

## The Rufford Foundation

### Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Marko Nikolić
<b>Project title</b>	The influence of local folklore and cultural heritage on the conflict between man and Hermann's tortoises ( <i>Testudo hermanni</i> ) in Serbia
<b>RSG reference</b>	18761-1
<b>Reporting period</b>	January 2016 – January 2017
<b>Amount of grant</b>	£ 4.979
<b>Your email address</b>	<a href="mailto:zerocool.axl@gmail.com">zerocool.axl@gmail.com</a>
<b>Date of this report</b>	17. 02. 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
Promoting the project at universities in Niš, Kragujevac, Belgrade and Novi Sad. Involving all of the students interested in field research.				<p>The promotion of the project was held at four universities in Serbia. The promotion at each of the universities was held in cooperation with The Faculty of Science in Niš, Kragujevac and Novi Sad, The Faculty of Biology in Belgrade, as well as with the help of the following non-governmental organizations: BS "Dr. Sava Petrović" in Niš, NIDSBE "Josif Pančić" in Novi Sad, EID "Mladen Karaman" in Kragujevac and BID "Jodif Pančić" in Belgrade. The promotion in Belgrade was also supported by the botanical garden "Jevremovac". Please see:</p> <p><a href="http://testudo.bddsp.org.rs/en/najava-projektnih-aktivnosti-na-univerzitetima-u-srbiji/">http://testudo.bddsp.org.rs/en/najava-projektnih-aktivnosti-na-univerzitetima-u-srbiji/</a></p>
Students' education and training for doing field research				<p>In May and July 2016, all the interested students took part in field research where they could get familiar with the methodology of collecting population parameters. In addition, the students also did surveys with local inhabitants in order to get the necessary information about using turtles in human diet and in alternative medicine. All of the mentioned activities included 47 researchers and students. All the participants got thank-you notes with the logo of the foundation.</p>
Making educative brochures				<p>At the beginning of the project we have made 1500 educational brochures (in the form of three-fold brochure) about</p>

			<p>Hermann's tortoise. The brochure contains basic information about the biology and ecology of <i>T. hermanni</i>, the endangered status and legal protection. Brochures were distributed during the promotion at the four universities in Serbia and during field research in May 2016. Additionally, 1,500 brochures were printed before field research in July 2016. The second set of brochures was distributed during the interviewing of the local inhabitants, a part was donated to the primary and secondary schools where the teachers showed interest and devoted their time to present the project to the students. A mock-up of the brochure is attached. The brochure was distributed on social networks in PDF format, and is also available at this address:  <a href="http://testudo.bddsp.org.rs/en/nova-brosura-o-sumskoj-kornjaci/">http://testudo.bddsp.org.rs/en/nova-brosura-o-sumskoj-kornjaci/</a></p> <p>One part of the brochures was delivered to partner NGOs and state institutions: the Institute for Nature Conservation of Serbia, Regional center for professional development of employees in education, the National Park "Đerdap" and others.</p>
<p>Creating a web site and promotion on social networks</p>			<p>In January 2016, website was created where news from the project were published. Website is located at:  <a href="http://testudo.bddsp.org.rs/">http://testudo.bddsp.org.rs/</a>          Facebook page was launched:  <a href="https://www.facebook.com/tortoisesinserbia/">https://www.facebook.com/tortoisesinserbia/</a>          All project activities were promoted through the website and Facebook page of Biological Society "Dr. Sava Petrović."  <a href="https://www.facebook.com/drsavapetr">https://www.facebook.com/drsavapetr</a></p>

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Field research on four populations of Hermann's tortoise			<p>The collection of population parameters has been successfully implemented at four locations in Serbia, using capture-mark-recapture method. The research was conducted at two sites in Eastern, and two in southern Serbia. Field research was conducted in two parts of the season (spring and summer), for a period of 4 to 7 days per site. The total number of individuals captured and marked at sites in both parts of the season was: Donji Milanovac - 57, Kladovo - 71, Kunovica - 107 and localities Pašina česma - 44.</p> <p>Gallery – field research in May 2016:  <a href="http://testudo.bddsp.org.rs/en/terenska-istrazivanja-maj-2016/">http://testudo.bddsp.org.rs/en/terenska-istrazivanja-maj-2016/</a></p> <p>Gallery – field research in July 2016:  <a href="http://testudo.bddsp.org.rs/en/terenska-istrazivanja-jul-2016/">http://testudo.bddsp.org.rs/en/terenska-istrazivanja-jul-2016/</a></p>
Interviewing of the local populations			<p>The interviewing of the local inhabitants was conducted in eastern and southern Serbia. By interviewing we got information on the use of tortoises in diet and traditional medicine, on knowledge of local population about the conservation status of Hermann's tortoise, and on their knowledge about legal provisions concerning the protection of biodiversity. After completion of the survey respondents were given an educational brochure. The talk after interview aroused additional interest of the subjects.</p>
Making a brochure about traditional beliefs as a threatening factor of Hermann's tortoise			<p>We have made 100 brochures on interesting information we collected during surveying. In brochure, the threatening factors for Hermann's tortoise are presented, with special focus on impact on traditional beliefs, use in</p>

