

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	Assessing threats and setting conservation priorities for endemic Balkan rock lizards (<i>Dinarolacerta</i> spp.) and their habitats in the mountains of Montenegro
RSR reference	19600-2
Reporting period	21 st March 2016 – 21 st March 2017
Amount of grant	£4998
Your email address	ljubisavljevic.k@gmail.com
Date of this report	21 st March 2017

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
Explore the distribution of the Mosor rock lizard in south-western (area of Orjen Mt) and central (Area of Maganik Mt) parts of Montenegro and Prokletije rock lizard in eastern part of Montenegro (Komovi Mts.)				The field work was successfully completed in all areas. We recorded new sites of both species. The paper on these findings entitled "New records and updated distribution of the endemic Balkan rock lizards <i>Dinarolacerta</i> spp. in Montenegro" was published in the peer-reviewed journal <i>Ecologica Montenegrina</i> (visible on: http://www.biotaxa.org/em/article/view/27541/25314).
Estimate demographic parameters (population size, abundance and sex ratio) and habitat requirements of <i>Dinarolacerta</i> spp. populations on Orjen, Maganik and Komovi Mts.				The fieldwork was successfully completed. Visual transects have been undertaken and collected data will be integrated with those of the first RSG project. First results indicate that abundance of <i>Dinarolacerta</i> populations depends on the percentage of leaf litter and vegetation cover on the sites. The smallest population was recorded in the area of Maganik Mt. in the Mrtvica River canyon, most likely refugial site of the Mosor rock lizard at the lowest elevation recorded for this species. Sex ratio at all sites is slightly male biased.
Identify the threats to <i>Dinarolacerta</i> populations and their habitats in the areas to be explored.				The main threats to <i>Dinarolacerta</i> populations recorded on study sites were forest fires, unplanned urbanisation, removal of rocks and stones during agricultural practices. The Mrtvica River canyon in the area of Maganik Mt. was the only site

				where we have not recorded anthropogenic impacts on reptile habitats.
Start an initiative for legal protection of the Prokletije rock lizard in Montenegro.				<p>Based on the results of our two RSG projects we wrote the request for legal protection of Prokletije rock lizard in Montenegro. The request includes species description, distribution, habitat and biology of the species, threats and proposed conservation measures.</p> <p>The request has been submitted to the relevant authorities – Environmental Protection Agency of Montenegro and Ministry of Sustainable Development and Tourism.</p>
Continue educational and public awareness campaigns with special focus on main threats to high altitude forests (habitats of the Dinaric rock lizards) recorded in our field surveys.				<p>Educational and public awareness campaigns were continued through lectures in local schools, public lecture on the exhibition of Natural History Museum of Montenegro dedicated to unique wildlife of this country, workshop on lizards for young children, TV broadcast, articles in newspaper, websites, social networks and scientific journal, talks with local residents and visits to forest administration officials in two municipalities.</p>
Increase knowledge and raise interest of the children in local schools in protecting species and the fragile habitats in their surroundings.				<p>In cooperation with NGO “Parents” we presented a workshop “In the world of lizards” to young children in Podgorica. We gave an interactive presentation and slide show which allowed children to see, touch and learn about the lizards of Montenegro and their importance in nature, with a special focus on species of high conservation concern such as Dinaric rock lizards.</p>

			<p>We gave presentations in schools near field sites and distributed promotional and educational material (brochures, t-shirts and posters).</p> <p>Also, we gave a public lecture for school children and their teachers on the exhibition of Natural History Museum dedicated to unique wildlife of Montenegro set up in the Ministry of Culture of Montenegro.</p>
Raise teachers' interest in including the topic on the Balkan rock lizards and their habitats in their lectures.			<p>We talked with biology teachers about the option to include the topic on threatened rock lizards of Montenegro in their lectures on reptiles. The posters promoting prevention of deforestation and forest protection were placed in the classrooms and brochures about Dinaric rock lizards were given to the teachers.</p>
Encourage local residents in environmental initiatives to conserve native forests.			<p>During the fieldwork, we talked with local people to identify their attitudes toward forest exploitation, reptiles, garbage and grass burning around forests, etc. Although we have tried to challenge their prejudices, we found out that they still have misperceptions and negative values toward reptiles, and that burning garbage and grass is the habit that is been hard to break.</p>
Inform local decision makers and competent services on results of our study, specific threats to natural forests in their municipalities in order to formulate priorities and implement appropriate policies for their			<p>We visited forest administration officials in municipalities where we had conducted the fieldwork. We presented our results and discussed problems of threats to montane forests in Montenegro since the Dinaric rock lizards often occur within or around these wooded areas. Forest fires were seen as the major</p>

