

## 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**

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<b>Grant Recipient Details</b>	
<b>Your name</b>	Anna Kuzemko
<b>Project title</b>	Conservation of meadow ecosystems of the central part of Ukraine as habitats of the rare and endangered plant species
<b>RSG reference</b>	8119-1
<b>Reporting period</b>	September 2010-August 2011
<b>Amount of grant</b>	£5370
<b>Your email address</b>	<a href="mailto:anya_meadow@mail.ru">anya_meadow@mail.ru</a>
<b>Date of this report</b>	13.08.2011

**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
Inventory of rare and endangered plant species from new edition of Red Data Book of Ukraine in the meadow communities of the Central regions of Ukraine		x		The inventory of rare species of meadow plants locations at the territory of Central Ukraine was carried out using the materials of herbarium KW, KWHU, SOF and PWU and we can create the database which including 153 locations of 16 plant species. We have eight expeditions with aim to confirm the actual status of this location and we find out that fact is more than a half of them have disappeared, mostly because of draining melioration in floodplains of Tyasmin River, Supoy River etc, and also as a result of regulations of stream in the South Bug River basin. We got reliable evidence of 48 locations, where we made relevés. The localities of the four species ( <i>Orchis morio</i> , <i>O. militaris</i> , <i>Gymnadenia conopsea</i> , <i>Dactylorhiza maculata</i> ) probably, have disappeared from the Central Ukraine.
Preparation of the digital maps of investigated species distribution			X	The digital maps of location of the studied species were prepared based on data of herbarium collections and a materials of our field research for 12 species ( <i>Orchis coriophora</i> , <i>O. palustris</i> , <i>O. laxiflora</i> , <i>Iris sibirica</i> , <i>Dactylorhiza incarnata</i> , <i>D. majalis</i> , <i>Gladiolus tenuis</i> , <i>G. imbricatus</i> , <i>Fritillaria meleagroides</i> , <i>F. ruthenica</i> , <i>Epipactis palustris</i> and <i>Listera ovata</i> ).
Investigation of the present state of the investigated species populations.		x		The data about ontogenetic and vitality structure of the six populations for three species ( <i>Dactylorhiza incarnata</i> , <i>Gladiolus imbricatus</i> and <i>Fritillaria meleagroides</i> ) were collected. But for in-depth study of population of all location we need much more time.
Estimation of the effectiveness of current protection measures for investigated species	x			The estimation of species abundance in the populations studied in Kanev Nature Reserve (Cherkasy region), Hydrological reserve "Shulyatskoe

				bog" (Cherkassy region), ornithological reserve "Bugo-Desnyansky" (Vinnitsa region), and botanical reserve "Strizhavskie Orchids". However, to assess the effectiveness of protection is necessary to study population dynamics for several years.
Studying of the coenotic peculiarities of rare and endangered species, compilation the database of phytosociological relevés with rare and endangered species			X	It was established that the studied locations of rare meadow species are belong to the 15 associations of the <i>Molinio-Arrhenatheretea</i> class. The greatest number of species observed in associations <i>Festuco pratensis-Deschampsietum</i> , <i>Poëtum pratensis</i> and <i>Lolietum perenne</i> , which are characterised by fairly intensive grazing.
Development the criteria of the meadow communities which are need the protection with consideration of rare and endangered species concentration			X	It was revealed that the existing documents relating to the protection of plant communities in Ukraine (Green Book of Ukraine) do not provide protection of the meadow communities of the plain part of Ukraine. It was proposed to use the criteria of Habitat Directive and Bern Convention, which regulates the protection of this type of meadow communities for these purposes.
Analysis of modern meadow land-use and development the system of scientific based management for meadow communities and the conservation measures.			X	It was determined significant decreasing the number of cattle in recent years in response to the crisis in agriculture in Ukraine, which led to a decrease of the pasture and hay-mowing pressure to the meadow communities, but such pressure is a necessary condition for existence of grasslands in the Forest-Steppe zone, and rare plants localities in the meadow communities respectively. The informational work with the local authorities (village councils) in selected villages in Vinnitsa, Cherkassy and Kirovograd regions on necessary to maintain the traditional land-use for preserve the populations of rare plant species were conducted. The development of the two regional landscape parks and two botanical reserves for conservation and maintain the populations of rare plant

