

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	Katarina Ljubisavljevic
Project title	Research, conservation and promotion of the endemic Balkan rock lizards (<i>Dinarolacerta</i> spp.) in Montenegro.
RSG reference	14714-1
Reporting period	27 th February 2014 - 27 th February 2015
Amount of grant	£5994
Your email address	ljubisavljevic.k@gmail.com
Date of this report	3 rd March 2015

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
Estimate population size, density and sex ratio of the Mosor rock lizard in two mountains (Prekornica and Lovćen mountains.) and of the Prokletije rock lizard in its unique locality in Djebeza mt. (Prokletije mountain massif).			x	The field work was successfully completed on all three mountains. Visual transects have been undertaken and collected data were statistically analysed. First results indicate that density of <i>Dinarolacerta</i> populations depends on several factors such as humidity, vegetation cover and fire incidents. The smallest population was recorded at the type locality of <i>D. montenegrina</i> . Sex ratio in all populations is slightly male biased, but close to 1:1. Data are prepared to be published in an international journal.
Identify possible unknown locations of occurrence of these species within above mentioned mountains.			x	We recorded a new site of the Prokletije rock lizard (<i>D. montenegrina</i>) in the Žijovo Mts. The paper on this finding was published in the journal <i>Ecologica Montenegrina</i> (attached to the message).
Identify habitat requirements and topographic factors that may determine the range limits of both endemic species			x	We confirmed former assumptions about link between <i>Dinarolacerta</i> spp. and plant communities formed by relic pine <i>P. heldreichii</i> with a number of Mediterranean floristic elements. The habitats are rather moist with quite rich vegetation. The drying of these habitats would have negative consequences for <i>Dinarolacerta</i> spp.
Check and record possible threatening factors at studied locations			x	The main threats to <i>Dinarolacerta</i> populations recorded were: forest fires, unplanned urbanisation, littering. Potential threats recorded were: livestock grazing, cultivation of vegetables and removal of stones for building of dry walls and enclosures.
Publish the results of the research in local and international journals			x	The paper about new record of <i>D. montenegrina</i> in Montenegro was published in <i>Ecologica Montenegrina</i> . http://ecol-mne.com/wp-content/uploads/2014/09/Ljubisavljevic_etal_EcolMont_14201-203.pdf The MS about habitat selection of <i>Dinarolacerta</i> spp. is in preparation to be submitted to an International journal.

Give lecture and presentation at Faculty of Mathematics and Natural Sciences			x	The lecture was highly attended. The students were very interested in hearing more about field data collection, ecology of lizards and shortcomings in legislative protection of Prokletije rock lizard and its habitat.
Give lectures and poster presentations in local schools			x	As planned, the lectures were held in three local schools near the surveyed areas. The educational and promotional materials were placed in the classrooms and distributed to pupils after the lectures. The best drawings were awarded by t-shirts. Additionally, promotional materials were distributed to several schools in Podgorica and Danilovgrad municipalities.
Organising the roundtable with representatives of decision makers		x		Although the roundtable was successful, and all invited lecturers took part in it, representatives of one of the decision makers (Environmental Protection Agency) were not present.
Establish connections with regional NGOs to build up future partnership			x	We made good connections with NGO Croatian Herpetological Society "Hyla" in order to plan some actions on the protection of the Mosor rock lizard at the regional level. The president of this organisation took part in the roundtable introducing the current state and perspectives of protection and research of the Mosor rock lizard in Croatia. Also we have contacts with Herpetological Association in Bosnia and Hercegovina "Atra"
Raise general public awareness on <i>Dinarolacerta</i> spp.			x	We established website www.dinarolacerta.com We published and distributed brochure, posters and t-shirts. Articles about our project were published in daily newspapers and naturalists' magazine (see at www.dinarolacerta.com). The project was presented at 6 th Montenegrin Science Festival (see at www.dinarolacerta.com). We also had two interviews on national TV channels (7 and 12 minutes long, respectively). See https://www.youtube.com/watch?v=YoBj8AG6a8A https://www.youtube.com/watch?v=U7tcNOBGbVY

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

The weather was unusually rainy and fresh last summer. According to protocol, field data should be collected only on sunny days during the peak of activity for these lizards. Because of that, we were forced to reschedule our field activities. In addition, we were unable to work continuously on each mountain, but rather to visit each location several times when weather conditions allowed.

