

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	Vitalii Hukov
Project title	Key bat hibernacula in North-eastern Ukraine: conservation, population research and monitoring
RSG reference	21319-1
Reporting period	April 2017 to May 2018
Amount of grant	£3800
Your email address	guckov.vitaliy@gmail.com
Date of this report	June 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 project goal was to level up the bat hibernacula conservation and monitoring for Eastern Ukraine.				We achieved the goal in general, because we got significant progress in most ways of the project planned activity (detailed see below).
To search the best ways for legal protection of the key bat hibernacula (Liptsy and Tetlega mines system).				The Liptsy mines are included to plan of development and expansion of Regional Landscape Park "Feldman Ecopark". It is planned that the mine system will be strictly protected branch of the RLP in 2018-2019. The Tetlega mines system has submitted to the List of International Important Underground Sites for Bats in Europe by EUROBATS Agreement; and the EUROBATS Meeting where the decision will make will be in October 2018.
To prevent the collapse of mines' entrances for the next 10-15 years				We dug out and supported with timber the collapsed mine entrances.
To estimate mammal predation on hibernated bats and develop the strategy for protection of bats from predators				Using new (new for Ukraine) tools (photo-traps) for estimation of activity in mines in full darkness we shot a lot of movies, but they are under development.
To study the hiding behaviour of bats in mines, and estimate do they use the deep crevices in mines' walls; extrapolation of bat numbers in the mines				Using photo-traps we confirm our hypothesis that bats use the deep crevices in mines' walls for hiding, and the real number of bats could be bigger than could count just mine inspection.
To carry out the field searching of the summer habitats of bats hibernated in the mines				
To continue the bat population monitoring				

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

No

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

1. We got significant progress in management of the future legal protection status of the mines. Especially the Lipty mines are included to plan of development and expansion of Regional Landscape Park "Feldman Ecopark". It is planned that the mine system will be strictly protected branch of the RLP in 2018-2019. In this case the forest patch 10-15 ha around the mine entrances will be the strictly protected area, and the entrances will be closed with bat-friendly iron grates. The other mine system, Tetlega mines, has been submitted to the List of International Important Underground Sites for Bats in Europe by EUROBATS Agreement; and the EUROBATS Meeting where the decision will make will be in October 2018.
2. The other key outcome is maintaining the conditions of the mines' entrances. We dug out and supported with timber the collapsed mine entrances. This repair works allow us to support the entrances, and allow access of bats inside. Our repair will be enough for existing the entrances to remain open for up to 10 years, but we think that building the concrete walls and closing of the entrances by grates will happen earlier (2-4 years).
3. This project allowed us to make significant progress in bat population monitoring in Eastern Ukraine, which is very important for conservation and estimation the bat population trends. The new tools (photo traps) allowed us to collect new data that is key for estimation the real bat number in hibernacula and to show the important moments in bat hiding live.

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

The people for the nearest settlements were not involve in this project, because it is too dangerous for bats if more people will know about the mines and will visit then. At first we need to close the entrances and manage the security system.

5. Are there any plans to continue this work?

The monitoring work on bat in mines was started in 1999 and will be continued. For this moment it is only one of few long-term monitoring programmes in Ukraine and our key object to continue this work as long as possible. These mines and open pit are key points for estimation bat population trend in this part of Eastern Europe, and more over they are important for study bat longevity and ageing. On all of these reasons the monitoring work will be continuing.

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

The results of monitoring will be published in scientific papers. Previously, for example it was a paper about Tetlega mines:
<https://content.sciendo.com/view/journals/vzoo/50/3/article-p231.xml>

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 field parts of the project were in: July, August-September, November-December 2017 and February-March and April 2019.

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
Costs of transport: Car rental 270£, For fuel 90£	360	410	-50	Car rental 330£, For fuel 80£
Rings (0,17£@1000)	170	170	0	
Equipment for radio telemetry: transmitter (70£@5)	350	350	0	
Spending on food (62 field days@5peoples@7£)	1640	1640	0	
Other consumables (work gloves, rope, bags etc.)	100	180	-80	
Saw Fiskars 24' (35£@2) Hammer (30£),Shovel (10£@2), Hatchet Fiskars X10 (45£@2)	210	220	-10	
Information boards (plastic) (7£@10)	70	70	0	
Camera traps(ScoutGuard SG-1000M) (330£@2)	660	460	+200	Browning Dark Ops HD Pro (220£); Bushnell 119875C 24MP Trophy Cam HD Low Glow (240£)
Camping furniture (chairs, field folding-table, gas cylinder for field cooking)	240	320	-80	
Total	3800	3820	-20	

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

The main next step will be to offer official conservation status of the mines, and later close entrances by iron gates. These steps guarantee the conservation of the local bat population for many years for the future.