protection.				problem affecting these habitats. We agreed that prevention through educational and awareness programmes should be one of the keys in the battle against forest fires.
Raise general public awareness on the existence of endangered species, values and importance of high altitude native forests, threats to these habitats and opportunities for their protection.				<p>The results of the project were presented in a broadcast on National TV station "Radio Television of Montenegro 1" (See at YouTube channel of Dinarolacerta project: https://www.youtube.com/channel/UCyMLmC2cqHJ5iX2XLTe7Zcw). The project website www.dinarolacerta.com has been regularly updated. Project progress has been also presented on the website of Montenegrin Ecologists Society (https://www.facebook.com/drustvoekologa/). An article on threats and conservation of <i>Dinarolacerta</i> lizards appeared in the printed and online version of Montenegrin daily newspaper "Vijesti" (http://www.vijesti.me/forum/prokletij-ski-guster-simbol-posebnosti-priode-crne-gore-920580), on the website dedicated to raising awareness about issues related to environmental protection in Montenegro (http://cemovsko.me/2017/01/prokletij-ski-guster-simbol-posebnosti-priode-crne-gore/) and on social networks (https://twitter.com/damirakalac?lang=en and https://www.facebook.com/cemovskopolje/). We also distributed brochures, posters and T-shirts.</p>

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

Except that we had to reschedule some field activities because of weather conditions (but fortunately in the planned timeline for field work), we did not encounter some other difficulties during the course of the project.

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

1. Habitat and population data collection and discovery of new important records of *Dinarolacerta* lizards in Montenegro that made a significant contribution in filling in the gaps in their distribution. This is especially important for stenoendemic species *D. montenegrina*, for which six new records expand the known distribution to the east.
2. Successful educational and public awareness campaigns through which schoolchildren, teachers, local people and decision makers were informed and learned on existence, significance and protection of endemic and threatened species and their habitats.
3. Starting initiative for legal protection of the Prokletije rock lizard in Montenegro by writing formal report and request to the relevant authorities. We hope that our request based on relevant information will contribute to changing the current inert approach to updating the list of protected species in Montenegro.

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

Our presentation in local schools near the surveyed areas helped schoolchildren to cast aside prejudices toward reptiles, increase knowledge on endemic species and habitats conservation. They learned to value and appreciate the importance of forest habitats in their surroundings and were encouraged to develop environment friendly attitudes and behaviour.

We hope that our communication with local people helped them to be more informed on existence and significance of threatened species and fragile forest habitats in their surroundings, and that they will be more responsible for their environment by changing their personal practices to reduce negative pressures on these habitats.

Discussions with local decision-makers made them more aware of the existence of valuable species and habitats in their municipalities and more informed on concrete environmental problems that we identified during the field-work. On the other hand, these meetings helped us to mark certain areas that should be explored in our future

work and to focus on certain issues in mountain forests conservation. We established good connections for future activities.

5. Are there any plans to continue this work?

We plan to:

- Identify distribution, habitat characteristics, population parameters and threatening factors of *Dinarolacerta* spp. in unexplored parts of the country.
- Cooperate with colleagues from Croatia in exchanging knowledge and experience in the protection and conservation of *D. mosorensis* as one of the target species in the Natura 2000 ecological network that is going to be established in Montenegro.
- Continue with educational and public awareness campaigns on protection of *Dinarolacerta* species and their habitats.
- Conduct monitoring of threatening factors and status of populations at studied locations.
- Publish scientific papers based on projects results.

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

The website (www.dinarolacerta.com), established during the course of our previous RSG project is a good source of information for all who are interested in *Dinarolacerta* lizards, their habitats, news and the course of our project. It has been regularly updated.

The results of our project are also shared on social network of Montenegrin Ecologist society (<https://www.facebook.com/drustvoekologa/>) and were presented in a TV broadcast.

More details of the project also can be seen on Dinarolacerta project YouTube channel (<https://www.youtube.com/channel/UCyMLmC2cqHJ5iX2XLTe7Zcw>) established during the course of our previous RSG project.

Brochures and posters are distributed during the lectures in local schools, on the exhibition of Natural History Museum of Montenegro, at workshop for young children and during meetings with forest administration officials.

An article about our project appeared in a daily newspaper and on social networks. The results of our project were also presented in a paper published in scientific journal *Ecologica Montenegrina*. Another paper dealing with habitat requirements and conservation issues of *Dinarolacerta* lizards that was accepted last year for

publication in the international herpetological journal *Salamandra* is expected to be published this year. We also plan to publish other results in journals.

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

[illegible]

Approval of the project and payment were earlier (2 months) than we expected, so we began with activities earlier. Consequently, we rescheduled some activities to be finished in March instead of May 2017. Before fieldwork began, we adjusted field protocols according to the results of the previous RSG project and made final processing of the paper based on the results of the previous RSG project. Nonetheless, we managed to finish all planned activities and perform some additional activities which we thought that would be beneficial to the promotion of our project such as workshop on lizards for young children (in cooperation with NGO "Parents" which provided space for workshop) and lecture on the exhibition of Natural History Museum.