Also, the road to one of the locations (Prekornica mountain) was too bad (unpaved and rocky), so we had to rent more expensive vehicle (off-road vehicle) than we planned.

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

1. We collected numerous data on demographic parameters, habitat characteristics and threatening factors at surveyed locations. This is a good starting point for further monitoring of population trends of *Dinarolacerta* lizards, and initiative for legal protection of the Prokletije rock lizard (*D. montenegrina*). A new record of the Prokletije rock lizard is especially important in depicting the distribution of this species in Montenegro. It is only the second record of this species for Montenegro in the last 19 years.

2. We built useful connections with:

- Secretariat for spatial and urban planning and environmental protection of the capital city of Podgorica which is responsible for the area where the type locality of *D. montenegrina* is situated. We agreed about important initiative for inclusion of this area within the future Regional Park "Komovi".
- Regional and domestic NGOs in developing conservation strategies for *Dinarolacerta* lizards at local and regional levels.

3. Educational and awareness raising campaigns were successful due to much positive feedback that we received (from colleagues, teachers, pupils, students and common people) we think that through our educational and promotional campaign we raised public awareness on existence and importance for protection of *Dinarolacerta* lizards and their habitats.

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

During field surveys we gained valuable information from the local residents about forest fires (such as intensity, time, their experience, etc.) that damaged the habitats of *Dinarolacerta* lizards. Local residents also gave us information about other representatives of herpetofauna that they found in their surroundings. We introduced our project to them, paying special attention to the uniqueness of dinaric lizards and necessity for effective protection of their habitats (such as forest fire prevention, prevention of littering and illegal logging). We explained them that through protection of the lizards' habitats, they also protect their own environment. Through our presentations, distribution of educational material and awards in local schools we raised awareness of young people in local communities about their responsibility to contribute to a clean and healthy environment through protection of reptiles habitats around their villages and cities.

5. Are there any plans to continue this work?

Yes, we plan to:

- further investigate distribution of the Mosor rock lizard in western and south-western parts of the country, and the Prokletije rock lizard in eastern part of the country.
- continue awareness raising campaign in local communities.
- start an initiative for legal protection of the Prokletije rock lizard (i.e. to be added to the list of protected species in Montenegro).
- conduct regular monitoring of the Prokletije rock lizard population at the type locality which is expecting to be a part of the Regional Nature Park “Komovi”, in order to check whether the conservation practices were implemented.
- to conduct periodic surveys to monitor the status of populations and their threats at studied locations in Lovćen and Prekornica mts.

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

Brochures and posters are distributed to Faculty of Mathematics and Natural Sciences – Department for Biology, Secretariat for spatial and urban planning and environmental protection of the Capital City of Podgorica, Environmental Protection Agency, Administration for Inspection Affairs, domestic and regional NGOs and biology students.

We established website (www.dinarolacerta.com) where everybody can learn about *Dinarolacerta* lizards, find and download all the information about our project.

We published three articles in daily newspapers and naturalists’ magazine, and one paper in national ecological journal. We are preparing to submit another paper in an international journal, and also plan to publish other results in journals.

We also are going to present results of the project at First Balkan Herpetological Symposium in Croatia (September, 2015).

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

Month	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	10 th	11 th	12 th
Preparation of a project website, posters and t-shirts	X	X										
Promotional lecture at Faculty of Mathematics and Natural Sciences			X									
Field study of the Mosor rock lizard in Prekornica mountain.				X	X							
Field study of the Prokletije rock lizard in Đebeza mountain					X							
Field study of the Mosor rock lizard in Lovćen mountain				X	X							
Designing and duplication of brochures						X						

Press, radio and TV interviews							X		X	X	X	
Promotional lectures in local schools										X	X	X
Organization of roundtable meeting										X		
Statistical data processing, writing of the manuscripts and submitting to scientific journals								X	X	X	X	X

As explained above, due to bad weather conditions, we were forced to reschedule our field activities to some extent. Because of that and their obligations, our colleagues from Croatian Herpetological Society – “Hyla” did not join us on field work. Instead of that they came and participate on the roundtable.