			<p>diet, use in traditional medicine and on illegal harvesting in general. The brochure has repeatedly highlighted conservation status, as well as legislation and international conventions that prohibit illegal overexploitation of the specimens from nature. Co-publisher of the brochure is the Faculty of Science and Mathematics in Niš, and publication has got the ISBN number (International Standard Book Number). Several copies (with ISBN) will be donated to the libraries in Serbia. Also, the brochure has got ISBN number for online edition and is available at:  <a href="http://bddsp.org.rs/en/uticaj-lokalnog-folklor-a-kulturnog-nasleda-na-odnos-coveka-prema-sumskoj-kornjaci-u-srbiji/">http://bddsp.org.rs/en/uticaj-lokalnog-folklor-a-kulturnog-nasleda-na-odnos-coveka-prema-sumskoj-kornjaci-u-srbiji/</a>        Mockup of the publication is attached.</p>
<p>Educative lectures and presentation results of the project</p>			<p>The knowledge collected during the project implementation on negative impact of folk beliefs, on use of tortoises in the diet and traditional medicine, were presented on several occasions. The first lecture was held at the University of Novi Sad, in cooperation with NIDSBE "Josif Pančić". Please see:  <a href="http://testudo.bddsp.org.rs/en/presentation-results-survey-university-novi-sad/">http://testudo.bddsp.org.rs/en/presentation-results-survey-university-novi-sad/</a>        Information about Hermann's tortoise biology, endangering factors in Serbia and beliefs of local people as a factor of endangerment were presented to the students of Faculty of Science and Mathematics, University of Niš, at the research excursion conducted in the Crni Vrh village at the Stara planina mountain. For more information, please see:  <a href="http://testudo.bddsp.org.rs/en/predavanje-na-crnom-vrhu-stara-planina/">http://testudo.bddsp.org.rs/en/predavanje-na-crnom-vrhu-stara-planina/</a>        Also, lecture was held at the Faculty of</p>

		<p>Science and Mathematics, university of Niš in cooperation with NGOs: BS "Dr. Sava Petrović" and "Centar za unapređenje društvene svesti – Super građanin". The results were presented at the Science Festival in Belgrade, held from December 15th to 18th 2016. Please see:  <a href="http://testudo.bddsp.org.rs/promocija-na-festivalu-nauke-u-beogradu/">http://testudo.bddsp.org.rs/promocija-na-festivalu-nauke-u-beogradu/</a>      "Regional center for professional development of employees in education in cooperation" with "Centre for Science Promotion (Science club in Niš)" has organized several lectures for students of all gymnasium in the City of Niš. In December, students had opportunity to present their knowledge to the peers, on the basis of our lectures. Please see:  <a href="http://testudo.bddsp.org.rs/predavanje-u-naucnom-klubu-u-nisu/">http://testudo.bddsp.org.rs/predavanje-u-naucnom-klubu-u-nisu/</a>      Education of the local inhabitants through conversation with the visitors and distribution of informative brochures was held at the "Multimedia challenge", which was organized by NGO "Centar za unapređenje društvene svesti – Super građanin", please see:  <a href="http://testudo.bddsp.org.rs/en/multimedijalni-izazov-promocija-projekta/">http://testudo.bddsp.org.rs/en/multimedijalni-izazov-promocija-projekta/</a>      The results were presented in six primary and secondary schools, please see:  <a href="http://testudo.bddsp.org.rs/en/predavanja-u-osnovnim-srednjim-skolama/">http://testudo.bddsp.org.rs/en/predavanja-u-osnovnim-srednjim-skolama/</a>      The plan is to continue with presentation of the results at the discussions and seminars and education of local inhabitants. Also, the plan is to present the results at science conferences during 2017. The research results will be published in the form of original research</p>
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				papers. In all further publications gratitude will be posted for The Rufford Foundation.
Promotion of the project in the media				The results of the project were shown in newspaper "Narodne novine" in June 2016 (image is in attachments), and in few radio shows.

