

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	Konstantin Tirronen
Project title	Estimation of arctic fox (<i>Vulpes lagopus</i> L.) population status and extinction risk due with climate changes on the Kola Peninsula, Russia
RSG reference	16.06.2017
Reporting period	July 2017 - July 2018
Amount of grant	£ 4992
Your email address	konstantin.tirronen@gmail.com
Date of this report	06.07.2018

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
The organization and carrying out expeditions to explore Arctic fox and visits of the villages of the reindeer herders and fishermen				Expeditions were performed in 2017 and 2018
The finding of breeding dens to provide subsequent monitoring and determine the key area				Most of the dens we found (previously actively used by animals) were already abandoned
Collection of samples for parasitological and genetic analysis				
Collection of primary data to reasonably introduce this population into the list of the regional Red Data Book				It is necessary to continue the started research, including in the winter to obtain sufficient data
Presentation of project results in the media, Internet and scientific articles				After processing the data of field expeditions, the results of the project will be presented in the stated releases. Project already mentioned in Facebook and Researchgate

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

The territory of the study is extremely remote and inaccessible area, we were ready for this and the plan of the main expedition changed several times, but the complexity of the route and the strong dependence on the weather conditions exceeded our expectations. Correlating to the possible risk and the need to pass the route, we tried not to deviate from the pre-planned plan, but, unfortunately, we did not always succeed.

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

1. For the first time in the last 80 years, attention was drawn to the study of the Arctic fox population of the Kola Peninsula.

2. Our field and survey data indicate a similar decrease in the number and distribution of the species as in Scandinavia. The reasons for what is happening have yet to be established in further studies.

3. We were pleasantly surprised and pleased with the interest of the local people in the fate of the Arctic fox and the desire to help. This is in fact one of the most valuable acquisition of this project.

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

We visited four villages of reindeer herders and Pomors. Here live hunters who in the past actively harvested Arctic foxes, and today very rarely, if there are separate orders for skins. They had provide us with very important information on dynamics of Arctic fox numbers. For today they agree to show Arctic foxes dens, to help with the search of animals and oversight of its settlements. Local people ready to participate even in restoration actions if it will be necessary.

5. Are there any plans to continue this work?

Without any doubt, this work will be continued. The most difficult thing is always to start something new and RF gave us a great opportunity to start a significant job. At the next stage, students, researchers in different areas and local people will be involved in the activity. We plan to continue writing grant applications for funding to continue and expand our research.

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

After processing all the data, in the autumn of this year, we will publish an article in the "Bulletin of hunting" on the status and threats of the Arctic fox population of the Kola Peninsula. All obtained information will also be available in Facebook, VKontakte and ResearchGate (<https://www.researchgate.net/project/Estimation-of-arctic-fox-Vulpes-lagopus-L-population-status-and-extinction-risk-due-with-climate-changes-on-the-Kola-Peninsula-Russia>).

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

The grant was used according to the time schedule between June 2017 and July 2018.

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
1. Travel costs				
1.1 Daily allowances in the field	3403	1771	1632	The total number of days we spent in the field has decreased as a consequence of the weather conditions and the reduction in the number of field workers.
1.2 Rent of car	194	295	-101	The rise in the price of gasoline. The change in the original plan of the expedition (the participants overcame the White sea on a catamaran about 650 km and visited the villages of reindeer herdsman and Pomors).
1.3 Rent of water-jet boat		181	-181	It was necessary to move up the river Ponoj to start hiking routes. It was impossible to use our catamaran for this task.
1.4 Fuel for car & catamaran	257	795	-538	The original plan of the expedition was changed. Gasoline was used in two field expeditions for the car, as well as for the passage of more than 650 km on the White sea on a catamaran.
1.5 Helicopter tickets	444	0	444	We did not use this option in consequence of changes in the original plan of the expedition, as well as the rise in the cost of tickets for the helicopter.
1.6 Rent a cabin in the tundra		60	-60	We were forced to take this opportunity to wait out the storm.
2. Equipment and supplies				
2.1 Catamaran	694	602	92	The fall of the ruble. We managed to find a cheaper catamaran.
2.2 Additional materials to the catamaran		241	-227	Construction materials were needed to remake the river catamaran for the sea
2.3 Outboard motor		1048	-1048	Outboard engine for the catamaran for travel on the sea

Total	4992	4980	12	Too high price to rent a helicopter or all-terrain vehicle changed the original plan of the expedition and we had to move by sea. The change in the exchange rate and the fall of the ruble affected all the stated points. £12 remaining
--------------	-------------	-------------	-----------	--

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

Since the study area was even more difficult to access than we expected, it became obvious that the necessary technical means for more productive research. And the first step will be a winter snowmobile expedition in March 2019. We have agreed with local hunters of their support, they will show us the known dens of Arctic foxes, help in observations and organization of field work. Further, should be expanded field work in the summertime with the involvement of experts in various biological areas.

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

We have not used the logo of The Rufford Foundation yet. However, this autumn an article will be published in the bulletin of hunting and a report will be made at an international conference with reference to the Foundation. Also, the results of the project will be available on Facebook and Vkontakte. Links on Rufford Foundation and project were made in Facebook (<https://www.facebook.com/163603430348415/photos/a.1000307806677969.1073741827.163603430348415/1815726061802802/?type=3&theater>) and Researchgate (<https://www.researchgate.net/project/Estimation-of-arctic-fox-Vulpes-lagopus-L-population-status-and-extinction-risk-due-with-climate-changes-on-the-Kola-Peninsula-Russia>).

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

Konstantin Tirronen – project management, planning, field and laboratory works;

Danila Panchenko – field works, all data analysis;

Sergey Simonov – equipment preparation, identification of representatives of the avifauna;

Anastasia Kuznetcova – Ph.D. student who is working with samples for genetic analysis and data base;

Sergey Bugmyrin – analysis of parasitological materials;

Klemen Jerina – the field work assistance;

Sergey Eliseev – Pomor, hunter, has provided us with a necessary information on Arctic fox dynamic and distribution, and all the fauna of the study region;

Pavel Vaganov – reindeer herder, hunter has provided us with a necessary information on all the game fauna of the study area and gave biological samples;

Ivan Eliseev – the local villager of Sosnovka, hunter, the field work assistance, he has provided us with a necessary information on Arctic fox dynamic, distribution and its harvesting, has rented to us a small cabin in the tundra, also we agreed to use his services as a guide for the next winter expedition in March 2019;

Ivan Gulsak – provided transport (water-jet boat) for the field team on the river Ponoy;

Dmitry Udal'tsov – our magnificent driver;

Felix Tirronen – my father, only due to his brilliant skills in engineering, our river catamaran was rebuild for the sea and prepared for the date of expedition.

12. Any other comments?

We are very grateful to the Rufford Foundation for the support. These studies took place only thanks to the RF. Now we have data and can count on the support of our project from other funds with much more confidence. The most important step was taken – at least some information about the state of the population was obtained and this can be crucial for its conserving in the future. In our opinion, this is the most important and coincides with the main goals of the RF – real support in the conservation and study of biodiversity in complex regions.