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.

Local exchange rate used: 1 EUR = 0.80 GBP (April 2016)

Item	Budgeted Amount	Actual Amount	Difference	Comments
Travel expenses (fuel) for field work- Orjen Mt.	56	66	+10	Fuel expenses were higher than expected. We have moved a greater distance than planned.
Travel expenses (fuel) for field work- Maganik Mt.	95	95		
Travel expenses (fuel) for field work- Komovi Mts.	79	79		
Daily allowance for field work (16 £ x 3 persons x 28 days)	1344	1344		
Overnight accommodation during the field work	770	770		
Car rental for field work (off-road vehicle)	1529	1529		
Travel expenses (fuel) for lectures in local schools	25	25		
Daily allowance for	48	48		

lectures (one person, three days, 16£ x 3)				
Car rental for lectures (standard car, 3 days)	70	70		
Brochure duplication, qty 1000	140	140		
Poster duplication, qty 50	214	214		
Promotional T-shirts, qty 50	390	390		
Project website maintenance	156	67	-89	We have moved the website to a cheaper hosting provider.
Consumables (pens, notebooks, printing of protocols and papers, etc)	78	78		
Fee for permission to conduct the field work	4	4		
Plastic terraria for children's workshop (qty 6)	0	47	+47	Children's workshop on lizards was not planned activity, but we found it would be beneficial to the educational purposes and promotion of our project. Few lizards were temporarily housed in terraria, and after the workshop returned to their habitat.
Bank commission (fee)	0	31	+31	unexpected expense
Total	4998	4997	-1	

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

- Further research of *Dinarolacerta* species distribution in unexplored parts of the country, monitoring of population trends and threats.
- Exploring the unstudied ecological features of the stenoendemic Prokletije rock lizard (*D. montenegrina*).
- Continuing with public awareness campaign with special focus on *Dinarolacerta* habitats such as fire and illegal logging prevention.
- Initiative for including both species as targets in Natura 2000 network for Montenegro.
- Cooperation on regional level concerning conservation of the Mosor rock lizard and its habitats.

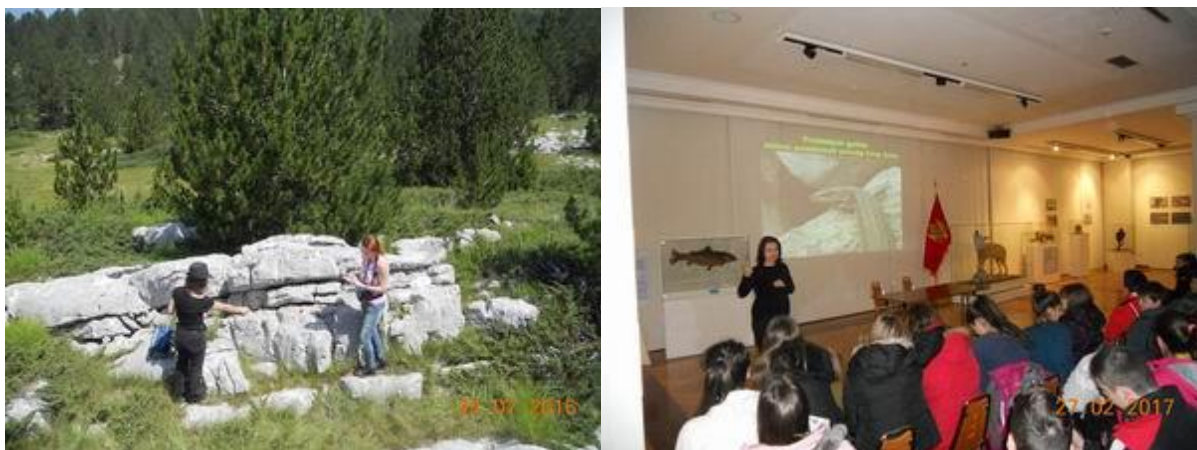
10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

The Rufford Foundation logo was printed on the brochures, posters and promotional t-shirts. It was used in all presentations that we held. The RF logo (linked to the RSGF website) is also on the project website. RSGF received publicity during the course of our project. We mentioned that Rufford foundation financed our project in our lectures, press and TV interviews, while talking with decision makers and local people during the field work. We shared our positive experience with Rufford foundation with our colleagues. RSGF is acknowledged in our paper published in *Ecologica Montenegrina* and in another paper that is in press in the journal *Salamandra*. It will be also acknowledged in all forthcoming publications presenting the results of this project.

11. Any other comments?

We would like to thank Rufford Small Grant Foundation for financial support of this project.

Thanks to this project we have also collected a lot of data on other species of reptiles inhabiting the areas that we have explored. These data will be of great importance in future studies of distribution and conservation issues of reptiles of Montenegro.



Left: Fieldwork in eastern Montenegro. Right: Lecture on the exhibition of Natural History Museum.