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	Ivan Zuban
Project title	Research on a Condition of Populations of Geese and Brents during Migration and Nesting in the Conditions of the North Kazakhstan Area
RSG reference	19235-1
Reporting period	May 2016- January 2017
Amount of grant	£ 5000
Your email address	Zuban_ia@mail.ru
Date of this report	

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
Accounting for the amount of geese and brant in the spring				In connection with the early spring, the migration of geese and brent began much earlier than the beginning of our work, so we missed the first wave of migrants. In addition, the work was complicated by a large amount of meltwater, which prevented the movement of vehicles.
Research of the impact of illegal hunting in the spring				During the field research in spring, all cases of illegal hunting were recorded, and an anonymous survey of hunters was also conducted. During the summer period, a number of facts of illegal hunting for gray goose on moulten clusters have been established. The information was transferred to the Territorial Authority for the Protection of Fauna. As a result of the operative actions of the inspectors, three poachers were detained and punished administratively.
Distribution of booklets and posters to the public				During the field work, 100 posters and 25 booklets about the importance of preserving globally threatened species of geese and brant were distributed among hunters, shepherds, fishermen
Research the nesting biology of gray goose. Determination of the number of nesting populations of gray goose				In the spring-summer period, the working group surveyed more than 90 lakes in eight administrative districts of the North-Kazakhstan region in 20 field days. Important information on the nesting biology of the gray goose was collected.
Identification of factors influencing the success of gray goose				Analysis of photographs and video material obtained from the photo traps, as well as visual observations

reproduction				allowed us to establish the factors influencing the success of gray goose reproduction (competition with the swan as well as predation). In addition, an interesting relationship was revealed between the choice of gray geese nesting areas and the distance to populated areas. About 80% of gray geese nested on water bodies in close proximity to populated areas. This issue requires further research.
Accounting for the number of geese and brant in autumn				In connection with the attraction of additional funds within the framework of the project of the Association for the Conservation of the Biodiversity of Kazakhstan - "Autumn Monitoring of Lesser White-fronted Goose in Kazakhstan", with the support of AEWA, the autumn monitoring work has been expanded both in time frame and spatial boundaries. Additional work was done on a number of lakes in the neighboring Kostanai region.
Identification of new key areas for migrating geese and brant				During the monitoring works in the spring and autumn period, two new lakes were identified, where about 1% of the global population of the globally threatened species, the red-breasted goose, stayed for rest. A detailed description of lakes for inclusion in the international list of Key Bird Areas has been prepared. The issue requires further monitoring studies to confirm the importance of these lakes in subsequent years.

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

The main difficulties in the implementation of the project were weather conditions, namely a large number of meltwater in the spring period, as well as protracted torrential rains at the end of the monitoring works in the autumn period, which prevented movement. Most of the field roads were impassable and in order to get to the planned observation points, it was necessary to make large detours, which

greatly affected the time costs. We also encountered a shortage of time for studying the nesting biology of the gray goose. The period of nesting coincides with the period of mass migration of other species of geese and brent, and simultaneously it was necessary to solve several tasks. In addition, the planned time for estimating the number of nesting populations of the gray goose in summer was also inadequate, in our opinion, because of a large number of lakes (about 3,000) in the project area.

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

1) New data on the number of geese and brent migrating through the territory of the North-Kazakhstan region in the spring and autumn periods were collected. In the spring period, a number of new water bodies important for the period of migration for globally threatened species of geese and brent (lesser white-fronted goose and red-breasted goose) have been identified, and a comprehensive description of these lakes has been prepared for their possible inclusion list of key ornithological territories of international importance.
2) For the first time in the last 50 years, new data on nesting biology of the gray goose in the North Kazakhstan region have been obtained. Methods of monitoring nest sites using an unmanned aerial vehicle, the use of which has reduced the human factor of concern, and also shorten the time for examination of breeding sites have been tested.
3) Using photo traps, as well as visual observations, natural enemies of gray geese were identified during the nesting period. An interesting feature of the attraction of gray geese during the nesting period to lakes located near inhabited localities was revealed.

