

Final Evaluation Report

Your Details	
Full Name	Georgiy Shakula
Project Title	Menzbir Marmot (Marmota menzbieri) Current Status in Central Asia
Application ID	b5e697-B
Date of this Report	April 01, 2022

1. 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
Visit all the remote sites in Central Asian Countries and confirm or not the species presence at the modern time				I had an opportunity to visit the most remote sites of the former Menzbieri Marmot's habitats in the highland of Aksu-Zhabagly Nature Reserve and Sayram-Ugam National Park. I am happy to report confirmation of living colonies of the species in Besh-Aral Nature Reserve, Kyrgyzstan.
Study the Menzbir Marmot's behaviour as not studied chapter of this species				I have obtained the material on the Menzbieri Marmot behaviour via 13 camera traps. Using video-type I got the records of animal's sounds from different families.
Study the sound communication through bioacoustics recording technology (Song Meter SM4) software				While I was refused in funds from <i>Wildlife Acoustics Scientific Product Grant</i> and had not an opportunity to do my bioacoustics research with the planned software, I did this in my traditional manner: using Dictaphone and sound-recorder in video option of my camera and camera traps.

2. Describe the three most important outcomes of your project.

a). the presentation of my results at The Rufford Foundation for Biodiversity Research and Conservation International Conference, Aksu-Zhabagly Biosphere Nature Reserve, Kazakhstan, 16–19/03/2019.

b). the publication of scientific results in the form of articles:

- Shakula G.V., Shakula F.V. 2021. Current status of the population of Menzbieri Marmot *Marmota menzbieri* in Central Asia. Collection of reports of the International Conference "The Rufford Foundation and Biodiversity Conservation of Northern Eurasia". M., 15–16/10/2021, pp. 109–118.

- Shakula G.V., Shakula F.V. 2021. Review of archival materials on the marmots of the Aksu-Zhabagly Nature Reserve. Part II. Yanushko, P.A., 1943. Collection of reports of the International Conference "The Rufford Foundation and the Conservation of the Biodiversity of Northern Eurasia". M., 15–16/10/2021, pp. 119–139. <https://cloud.mail.ru/public/FzrF/PaW75DmmC>
- Shakula G.V., Shakula F.V. 2021. Review of archival materials on the marmots of the Aksu-Zhabagly Nature Reserve. Part III. Yanushko, P.A., 1945. Collection of reports of the International Conference "The Rufford Foundation and the Conservation of the Biodiversity of Northern Eurasia". M., 15–16/10/2021, pp. 140–154. <https://cloud.mail.ru/public/cHrP/UjNxi1Pz5>
- Shakula G.V., Shakula F.V. 2019. Aksu-Zhabagly Biosphere Nature Reserve as a model area for the protection and study of the theriofauna of the Western Tien Shan. Collection of materials of the IX International Scientific and Practical Conference "The Mountain Territories: Priority Directions for Development". Vladikavkaz, 4–7/12/2019, pp. 290–306.
- Shakula G., Shakula F. 2019. The Menzbieri Marmot (*Marmota menzbieri*) in Kazakhstan. The study results and prospects for protection. Proceedings of the Aksu-Zhabagly Nature Reserve. Issue. 12. Proceedings of the Conference "The Rufford Foundation for Biodiversity Research and Conservation in Central Asia". Aksu-Zhabagly, 16–17/03/2019, pp. 177–186
- Shakula G. 2018. Menzbier-Murmeltier. *Eliomys*, # 3, pp. 7–9.

c). understanding of the measures necessary for the conservation of the species in Kazakhstan

d). development of a plan for further research and conservation measures throughout the range in Central Asia

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

The period of seasonal activity of Menzbieri Marmot is very short - from late April to mid-August, the animals spend the rest of the year in hibernation. In this regard, the field season is only sufficient to study the biology of this species in one geographic location, so the planned duration of the project was not enough to cover populations throughout the range of Menzbieri Marmot.

4. Describe the involvement of local communities and how they have benefited from the project.

As I continued to talk with local people who graze their livestock in the mountains in the habitats of Menzbieri Marmot, I felt real support from them and discovered a shared nature of my conservation beliefs, which was not observed at the beginning of my work. Thanks to the information campaign of this project and the work of the protection service of the Sairam-Ugam National Park, the awareness of the local population has increased significantly. In the 2018–2020 field seasons, we did not observe a single case of poaching in relation to the Menzbieri Marmot. Thanks to our propaganda, the number of shepherd dogs on mountain pastures has also decreased. However, the number of livestock grazing in the habitats of the Menzbieri

Marmot still exceeds the allowable load on pastures needs further regulation by the local administration and the Sairam-Ugam National Park rangers.

Representatives of local communities received a little material benefit from my project, as one field worker was hired and paid for by the grant. I also rented a horse from the local population to transport field equipment and ensure the delivery of food to the expedition camp in the mountains.

5. Are there any plans to continue this work?

First of all, I plan to complete a field survey of the habitats of Menzbieri Marmot that were planned for the study. I want to map a detailed GIS-based distribution of the species and submit it for the updated information on Menzbieri Marmot in the species section of the IUCN Red Data book.

All received and processed material will be included in the monograph on Marmots of Central Asia in the form of a separate chapter.

I also plan to make more use of modern technologies in my studies, such as: GPS-navigator and relevant soft for the data enter and proceeding.

I want to be trained as a drone pilot for the task of mapping marmot settlements. The first experience of the drone using was successful. Unfortunately, the resolution of the equipment I had, including the go-pro camera, wasn't enough for accurate mapping.

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

I am in progress to prepare a report and make a presentation on incoming Rufford Grantees Conference hold in Mongolia at early July 2023. The materials will be sent to peer-reviewed Zoological Journal for submitting as well.

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

The most important next steps are:

- accurate mapping of the Menzbieri Marmot's habitats throughout its range,
- development and implementation of scientifically based grazing norms in the habitats of Menzbieri Marmot,
- control over the implementation of environmental standards in the Sairam-Ugam National Park by the forces of security guards and volunteers.

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

I always tell the people I work with that I work with the financial and ideological support of the Rufford Foundation. Since my Booster grant does not assume the production of printed products the RSG logo was not use.

9. Provide a full list of all the members of your team and their role in the project.

Bagdat Ablayev – the local unemployed citizen who assist me in the field work,

Sergey Kurochkin – the mountaineer, the volunteer of the project, assistant in the field work,

Fedor Shakula – the expedition driver, climber and volunteer,

Svetlana Baskakova – the Wild Nature NGO Director, field assistant, project manager and designer, English translator.

10. Any other comments?

I would like to use the opportunity to thank the Rufford Foundation for the support of my research, this is exactly the kind of help that was difficult to get from other sources in my country. I am going to apply for the 2nd Booster Grant of the Rufford Grants system in late 2022 for the field work in summer 2023–2024. I am looking for other sources as well and have obtained co-funding from Wild Nature NGO, Kazakhstan already. As usually, I plan to use my own savings and the equipment from the first, second and third Rufford Small Grants awarded to me.