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

The only difficulty that we encountered during the project was changing of one research site in east Serbia. After localities review, the first planned site - Sikole, was replaced with research site near the City of Kladovo. The reason for this change was of technical nature – impossibility of transport of researchers and field equipment, lack of accommodation facilities, etc. The site near Kladovo was an excellent alternative, because we found stabile population of Hermann's tortoise and, in both field visits in the season, we marked the total of 71 individuals. Also, our stay on this site allowed us to gather a lot of information about the use of tortoises in cuisine and folk medicine. Some interviewees pointed at the fact that elder residents use tortoises as a food for domestic animals, such as pigs. Information of this type we gathered from local residents at this research site.

Minor problems occurred during the interviewing of residents, because some of the interviewees, mostly in east Serbia, were convinced that tortoise blood had healing powers. Conversation with those residents after filling in the questionnaire, in purpose of education, was usually long and without visible and apparent progress. These cases point that believes, transmitted from generation to generation, are firmly embedded in local folklore and that the education of local community has to be continued. The education of local community should be conducted on much larger area, than covered by the project. Rural parts of east Serbia are deeply involved in local folk believes, and education in the future could be of great importance in preserving biological diversity and decreasing negative human impact.

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

- a) One of the most important results is proving the presence of Hermann's tortoise in local folklore believes and setting the foundation for further research. People were interviewed in south and east Serbia and information gathered about the use of tortoises in traditional medicine and diet, as well as about other threatening factors. We also gained insight into local community awareness of law regulations considering nature protection. The influence of

local folklore and believes on condition of the tortoise population in our country was not systemically researched until now, but can be serious factor of endangering the species.

- b) Data was gathered about the condition of Hermann's tortoise populations on four different sites. The data will be used for writing original science papers and will contribute to better understanding of Hermann's tortoise biology and ecology.
- c) Education of young researchers and raising the level of awareness of broader community about negative influence of folk believes on Hermann's tortoise populations in nature and law regulations about nature protection. In the realization of project activities 47 researchers participated, mostly biology students. The number of participants considerably exceeded our expectations. Students will be included in further research activities, such as monitoring programme of Hermann's tortoise in Kunovica, which is conducted by researchers and scientists from the Faculty of Science and Mathematics in Niš, and further research activities of Biological society "Dr. Sava Petrović".

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

Local communities were involved in the project in many ways. Before all, the survey included residents from east and south Serbia. Interviewees were open for cooperation in most cases, and helped us to gain the perspective of Hermann's tortoise presence in local folklore. The people provided us with a lot of interesting stories and anecdotes about overexploitation of tortoises in the few last decades, stated their remarks and told us about myths that they have heard from ancestors.

Lectures we held had large attendance, and a large auditorium had the chance to hear the results of our project and to get acquainted with both the conservation status of Hermann's tortoise and with the nature conservation law obligations and regulations. Younger participants from Niš showed great interest in the topic, and even prepared the presentations for their peers in order to carry over the story about the endangering factors and the need of conservation of Hermann's tortoise (gallery).

Abundance of brochures about Hermann's tortoise got into the hands of local residents in the east and south of the country, and the rest is yet to be distributed. Likewise, online versions of the publications made within the project were distributed to the locals.

The students of four Universities in the country had the chance to hear the lectures in January and December of 2016. Great interest of students led to participation of 47 researchers in the project, instead of planned 16 researchers. The response was much greater, but there was no way to engage more people, so we hope that in the future we will be able to engage even larger number of interested students in the research.

Through our Facebook page interested citizens contacted, reported their encounters with the tortoises, and also sent us the stories from their parts of the country. In this way we could see that the illegal harvesting of tortoises was of much larger scale and was present in the parts of Serbia which were not planned in the research. This is an extremely important motif for further including of a much larger territory in our research.

Great response of local residents in our lectures, especially those younger ones, is a huge stimulant for continuation of our education programme, because continuous education can gain much bigger success and influence on raising the awareness about preservation of biological diversity.

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

Yes, this is a good start, and considering that the influence of local folklore was never before systemically researched in Serbia, we set the foundation for further research. The insights that we gained showed us that the local folklore believes can be a serious endangering factor, not only for tortoises, but for a much larger number of reptile, amphibian, bird, mammal, and other species. All these insights we gained by field visits and constant conversation with local people.

Our future efforts will be routed to determination of the degree of influence of local beliefs and local folklore on overexploitation of representatives of the wild fauna of Serbia, and gathering as much relevant information as possible about the reasons for their overexploitation.

Considering the population parameters gathering, the processed sites provide us the insights into the state of populations in the wild, and we hope to develop a monitoring programme on all four research sites. Besides the chosen sites, similar programmes are being conducted on few other localities in Serbia, also with the help of the Rufford Foundation. It should be strived to developing of continued monitoring programmes on all sites and monitoring the populations in the wild. All gathered data is of great importance for gathering information about illegal poaching and conservation of the species whose numbers in Europe are declining.



