



## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
<b>Your name</b>	Peter Efimov
<b>Project title</b>	Conservation of the Orchids native to North-West European Russia (in the limits of Leningrad, Pskov and Novgorod Regions)
<b>RSG reference</b>	22.12.07
<b>Reporting period</b>	12.2007-12.2008
<b>Amount of grant</b>	£4000
<b>Your email address</b>	efimov81@mail.ru
<b>Date of this report</b>	24.12.2008

**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
Preparing a comprehensive publication on the Orchids of north-west Russia			+	A book is prepared, now text is subjected to the linguistic editing process. All illustrations are ready, both photographs and grid maps. Now I am searching the funds to publish this book
Developing the activities of Saint-Petersburg Orchid Society			+	During SPOS meetings the problems of Orchid conservation in our region were discussed. Two reports were presented on the subject, one concerning the Orchid diversity of our region, the second about the results of field work at last season. The corresponding information is also presented on our website ( <a href="http://www.spolo.ru/about_english.html">http://www.spolo.ru/about_english.html</a> ) and its forum, as well as in the article in the popular Russian magazine 'Orchid planet'. Equipment for the SPOS meetings (multimedia projector and notebook) was bought
Resolving the dynamics of changing in number of orchid populations		+		In order to elucidate the dynamics of orchid population in our area, we compiled a database, which includes almost 8000 records of Orchids. Based on this database we made the grid maps. Dividing all records according to their age, we elucidated some dynamics. Most threatened species proved to be <i>Calypso bulbosa</i> , <i>Neotinea ustulata</i> , <i>Herminium monorchis</i> . During field season we checked the most important old locations. Pskov region is characterized by the biggest percent of extinct orchids. This is discussed in the corresponding article in 'Journal Europaischen Orchideen'. All maps will be published in the book. We think this goal is partially achieved, because the

				reasons of extinction are still not always clear.
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

We did not encounter any major unforeseen difficulties.

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

1. I am sure that a prepared book will increase people's interest to the native vegetation and to problems of its conservation
2. We developed the activities of our Saint-Petersburg Orchid Society. This Society plays an important role in the increasing people's interest to our native Orchids via its meetings and internet site. The same role plays the article in 'Orchid Planet'.
3. Scientific results. Here are the most important ones:
  - 3.1. We compiled a database with almost 8000 records of orchids – as full as it was possible. It includes data from various herbaria, literature data and personal observations. It will be very useful for any scientific Orchid research in our region in the future. This is a first full taxonomic database for NW-Russia.
  - 3.2. We made grid maps of all Orchids native to NW-Russia. They were automatically built based on the data from database. These are the first grid maps for plants, made especially for NW-Russia. Using the same method, maps of any other plant groups might be easily made in the future.
  - 3.3. Maps provided us with the reliable information about the rates of extinction of any species. The causes of extinction may be more successfully examined, future situation may be predicted.
  - 3.4. We made a lot of new findings. Some of them were made during herbarium work. Here, as the most important example I can mention a new locality of *Ophrys insectifera* in the Leningrad region, which is situated in a distance of 300 km far from the nearest known locality of this taxon in this region. This is based on the old specimen in herbarium of Helsinki University – a specimen was collected in 1943. The third locality of *Orchis militaris* is now known after we found it in the herbarium of Herzen State Pedagogical University (it was rarely examined by herbarium botanists). Other new findings were made in the field. In total, in the summer 2008 we found all 28 orchids native to NW-Russia. All were photographed for the book. Of them, new localities of *Orchis militaris*, *Liparis loeselii*, *Epipogium aphyllum*, *Neotinea ustulata*, *Herminium monorchis* etc. within Novgorod and Leningrad Regions are scientifically the most important. In Pskov Region the findings of rare plants proved to be rather few; this confirmed that some taxa are extinct in this area.

3.5. The full information on Orchids of Pskov Region was published in 'Journal Europaischen Orchideen'.

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

Here I can again mention all people who will see internet site of Saint-Petersburg Orchid Society or attend its meetings and listen lectures, all who will read publications, and of course, my numerous scientific colleagues. When a book will be published, I think that more people will have benefit of this project.

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

Yes, I have such plans. First, I will publish a book. Then, I have some scientific plans: working further on grid maps of Orchids of NW-Russia; making further floristic explorations in NW-Russia; monitoring the localities of rare plants which we found this year; and finally, I have some ideas how to examine the evolution of *Dactylorhiza*, taxonomically the most complicated Orchid genus in NW-Russia. Of course, I will continue collaboration with Saint-Petersburg Orchid Society. I will replenish the database any time I get any new data.

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

I have a lot of colleagues both in science and among common people. Moreover, I understand that the results of my work will be as wide as I will be able to present them for people. For common people the book of course will be the most important. The thing which I should share only in narrow scientific circles, is an information on the localities of the rarest Orchids, such as *Calypso bulbosa* and *Neotinea ustulata*, to prevent replanting last specimens from the nature to private gardens.

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

I used RSG during one-year 2008. I think that a lot of things were done, but a lot of work is expected on the subject in the future.

**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
travelling expenses	972,2 GBP (=50000 RUB)	87210 RUB	- 37210 RUB	Rent of a car (UAZ) for our main expedition proved to be more expensive than expected; it took 52500 RUB for 35 days, excluding petrol. Other money (34710 RUB)

				are other expenses during this expedition, as well as the expenses for using public bus and train during many short expeditions and 1-day excursions (more than 10) – the detailed reports are presented on the SPOLO forum ( <a href="http://spolo.borda.ru/?0-8">http://spolo.borda.ru/?0-8</a> ).
business trips to the important herbaria	486,1 GBP (=25000 RUB)	9630 RUB	15370 RUB	Business trip to Helsinki (7130 RUB, of them fare 2400 RUB) and to Pskov (2500 RUB)
renovation of standard expedition equipment	597,3 GBP (=30720 RUB)	10450 RUB	20270 RUB	Tourist camp, sleeping bag, two rucksacks
improvement of photo technique	777,8 GBP (=40000 RUB)	51530 RUB	- 11530 RUB	2 lens (21900 RUB), flash Canon Speedlite EX-2 and a cable for it (17300 RUB), two tripods (5070 RUB), batteries, memory cards, lenspen, filter, bag, etc. (7260 RUB).
improvement of computer software for making database and forum	486,1 GBP (=25000 RUB)	0 RUB	25000 RUB	Not needed because I was able to make all maps using standard programmes: Microsoft Excel for storing database, Ingit computer maps for determining coordinates, MapInfo for making grid and producing maps, Photoshop for final map editing. Editing the page about our native Orchids on the website was made by colleagues from Orchid Society.
multimedia projector and notebook	680,5 GBP (=35000 RUB)	46900 RUB	- 11900 RUB	Multimedia projector (24300 RUB), a notebook (22600 RUB)
<b>TOTAL</b>	205720 RUB	<b>205720</b> <b>RUB</b>		

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

They are briefly discussed under 'Are there any plans to continue this work?' The most important next step is to publish a book.



**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?**

I printed RSGF logo in 2 articles in the journals (in Russian 'Orchid Planet', and in German 'Journal Europaischen Orchideen') and at the internet-site of Saint-Petersburg Orchid Society (please see [http://www.spolo.ru/about\\_english.html](http://www.spolo.ru/about_english.html)).

**11. Any other comments?**

Thank you very much for this grant. It really helped me to accomplish the plans which I dreamed to do. In the attachment there are some photographs (taken in the field and during the meetings), and an example of the pages of the book about one of the orchid species, *Orchis militaris*.