Final Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF 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 – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please DO NOT fill in and submit this form until the project has been completed.

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

Your Details	
Full Name	Armine Kosyan
Project Title	"Web of Community Engagement: Advancing Spider Conservation and Research in Armenia"
Application ID	42200-2
Date of this Report	05.11.2025

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not	Partially	Fully achieved	Comments
Creation of the website "Spiders of Armenia"			Fully achieved	The *Armenia's Spiders* website has been developed and is now fully functional (although is not yet publicly available). It is currently undergoing illustration and content enrichment. The website includes the following main sections: About Us, Arachnology in Armenia, Projects, News, and Contacts. All content on the website is freely accessible to the public. In addition, it features several subsections, including National Checklist, New Species, Publications, Projects, Conferences, Media, and Events, providing comprehensive information on arachnological research and activities in Armenia.
BioBlitz Events and the Use of the iNaturalist Platform			Fully achieved	BioBlitz events were organized in the Syunik and Lori regions, engaging school students, young people, and local residents. A total of 110 participants—50 in Lori and 60 in Syunik regions were introduced to field research methods and trained to use the iNaturalist platform for documenting biodiversity. I also provided educational sessions on the spiders of Armenia, raising awareness about their ecological importance and promoting citizen science participation.
Teaching fieldwork skills to students and schoolchildren			Fully achieved	The fieldwork training gave students and schoolchildren an exciting opportunity to explore the world of spiders up close. Participants discovered how to find spiders in their natural habitats, safely collect specimens, and observe their behavior in the wild. They also learned how to use basic scientific tools and document their findings, building confidence in identifying different species and understanding their ecological roles. In total, 40–50 students and schoolchildren were trained in fieldwork skills.
The main purpose of the fieldwork and			Fully achieved	The fieldwork was conducted using a variety of methods, giving participants hands-on experience in studying spiders. Participants took part in visual

spider data collection				surveys, net sweeping, leaf-litter sifting, as well as checking pre-installed pitfall traps. After the field activities, students and schoolchildren also participated in laboratory work, where specimens were sorted, identified, and prepared for further morphological or genetic analyses. Approximately 40–50 students and schoolchildren participated in the fieldwork, collectively collecting around 200 specimens. The main purpose of the fieldwork and spider data collection was to disseminate knowledge about spiders, engage young people in field research, teach them various methods of spider collection, and emphasize the ecological importance of spiders and their role in biodiversity conservation.
Publishing plan			Fully achieved	This scientific article will soon be published, presenting over 100 new spider species for Armenia, including 3 new families and 47 new genera. In addition, the article reports 13 species new to the Caucasus region. It is currently in the final stages of publication in ZooKeys journal.
Conference participations			Fully achieved	• **May 5–8, 2025** – *International Conference on Biodiversity, Conservation, and Climate Change*, Yerevan, Armenia Presentation: "Advance in the Study of Biodiversity of Spiders in the Caucasus (Araneae)" Conference link • **August 31 – September 5, 2025** – *35th European Congress of Arachnology*, Zadar, Croatia Oral presentation: "Ground Spider Diversity in Armenia: New Records of the Family Gnaphosidae" Poster presentation: "Drying Lands: Spiders of the Changing Semi-Desert Lands of Armenia" Conference link • **September 24–26, 2025** – *First International Conference on Biological Sciences and Environmental Solutions for the Achievement of Sustainable Development Goals (BSES-SDGs)*, Yerevan, Armenia The conference is dedicated to the 90th anniversary of the Faculty of Biology and the 10th anniversary of the Research Institute of Biology at Yerevan State University Conference link

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

Creation of the "Armenia's Spiders" Website.

The *Armenia's Spiders* website has been developed as a lasting platform for science communication and public engagement. It will provide open-access information for both specialists and the general public. The sections introduce the team and project goals, establishing credibility and context. **Arachnology in Armenia** presents the country's spider diversity, highlighting endemic and rare species. **Projects** and **News** share ongoing research and recent discoveries, keeping the community informed. **Contacts** allow collaboration and networking. The **National Checklist** compiles all known spider species of Armenia, showing how research and findings have accumulated over the years, providing a valuable resource for researchers and conservationists. Additional subsections—**New Species**, **Publications**, **Conferences**, **Media**, and **Events**—ensure that all key scientific findings and activities are easily accessible, supporting education, outreach, and the promotion of arachnology in Armenia. The website is not yet available to the public as content development and illustration is ongoing.

Educational and Field Activities (BioBlitz Events).

BioBlitz events were organized in the Syunik and Lori regions, engaging schoolchildren, youth, and local residents. Participants learned how to work in field conditions, use the iNaturalist platform, and document biodiversity observations. Despite some challenges due to limited internet connectivity and unfamiliarity with smartphones, the training was highly engaging and educational. Participants gained hands-on experience, developed confidence in species identification, and improved teamwork, environmental awareness, and practical research skills.