The on-going steps are winter monitoring and ringing bats in spring and late summer seasons in the mines.

We will continue the searching of ringed bats in forests in summer time.

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?

This project is not only one grant from The Rufford Foundation given to Kharkiv Bat Group as a branch of Ukrainian Independent Ecology Institute. Therefore we have several kinds' of replicas of the logo. There are chevrons, signs, labels and thousands of wall and pocket calendars with Rufford logo. The Rufford logo is also present on all public presentation about bats made by Kharkiv Bat Group. The Rufford Foundation logo often appear on the TV and internet channels of local and national Ukrainian mass media.

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

Vitalii Hukov – Mgr. of biology, Leader of the project: I managed buying of equipment planning of field work and took part in part of expeditions.

Victor Kovalov – master student of V.N. Karazin Kharkiv National University (Ukraine), Kharkiv Bat Group and UIEI (Ukrainian Independent Ecology Institute) member. Victor took part in field work in July, in spring and autumn catching of bats and took part in winter monitoring of bats in mines and mines restoring action.

Olena Holovchenko – bachelor student of V.N. Karazin Kharkiv National University (Ukraine), Kharkiv Bat Group and UIEI member. Olena took part in spring and autumn catching of bats and took part in winter monitoring of bats in mines. Also she took part in analysis of video material from photo traps.

Natalia Shanyuk – young naturalist of Kharkiv Bat Group. She took part in field work in July, in spring and autumn catching of bats and took part in winter monitoring of bats.

Hanna Suvorova – Mgr. in biology, Kharkiv Bat Group and UIEI member. Hanna took part in field work in July and in spring and autumn catching of bats.

Illya Nekrutov – young naturalist of Kharkiv Bat Group. He took part in field work in July, and took part in spring and autumn catching of bats. Also he took part in analysis of video material from photo traps.

Olgha Timofeeva – bachelor student of V.N. Karazin Kharkiv National University (Ukraine), Kharkiv Bat Group and UIEI member. Olgha took part in field work in July and took part in winter monitoring of bats in mines.

Olexey Parfilov – bachelor student of V.N. Karazin Kharkiv National University (Ukraine), Kharkiv Bat Group volunteer. Olexey was main car driver during all period of the project, and took part in field work in July and mines restoring action.

Kateryna Posrednikova - master student of V.N. Karazin Kharkiv National University (Ukraine), Kharkiv Bat Group and UIEI member. Kateryna took part in winter monitoring of bats in mines.

Anastasia Domanska – Mgr. of veterinary, Kharkiv Bat Group and UIEI member. Anastasia took part in winter monitoring of bats in mines.

Myhaylo Shlahter – Mgr. of biology, Kharkiv Bat Group member. Myhaylo took part in mines restoring action.

Roman Tykin – volunteer of Kharkiv Bat Group. He took part in field work in July.

Valeria Bogodist – young naturalist of Kharkiv Bat Group. She took part in field work in July.

Nikita Tovstyak - young naturalist of Kharkiv Bat Group. He took part in field work in July.

Myhaylo Shlahter – Mgr. of biology, Kharkiv Bat Group member. Myhaylo took part in mines restoring action.

12. Any other comments?

No.

Digging of mines entrances



Liptsy 1 mine, entrance 1, view in August 2017 (picture by Hukov V.)



Liptsy 1 mine, entrance 1, view in November 2017 beginning of digging (picture by Hukov V.)



Liptsy 1 mine, entrance 1, close view (one section of the stick is 10 cm) in August 2017 (picture by Hukov V.)



Liptsy 1 mine, entrance 1, close view in November 2017 after digging (picture by Parfilov O.)



Vitaliy Hukov near the entrance 1 to Liptsy 1 mine, August 2017 (picture by Parfilov O.)



Vitaliy Hukov near the entrance 1 to Liptsy 1 mine, November 2017 (picture by Parfilov O.)



Liptsy 1 mine, entrance 2, view in August 2017
(picture by Hukov V.)



Digging of entrance 2 to Liptsy 1 mine,
November 2017 (picture by Hukov V.)



Liptsy 1 mine, entrance 2, close view (one
section of the stick is 10 cm) in August 2017
(picture by Hukov V.)



Vitaliy Hukov dug the entrance 2 to Liptsy 1 mine,
November 2017 (picture by Parfilov O.)