

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. 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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details

Your name	Igor Popov
Project title	Freshwater pearl mussels on the edge
RSG reference	
Reporting period	March 2011 – March 2012
Amount of grant	£5955
Your email address	igorioshapopov@mail.ru
Date of this report	March 29th 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
1. Detection of the unknown and forgotten freshwater pearl mussel populations and evaluation of their current status.			+	Only one population in the river Khorinka (Novgorod area) survived, while 20 others became extinct. The extinct populations were replaced by another bivalve <i>Unio crassus</i> - this species is protected in Europe under conservation status U2 (bad), while in Russia it was neither explored, nor protected. Such a replacement indicates a serious change in the environment, because <i>U. crassus</i> has different ecological requirements. Such a change was caused by deforestation and river shoaling in 18 th and 19 th centuries.
2. Developing a plan towards conservation of the remnant population in respect to anthropogenic pressure influencing the local rivers.			+	Data obtained in a course of the project were delivered to the local administration. As a result, a further plan of the detailed investigation of the survived population of <i>Margaritifera</i> and potential threats for it has been developed and approved by the local authorities. Corresponding activities should start in the summer 2012. In addition to this plan, some other activities were fulfilled that will contribute to following work on mussel restoration: (1) One of the team members Dr. A. Ostrovsky was invited to work in the local "Commission of the Red List", which compiles the local lists of protected species and coordinates other conservation activities. (2) In October 2011, the main results of the project were presented during the local environmentalist conference in Valday-city, in which numerous school teachers and naturalists participated. They obtained information on the mussel studies and will contribute to the corresponding activities.
3. Obtaining the important		+		Since only one pearl mussel population survived in the Novgorod region, its

information about the local trout populations.				research provided little information on the local trout populations. According to the local information, trout populations are much more numerous, although they are also endangered.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Soon after the beginning of the project it turned out that some change of the plans is necessary. Initially, the research of seven rivers had been planned but the contact with local naturalists provided information on many more localities where the pearl fishing existed 100-200 years ago. Thus, instead of seven rivers, 23 were examined that required considerably more time and effort than expected. On the other hand, the establishment of the contacts with the local environmentalists in the Novgorod area resulted in the successful accomplishment of the project.

The final results were also unforeseen. The previous studies showed that pearl mussels population usually survive, although reduced in number, even close to the large cities (for instance, in Saint-Petersburg). In contrast, in the Novgorod area they became extinct, although the rivers are generally in a good condition. The intense research across the archives and the scientific literature on mussels was required to identify the reasons for this extinction. That is why the presentation of our results and other activities was delayed a little.

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

- In the Novgorod area the state of the pearl mussel populations was re-evaluated for the first time after 120 years of negligence and the viable *Margaritifera* population of the international importance has been rediscovered.
- For the first time the activities towards the restoration of the pearl mussels were included into the activities of the local administration.
- The promising contacts with local environmentalists were established, the information on mussel research and conservation was spread across the community, focusing on the local environmentalists who are able to conduct an effective work in this field.

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

Local environmentalists were active and helpful, being very much interested in the results of the project and actively learning the major methods during our studies. The report on the major results of our activities was presented during one of the local conferences in Valday-city, being considered as a main achievement of the 2011 'field season'. Starting in summer 2012, the local naturalists plan to conduct similar work, dedicated to the several target plant and animal species and also several aquatic and near-aquatic habitats. In particular, a plan to study two local rivers has been developed with our help aiming to give them a status of protected areas.

5. Are there any plans to continue this work?

At first the detailed description of the discovered pearl mussel population in the river Khorinka is planned in 2012. Local administration promised to support this work.

The work on the pearl mussel revealed a significant gap in the conservation activities that is an absence of the protection of the endangered aquatic habitats – the rapids of pure rivers, the ponds with congestions of bats, shallow waters with the fish spawning grounds, springs, etc. Now I work on the classification of such habitats in the Northwest Russia and recognition of the most valuable among them. I plan to continue these studies and corresponding conservation activities.

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

Some results were already presented to others:

- Oral presentation in the local conference of Novgorod region “Field season of 2011” on the rediscovery of the viable population of the pearl mussel in the river Khorinka.
- Two reports were submitted to the Proceedings of this conference:
- Popov I., Ostrovsky A. Rare bivalves of the National park of Valday.
- Popov I., Ostrovsky A. Rediscovery of the pearl mussel in the Novgorod region
- An oral presentation on our activities was included to the program of the International Meeting on Biology and Conservation of Freshwater Bivalves, 2012, Portugal. Based on the report we are invited to submit an article to the special issue of the journal *Hydrobiologia*.
- Data on the pearl mussel *Margaritifera margaritifera* and another endangered bivalve *Unio crassus* were delivered to the local Directorate of Protected Areas of Novgorod-city and to the administration of the “National Park of Valday” (the biggest protected area of the Novgorod region).

Such activities will be continued.

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

The RSG funding was used during summer and autumn, 2011, i.e. according to the planned schedule.

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 funds: fuel, oil, car service	1725	2890	1165	Due to assistance of local administration the costs for motels were significantly reduced, free lodging was provided in “Visiting Centre of the National Park Valday”. Moreover, the motels
Payments for motels	1680	45	1635	
A food and other essential costs during expeditions	1920	2325	405	
Equipment	570	635	85	

				were often replaced for the lodging in tents. Since the rivers, which had to be explored, turned out to be three times more numerous, than it was expected, the number of trips was increased. The costs for transportation and fieldwork have been correspondingly increased too. The poor quality of roads resulted in the higher costs for transportation and car service. Expenditure for equipment was increased a little, because a new additional tent was required.
Bank fees for the money transfer	60	60	60	The requirement of the Russian bank ("Sberbank").
TOTAL	5955		5955	

Money was converted into Euro by Russian bank that is why I received 6620 Euro instead of 5965 pounds sterling. Local exchange rate was 39 rubles per 1 Euro (previous year it was 44 rubles per 1 Euro). So, I have got 258180 rubles.

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

- Detailed research on the rediscovered viable pearl mussel population, and measures towards its protection.
- Further research on the other endangered aquatic habitats and species in the Northwest Russia.
- Development of the further contacts with the local environmentalists and implementation of the conservation activities on the aquatic habitats and endangered species to the work of the local administrations.
- Establishment of protected aquatic areas.

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?

All publications and conference presentations based on the RSGF grant were and will be made with indication of RSGF support.

RSGF logo was used during the presentations at the local conference of Novgorod region “Field season 2011”

The abstract Popov, I., Ostrovsky, A “Rediscovery of the freshwater pearl mussel (*Margaritifera margaritifera*) populations across the territory of the Baltic Sea basin in Russia” that was submitted to the International Meeting on Biology and Conservation of Freshwater Bivalves 2012, also contains indication of the RSGF support. The publication of the special issue of the journal Hydrobiologia is planned. The article is currently in preparation, and RSG support will be definitely included in it.

11. Any other comments?

I and my team greatly thank the Rufford Small Grants Foundation for providing us an excellent opportunity to study and protect one of the rarest freshwater invertebrates in Europe. Most important is a rediscovery of the viable population of the international status that otherwise would be lost. This finding is definitely a REAL result of your amazing support.