and conservation of snakes and this caused immense interest. In these parts snakes are considered evil, slimy and are killed on sight. In many remote places this was their first indication that the nature that surrounds them whole of their lives is very unique and that it needs to be protected. Many of them even refused to touch the snake and admitted that they killed them because they did not know anything about them.

Student community in all four universities was quite impressed with the active and precisely defined conservation actions implemented in the project and they reacted with great interest. 17 students were selected for field trip to Prenj-Zelengora (training) and we hope some of them will start to do their BSc thesis on herpetological subjects.

Through exchange of scientists from Croatia, Bosnia and Herzegovina, Serbia, Montenegro and Hungary and organising lectures we hoped to strengthen regional cooperation and reduce the past

war consequences. We think that the regional team that was formed has managed to fulfil these goals and we hope that cooperation will become even stronger during 2012/2013 project.

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

We hope to apply for the 2nd Rufford Small Grant for the period of 2012/2013 and to continue with the training of the Bosnia and Hercegovina team consisted of experts from all three regions. More detail plan of future project activities is given in Section 9 of this report. We are hoping that soon we could include research in Albania into our project as basic research is missing there too. During the time 2012/2013 we plan to apply for the IPA regional cooperation Croatia-Bosnia and Hercegovina project that should be opened in 2013.

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

Results of our work have been sent to the national nature protection offices in Banja Luka (for the Republika Srpska entity) and Sarajevo (for the Federation entity). Results are also held by all three partner universities for further conservation use. Final report, after the approval by the RSGF, will be translated into Serbian and Croatian and made available on our official web page. Some of the results of this project are being published in scientific journals:

**Jelić, D.**, Ajtić, R., Sterijovski, B., Crnobrnja-Isailović, J., Lelo, S. & Tomović, Lj. (2012): Vipers (Reptilia: Squamata: Viperidae) of the Western and Central Balkans – distribution, protection and conservation. Herpetozoa (submitted)

Ferchaud, A.-L., Ursenbacher, S., Cheylan, M., Luiselli, L., **Jelić, D.**, Halpern, B., Major, A., Kotenko, T., Crnobrnja-Isailović, J., Tomović, Lj., Ghira I., Ioannidis, Y., Arnal, V. and Montgelard, C. (2011): From south to north: mitochondrial markers reveal an unexpected colonization route for vipers of the *Vipera ursinii* complex in the Palaearctic region. Journal of Biogeography (in print)

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

The grant was used over a period of one year (July 2011 – July 2012) as anticipated in the project proposal. Some of the activities were reorganised due to the possibilities to work in the field (bad weather in 2011) and availability of the students for the lectures. Also the student field trip and training on Zelengora – Prenj – Boračko jezero region had to be postponed till July 2012 because that is the time when student university obligations are finished for the summer leave.

#### 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
I. – May/2011 – travel for lectures in Banja Luka, Sarajevo and Mostar (1400 km)	420	420	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.

II. first trip - Zelengora, Baba planina, Somina mountains (1600 km)	480	480	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.
III. second trip – Hrbina planina, Čvrstica, Bjelasica (1400 km)	420	420	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.
IV. third trip - Viduša, Ljubuša, Tušnica (1600 km)	480	480	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.
V. fourth trip - Cincar, Jadovnik, Šator (1400 km)	420	420	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.
VI. fourth trip -Treskavica, Volujak, Velež, Lelija, Orijen (1600 km)	480	480	0	Travel expenses have been spent according to the plan. Official travel forms have been filed.
Road-toll (6 x both ways)	300	276	+24	Prices of highway went higher in Bosnia and Herzegovina by 13%, and we had to compensate by using Electronic Highway Payment after December 2011 (15% discount)
Daily allowance (for food, drink etc.) – 15 GBP x 4 person x 34 days	2040	2040	0	Allowances have been spent according to the plan and added to official travel forms.
Leaflet preparation (material, photos, design)	400	390	+10	Extra £10 was taken from preparation to cover the minus on leaflet print which turned £38 more expensive.
Leaflet print (3000 copies)	550	588	-38	Print turned out £38 more expensive due to the increase in the governmental taxes during economical crisis in 2011/2012
<b>Total</b>	5990	<b>5986</b>	-4	

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

First important step has now been made. We have successfully initiated a formation of local viper team in Bosnia and Herzegovina consisted of three focal point experts from all three regions: Banja Luka – mr.sc. Goran Šukalo (Biology department, University of Banja Luka); Sarajevo – prof. Dr.sc. Suvad Lelo (Department for agriculture, University of Sarajevo); Mostar – Benjamin Jusić (University of Mostar). This team will now be strengthened with Bachelor and PhD students to build a team that can conduct research and monitoring actions during 2012-2015. Next it is important to determine the best localities for setting up long term monitoring by creating areas for capture-mark-recapture research. Also GIS data base should be made to serve as a base for the research but should also be made public for all interested parties. Through regional round tables we plan to gather the viper teams from all surrounding countries to try to work on the development of regional Karst Viper Conservation Action 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?**

RSGF logo was used during the project in the educational leaflets that were handed to interested parties (example leaflets are attached to this report).

Logo was also used in the lectures held in Banja Luka, Sarajevo and Mostar to point out the grant. During the lectures we introduced the RSGF to the students as we hope them to be potential future beneficiaries. Example lecture presentation from Banja Luka is attached to the report. After all three lectures we have sent out press releases about the lectures and the project and held small conferences. During this we have also used the RSGF logo.

On the official project web page RSGF logo was stated on the home page as a sponsor and also on a [separate page](#) dedicated to the activities funded by the RSGF.

Logo was used according to the instructions received from the RSGF.

**11. Any other comments?**

I wish to thank RSGF for the opportunity to work on this project and help to start the conservation of karst viper and its habitats in Bosnia and Herzegovina. With this distribution data we can now include 80% of these areas in the NATURA2000 network protected areas due to the status of karst viper as a priority species on the Habitat Directive. In this case karst viper serves as an umbrella species to conserve the whole ecosystem.