Scientific Achievement and Publication.

A scientific article titled "*First DNA Barcoding of Armenian Spiders (Arachnida, Araneae), with New Taxonomic Data and More than 100 New Records for the Country*" is currently in the publication stage. The paper presents over 100 new spider species for Armenia, including 3 new families and 47 new genera, and reports 13 new species for the Caucasus region. This research represents a significant contribution to the understanding of Armenia's biodiversity and regional arachnology.

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

1. Limited Internet Connectivity and Technical Barriers
During the BioBlitz and fieldwork activities, several participants faced difficulties using the iNaturalist platform due to poor internet connectivity. This limitation reduced the effectiveness of the digital learning component.
Solution: The issue was addressed by providing printed educational materials and using offline data recording methods during fieldwork. Participants recorded their

observations on paper in the field, and the collected specimens were later transferred to the Department of Zoology at the YSU Faculty of Biology for further study and identification. Participants were also taught how to register and use the iNaturalist website; however, due to connectivity and smartphone challenges, this component was less effective than anticipated.

2. Weather Conditions and Fieldwork Challenges
In some regions, unfavorable weather conditions (rain and wind) hindered fieldwork and specimen collection.
Solution: The project schedule was adjusted to accommodate weather conditions, and alternative indoor sessions were organized. These included short lectures on spider diversity, specimen preservation techniques, and biodiversity monitoring methods.

3. Delays in Website Development
The development of the Armenia's Spiders website took longer than expected due to the time required for content preparation, photo editing, and illustration.
Solution: The issue was managed through effective teamwork and task division. Responsibilities were clearly distributed among team members, and collaboration was established with graphic designers and photographers to accelerate the process while maintaining high quality.

4. Describe the involvement of local communities and how they have benefitted from the project.
The project actively engaged local communities in the Syunik and Lori regions, including more than 85 school students, youth, and residents, through fieldwork and BioBlitz events. Participants gained hands-on experience in conducting field observations, and working with the iNaturalist platform, significantly enhancing their knowledge and skills in biodiversity monitoring. The project also help increase environmental awareness, and fostered closer collaboration between scientists and local residents, encouraging active participation in conservation and citizen science initiatives.

5. Are there any plans to continue this work?
The work will continue and expand. The Armenia Spiders website will become more interactive, featuring new species records, photos, and educational content. Upcoming plans include BioBlitz events in new regions, workshops for students and communities, and field surveys to promote spider diversity and conservation.

DNA barcoding research will also continue to identify rare and threatened species, publish new data, update taxonomy, and enrich national biodiversity databases. These efforts aim to engage communities, further promote citizen science, and strengthen environmental awareness and research capacity in Armenia.

6. How do you plan to share the results of your work with others?
The results will be shared through scientific publications, presentations at international and local conferences, as well as on the **"Armenia Spiders"** website and the **"Spiders of Armenia"** Facebook and Instagram pages, which will feature updated species lists, photos, and educational materials.

In addition, the results have been presented during public lectures, educational seminars, and events such as **BioBlitz, Bio Expo, Banugorts, and Science Week**, engaging students, researchers, and community members.
The project will also collaborate with national and international biodiversity databases, contributing to the study and conservation of Armenia's biodiversity.
We plan to share the results of our work through multiple channels to reach both the scientific community and the general public

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

- Successfully defended my dissertation.
- Increased the visibility and reach of the "Spiders of Armenia" website among a wide audience.
- Expanded the national spider collection.
- Conducted studies to clarify the status of endangered and invasive species.
- Proposed, for the first time, a Red List of spiders in Armenia.
- Implemented conservation measures for endangered spider species.

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?
Yes, the Rufford Foundation logo has been used on all printed materials related to BioBlitz (pens, notebooks, bags, stickers), during numerous local events, as well as during oral presentations at an international conference.

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

The members of our research team include Professor Marine Arakelyan and Dr. Christian Kropf, as well as Master's and Bachelor's students: Lars Weiler, Mariam Karapetyan, Inessa Galstyan, Argishti Helhelian, Arevik Grmajian, Zoya Khalatyan, Gayane Adamyan, Gohar Zhamkochyan, Tatev Hayrapetyan, and Hayk Hayrapetyan.
Many students actively contributed to the creation of the collection, spider identification and classification, and the organization of BioBlitz and similar events, which have been invaluable for disseminating knowledge and engaging the public in science. Argishti Helhelian, Gohar Zhamkochyan, and Arevik Grmajian contributed to the genetic research by performing DNA extraction and sequencing.
The contributions of all team members have been essential for studying, documenting, and conserving the spider diversity of Armenia.

10. Any other comments?
I would like to express my sincere thanks for supporting the RSG initiative, which has been an important stage in advancing a little-known and under-supported field in Armenia. Your support has allowed us to develop the study of spiders, raise public awareness, and promote biodiversity research in the country.

ANNEX – Financial Report

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