Field research				X	X		X	X						
Interviewing of local inhabitants					X	X	X		X	X	X			
Data processing					X	X		X	X					
Making a publication with project results *													X	X
Education of local inhabitants					X	X	X	X		X	X	X	X	X
Presentation of project results												X	X	X

\* Final version of publication about traditional beliefs as a threatening factor was planned to be done in November and December 2016, but it was made with one month of delay due to large amount of collected data. In January 2017, Faculty of Sciences and Mathematics in Niš accepted to be a co-publisher of the publication which means that this publication will have ISBN number for both printed and online version. This is expected to be finished by the end of February 2017. My opinion is that this is a great opportunity to share the publication with the Rufford logo, since it will be located in most libraries in Serbia. That way, a large number of people could inform themselves about Rufford foundation and its projects.

**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
Printing surveys	109	61	-48	Print price was lower than expected
Printing 3000 brochures	127	164	+37	Print price was higher than expected
Printing 200 T-Shirts	688	337	-351	Printing illustrations on T-shirts was much cheaper than we expected. The money we allocate to field research to

				include more students.
Fuel costs for a project presentation at universities (1500 km)	133	160	+27	fuel prices were higher than expected
Photo camera	211	275	+64	Planned model was not available in the market. We bought most similar model, but the price was higher
4 GPS devices	483	549	+56	Exchange rate fluctuations
8 thermometers	58	50	-8	
2 hygrometers	84	90	+6	
Supplies material	84	84		
Cost of field work in Kunovica in May and July (Fuel cost+food+accommodation) for 8 researchers	332	378	+46	
Cost of field work in Pašina česma in May and July (Fuel cost+food+accommodation) for 8 researchers	422	478	+66	
Cost of field work in Đerdap 1 in May and July (Fuel cost+food+accommodation) for 8 researchers	611	695	+84	
Cost of field work in Đerdap 2 in May and July (Fuel cost+food+accommodation) for 8 researchers	611	695	+84	
Fuel cost for interviewing (3000 km)	253	290	+37	
Printing 100 publications	591	500	-91	Print price was lower than expected
Presentation of project results (fuel cost for 2400 km)	182	173	-9	
<b>TOTAL</b>	4979	<b>4979</b>		

NOTE: Printing illustrations on T-shirts was much cheaper than we expected. The money we allocate to field research to include more students.

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

Next step is to continuously inform population about negative effects of illegal catching of *T. hermanni* for traditional purposes. Since these beliefs exist a long time, it will be necessary to invest great effort in order to raise awareness about vulnerability of this species. Also, during the interviews, we found out about use of other animal groups (amphibians, birds, mammals and other reptile species) for similar purposes like tortoises. This discovery is of great importance and need to be searched in more detail in future. The influence of traditional beliefs can be a significant reason for illegal catching of protected and strictly protected species.

**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 RSGF logo is used on every publication from this project. About 3,000 brochures are distributed in different parts of country (the mock-up of brochure is in attachment). There is information about the Rufford Foundation on first page of the publication (picture is in attachment). Text about project is in the journal "De Nature", where the RSGF logo can be found, too (picture is in attachment). The logo is highlighted on the project site (<http://testudo.bddsp.org.rs>) as well as on first slide of every presentation in gallery. It is accentuated that the project was realised thanks to funding of the Rufford Foundation in most posts on Facebook page. Within the project, 200 t-shirts with the RSGF logo were printed and given to researchers and local residents of researched areas (mock-up in attachment). Whole page in the newspaper "Narodne Novine" is dedicated to activities of this project (picture in attachment). A letters of thanks that are given to 47 researches also have the RSGF logo. There is a text about the project on the site of biological society "Dr Sava Petrovic" and it contains the RSGF logo as well. This can be found on the next link: <http://bddsp.org.rs/project/tortoises-in-serbia/>.

The gratitude to the Rufford Foundation will be emphasised on every future publication. The RSGF logo will be placed on every edition when is allowed.

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

**12. Any other comments?**

I owe a great debt of gratitude to the RSGF for given opportunity to realise this project. Thanks to the RSGF financial support, my team and I discovered a lot of new findings that could be of great importance to protected and strictly protected

species in Serbia. It was a great experience for us, and we are sure we will continue to research this field, hopefully with the RSGF financial support.



3-fold brochure about Hermann's tortoise



Mockup of T-shirts (Design by: Dimitrija Savić)



Mockup of publication