				species in Cherkassy and Vinnitsa regions.
It will be gathered the collection of the rare meadow plants and its seed bank in the National Dendrological park "Sofievka" of the National Academy of Sciences of Ukraine		x		The seeds of <i>Iris sibirica</i> , <i>Fritillaria meleagroides</i> , <i>Gladiolus imbricatus</i> and <i>G. tenuis</i> were collected and brought to the laboratory of micropropagation of the National dendrological park "Sofiyivka" of the NAS of Ukraine with purpose of seed production of these species investigation for enrichment of the collection of rare and endangered plant species in the park.

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

The main difficulties were connected with the changes of the project terms which originally included two field seasons. As far as we were able to spend our investigations only during the field season 2011, we obliged to reduce the territory of investigation at the expense of Kiev region because the vegetation of this region is studied better than others. In addition, the big part of Kiev region occupied the Northern part of Ukraine but only southern part of the region can be include into Central Ukraine.

Furthermore, we don't have enough time for high-quality investigation of the populations' structure which needs careful morphometric measurements.

Taking into account that field researches were finished less than month before the date of this report we don't have time for preparing the monograph for publication. Its preparation and editing still continue and it will be ready approximately in November-December 2011, after the project termination.

One more difficult was imperfection of the Ukrainian banking system which caused the delay with the grant receiving also difficulties with payment for DMap software.

Finally, the instability of Ukrainian currency led to the significant changes the previously declared costs for polygraph service.

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

- The inventory of the present localities of the rare and endangered plant species in meadow communities in the Central Regions of Ukraine and their ecological and phytosociological characteristics.
- The revealing of the non-protected localities of these species and preparing proposes of the creating a new protected areas for conservation of their habitats.
- The local authority informing about importance of traditional land-use for preserving of the rare and endangered plant species habitats.

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

As mentioned, the discussion with representatives of village councils in six villages of Cherkassy, Vinnitsa and Kirovograd regions about regimes of grasslands management which provide the preservation of the rare and endangered species habitats.

The five educational seminars for pupils' and students' youth in the National Dendrological Park "Sofiyvka" were carried out and training on phytosociological and populations' investigations for students of summer school which was organized in cooperation with the Minor Academy of Sciences of Ukraine.

The informational poster "The Rarities of meadow vegetation of the Central Ukraine" was published and dispersed in educational institutions of Cherkassy, Vinnitsa, Kirovograd, and Poltava regions.

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

We plan to continue the work on checking-out of the present state of all rare plant species localities in Central and other regions of Ukraine mentioned in literature and collected in herbarium collections. The further investigations of dynamics of the number and structure of populations' of these species at protected areas also planning.

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

The results obtained during the project realisation were presented at the conference «The Plant Kingdom in the Red Data Book of Ukraine: Implementing the Global Strategy for Plant Conservation» (11-15 October 2010, Kyiv) and at the 8<sup>th</sup> European Dry Grassland Meeting (Uman'-Kherson 13-17 June 2011). The leader of the project Anna Kuzemko was the coordinator of the last conference.

As mentioned, informational poster was published and distributed among concerned persons, scientific community, NGOs and other organisations.

The materials obtained during the project can be used in the new edition of the Red Data Book of Ukraine, "Flora of Ukraine". Furthermore it can provide the promotion in Ukraine the principles of the Habitat Directive and Natura 2000 Network also Emerald Network for more effective protection of biodiversity at plant community and biotope level.

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

All materials and equipment were purchased in September 2010. The field research was carried out during April-July 2011. The biggest part RSG used in these terms.

The terms of the project realization were corrected significantly because grant was received in August 2011 and duration of the project reduced from 18 to 12 months.