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

The local population did not directly participate in the project. We resorted to a survey of the population to clarify the timing of migration of geese in different areas of the region, identify new nesting places for gray goose, etc. An anonymous survey of hunters about the amount of birds they caught, availability of species from the red book, etc. was also conducted.

5. Are there any plans to continue this work?

Undoubtedly, our plans are to continue this work, because the basis for sustainable management of waterfowl is the constructive regulation of extraction volumes and hunting parameters based on regular annual monitoring of both hunting and rare species.

Monitoring of migratory Anseriformes should include annual counts of numbers, anthropogenic impact assessment, assessment of the impact of limiting factors of biotic and abiotic nature, assessment of the status of key habitats when the regime of their economic use changes. Monitoring during periods of migration provides full information on the places of concentration of different species in the pre-nest and

post-nesting periods, allows assessing the role of the region and its individual sites in order to maintain a high population for each of the monitored species. We are also planning to continue expanding the geography of work on monitoring the status of the local gray goose population, identifying factors that affect its abundance, and factors affecting the attraction of gray geese to human settlements during nesting period.

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

In order to popularize the results of the work, three popular science articles were prepared in the regional newspaper North Kazakhstan, in the republican ornithological newspaper Remez and also the bulletin of the Association for the Conservation of the Biodiversity of Kazakhstan - "Green World" - http://acbkvestnik.weebly.com/4-1048107910911095107710851080107 7-10751091108910771081-1080-1082107210791072108810861082-1074-105710501054.html

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

Work on the project was carried out on schedule from May to November 2016.

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
Telephoto Lens Nikon 70-300mm f/4.5-5.6G ED-IF AF-S VR Zoom-Nikkor	280	275	-5	
Telephoto Nikon 60mm f/2.8G ED AF-S Micro-Nikkor	373	378	+5	
Quadrocopters for aerial DJI Phantom 3 PROFESSIONAL	1200	1046	+154	At the time of purchase, the prices for quadrocopters were reduced.
Rent of the car VAZ 21213 (40 days)	522	522		
Purchase of fuel (gasoline AI 92) - 1500 lit.	355	355		
Traveling expenses (3 persons - 40 days)	1118	1118		
Camouflage suit (3 pcs.)	56	56		
Wages	1096	1096		
The tablet Samsung SM-T285	0	154		For comfortable

				management of quadrocopter, we decided to buy a tablet for the saved money
Total	**5000**	**5000**		

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

Undoubtedly, the most important further steps are the continuation of the monitoring of the number of hunting and rare species of geese and brent on the territory of the region. Identification of new key territories for globally endangered species, as well as confirmation of the importance of those found, in order to assign them the status of International. In addition, it is necessary to expand the geography of work on the research of nesting biology and the number of gray goose. Identification of the reasons for the attraction of the gray goose to settlements in the nesting period is necessary.

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 Rufford Foundation logo was used in the publication of the popular science article in the bulletin of the Association for the Conservation of the Biodiversity of Kazakhstan - "Green World". Also referring to the financial support of the Rufford Fund for the collection of material, we published a scientific article "Perspective Ornithological Territories of the North Kazakhstan Region" in the collection of the XIX International Scientific and Practical Conference "Problems of river basin management in the familiarization of Siberia and the Arctic in the context of global climate change in the 21st century".

11. Any other comments?

The data obtained on the number and distribution of geese and brents in the territory of Northern Kazakhstan are very important scientifically both at the regional and international levels. The use of an unmanned aerial vehicle in the nest monitoring of waterfowl was the first, and in our opinion quite successful, experience for Kazakhstan. We sincerely thank the foundation for the opportunity to do such an interesting and important work in the scientific plan, and we hope for further cooperation.