Promotional lectures in local schools were moved from September to winter months in order to align with the curriculum in biology in different grades at primary and secondary schools.

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
Travel expenses (fuel) for lectures in local schools	38	38		
Daily allowance for lectures (one person, three days, 16£ x 3)	48	48		
Travel expenses (fuel) for field work- Lovćen mountain	14	42	+28	Fuel expenses were higher than expected. Because of bad weather, we had a couple of times to go to the field to complete the surveys
Travel expenses (fuel) for field work- Prokletije mountains.	21	36	+15	Fuel expenses were higher than expected.
Travel expenses (fuel) for field work- Prekornica mountain	49	102	+53	Fuel expenses were higher than expected. We could get to the site only by off-road vehicle which consumes more fuel than ordinary car.
Daily allowance for field work (16 £ x 4 persons x 21 days)	1344	1408	+64	We were accompanied by 2 volunteers (2 days on Lovćen mt. and 2 days on Prekornica mt.), members of NGO “Montenegrin Ecologists Society” who helped us in data collection.
Overnight accommodation for 4 persons during the field work in Lovćen and Prokletije mountains	510	383	-127	Because of bad weather we were forced to change our plans. We had a couple of times to go to the field right from Podgorica (without 3 overnight stays in Lovćen mt.)

Travel expenses for meeting on regional cooperation	187	130	-57	For the roundtable meeting instead of joint fieldwork
Daily allowance for persons coming on meeting on regional cooperation	144	144		
Overnight accommodation for persons from Croatia coming on meeting on regional cooperation	190	120	-70	For the roundtable meeting instead of joint fieldwork; two instead of three nights
Car renting 3+21 days	612	833	+221	We calculated rental costs for a standard car of 25,5€ per day. However, the road on Prekornica mt. was too bad (unpaved and rocky) that we had to rent much expensive off-road vehicle (68 € per day).
Equipment for educational objectives (video beam projector)	382	276	-106	We purchased a cheaper model.
Equipment for educational objectives (notebook computer)	425	425		
Brochure design, preparation and printing, quantity 1000	387	387		
Poster design, preparation and printing, quantity 50	310	310		
Project website development and maintenance	298	298		
Promotional T shirts, quantity 50	425	425		
Rental of meeting room for roundtable organization	170	170		
Equipment for field work (2 GPS navigator devices)	340	238	-102	The GPS device we planned to buy was not exposed for sale, so we purchased other cheaper model.
Consumables (paper, protocol duplication, pens, measuring tapes)	100	175,5	+75,5	Actual expenses are higher than budgeted amount for this item because we bought two digital thermometers and one IR measuring device. We realized that the distance measuring would be faster and easier with IR measuring device, and also that measuring of rock and air temperatures would be very useful for our study.
Tax for field work permits issued by Environmental Protection Agency		4	+4	unexpected expense.
Total	5994	5992	-2	

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

- Further research of *Dinarolacerta* species distribution, monitoring of population trends and threats.
- Making an agreement with state authorities in order to start an initiative for legal protection of the Prokletije rock lizard.
- Continuing with public awareness campaign with special focus on *Dinarolacerta* habitats and fire prevention.
- Creating a network of colleagues from Croatia and Bosnia and Herzegovina in order to create common action plan for protection of the Mosor rock lizard. The first next opportunity will be First Balkan Herpetological Symposium that will be held in Croatia (September 2015.), where we going to present our project and exchange experiences with colleagues.

**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?**

Yes, we used Rufford Foundation logo in all presentations (at Faculty of Biology, Science festival, local schools) and it was printed on the brochures, posters and promotional t-shirts. The RSGF logo (linked to the RSGF website) is also on our website where we actively post project updates.

RSGF received publicity during the course of our project. We mentioned that Rufford foundation financed our project in press and TV interviews, while talking with people in local communities, during field work and lectures. We shared our positive experience with Rufford Foundation with our colleagues. RSGF is acknowledged in our paper published in *Ecologica Montenegrina*. Also, it will be acknowledged in all forthcoming publications presenting the results of this project.

11. Any other comments?

Sincere thanks to Rufford Small Grants Foundation for financial support which enabled us to conduct this interesting and valuable project for the protection of the Balkan endemic species.