Originally planned that field research will be carried out in June-August 2010 and May-July 2011, but actually it was in April-July 2011 and only one expedition was at August 2010. Processing of the herbarium specimens was carried out from November 2010 to March 2011 (planned June-December 2010). The publication of the informational poster was adjourned from March to July 2011 because in March was absent high-quality photos of the plants. Four educational seminars were held in

March-April 2011 as planned and additional seminar was hold in August 2011 in the frame of summer school in collaboration with Minor Academy of Sciences of Ukraine in such period. Preparation of the Final Report was provide in July-August 2011 in accordance of the project duration reducing (planned in October-November 2011). The processing of the collected materials and the monograph preparation still in progress.

**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
Portable computer	500	422.46	-77,54	Samsung R 530
Camera	400	409.22	+9,22	CANON EOS 450D
Canoe	350	639.28	+289,28	NERIS-3. Previously we wanted to purchase canoe TM "Taymen" but such canoe now not produced and we decide purchase more expensive canoe "Neris" which are available
GPS navigator	300	284.21	-15,79	DAKOTA 20
Transport (including fuel)	1200	926.5	-273.5	Costs for transport include transportation to Kiev and Poltava for work with herbarium collection (10 times 3 or 2 persons, costs of tickets from Uman to Kiev is 60 UAH (£4.63) and from Kiev to Poltava 105 UAH (£8.10) at one person. We rent a car for 10 day, in other cases we agreed on a rental car with our friends, so the rental car is not paid, but only for petrol. We drove in total 2500 km. Cost of petrol during period of our field research was about 9 UAH/litre (£0.69).
Software (DMap)	70	70	0	Bank transfer via PayPal
Publishing of informational booklets	100	215.66	+115,66	300 posters, A2 format. Previously, we planned to print informational booklets of A3 format but the quality of such production was not convenient for our purposes, so we changed the format and it turned out much more expensive but quality of the posters is very high.

Publishing of Monograph	500	648.08	+148.08	300 copies of A5 format, 150 pages with colour illustrations. Preliminary calculations of the cost of the monograph held in the printing centre, "Visavi", where plans to print a monograph
Food and accommodation	1500	1311.59	-188.41	Total period of field research was 43 day. Food calculated for 4 person (three members of project team and driver) counting 50 UAH (£4). Accommodation in hotels (as well as tourist centres, sanatoriums, etc.), it was only in the cold nights or rainy weather. The rest of the time - in tents. Thus the total number of days that used money to accommodation was 14 (costs for accommodation vary from 80 UAH to 200 UAH – £6.17-£15.43).
Writing materials	150	143	-7	Includes paper, notebooks, measure strips, pens, cartridges etc.
Overhead charges	300	300	0	We used overhead charges in food and accommodation in Kiev and Poltava during works with herbarium collections and for banking service.
<b>TOTAL</b>	5370	5370	0	

\* Rate £ sterling to UAH (Ukrainian hryvna) is 1 to 12.96 (National Bank of Ukraine).

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

We will continue distribution of the informational poster and monograph (as soon as it will be ready) among all interested persons and organisations for attract the attention for the problem of rare plant species and meadow vegetation conservation at the actual economic situation in Ukraine. We plan to prepare popular scientific publication about importance of the traditional land-use for preservation of meadow vegetation and most valuable its components, because local community, as our project showed, not enough informed about such problem and present state of agriculture in Ukraine not ensure the success in its solution. We plan also continue our activity on adoption of the Habitat Directive principles for conservation of plant cover of Ukraine including meadow vegetation.

### 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 use RSGF logo in my presentation at the mentioned conferences and educational seminars also at the informational poster. It will be presented also at the cover of the monograph.

As attachment for Final Report I send the digital variant of the informational poster. If it necessary I can send also original of the poster and original of the monograph when it will be published.

**11. Any other comments?**

I am very grateful for RSGF for financial support of our project. Also I would like to thank my project team, referees of the project, all persons who were involved in our activity during project realisation.

