

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
Your name	Irakli Janashia
Project title	Prevention of introgression in populations of endemic honeybee <i>Apis mellifera caucasica</i> in Georgia
RSG reference	19023- 1
Reporting period	01.03.2016 – 24.02.2017
Amount of grant	5000 £
Your email address	i.janashia@agruni.edu.ge
Date of this report	27.02.2017

**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
Popularisation of the topic among beekeepers				
Initiation of discussions with decision makers and relevant officials for need of legislation regulating import and export of honeybees.				
Preparation of the publication describing current state of <i>Apis mellifera caucasica</i> in Georgia				
Involvement of international scientific society in the issue.				
The sample collection				
The survey among beekeepers				

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

The most unforeseen obstacles have been:

1. The unwillingness of beekeepers to allow us sample collection in apiaries, which we finally managed after giving free consultancy addressing just practical beekeeping matters.
2. It has been extremely hard to find apiaries which were keeping only local populations in their villages. During 1965-1985 it has been common practice to bring honeybee queens from single queen breeding apiary. Migratory beekeeping has been taken into consideration as well. Thus, we made more search for obtaining reliable (indigenous) samples from 64 sites covering entire country where beekeeping exist.

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

- More tight contact has been established between our scientific team and Georgian beekeepers. This facilitates rapid exchange of information about treats, problems and many aspects of beekeeping, including possibility of honeybee introduction to Georgia.

- We have managed to organise meeting at Ministry of Environment and Natural Resources Protection of Georgia and provide them information about current state of native honeybees in Georgia, their value for biodiversity, urge of protective strategy development and relevant practices existing in the western world. We have agreed to propose statements about importance of native honeybee protection for adoption of edited version of "National Biodiversity Strategy and Action Plan for Georgia". This document will be potent argument to make changes in relevant legislations concerning veterinary control of imported alive organisms.
- Recognition of Georgian populations of Caucasian bees is getting more attention on international level. We engaged two scientists (Dr Marina Doris Meixner and Dr Maria Bouga) in review of Caucasian honeybee Georgian populations. The paperwork is currently progressing and will be submitted to decent scientific journal. Information about project has been shared also on Researchgate where we have 17 followers and 74 reads. We have also contributed collected honeybee 64 samples to the SMARTBEES Project (EC FP7-KBBE Project 613960) which aims to create a comprehensive overview of honey bee biodiversity in Europe and adjacent areas using a WGS approach.

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

The main benefit for local community appeared to be our seminars which helped them as extension service had to; Project manager Irakli Janashia is professional beekeeper with considerable teaching and instructing experience. We managed to use backdoor approach during our meetings and indirectly introduce the problem of the introgression.

Involvement of local community in native bee protection strategy has been relatively passive. Although local honeybees are appreciated among them, the temptation to import honeybees belonging to different races does exist. However, we have managed to convince most of our seminar attendees to stick with local lines and avoid introductions.

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

We plan to continue advocacy of Native Georgian honeybees' protection (*Apis mellifera caucasica*). After revising the report and getting feedback we will apply for second Rufford Small Grant, which indeed will help us to keep progress in this direction.

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

For sharing of our work we will use the most potent tool - scientific publication, and extension service opportunities.

**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 RGS was used over 12 month period as it was planned in our application.

**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
Photography camera	300	316	+16	GEL (Georgian Lari) exchange rate has been changed profoundly.
Laptop	500	443	-57	The grant 5000£ was charged (39.76 £) by Bank during transaction.
Centrifuge tubes for sample collection	50	50	0	
Alcohol (for sample preservation)	30	30	0	
Supplemental material printing	250	250	0	
Snacks and drinks for seminar (7)	630	630	0	
Travel, Visiting 7 regions (seminars) by two members of team	350	350	0	
Travel, Field sample collection trips one member of team	1000	1000	0	
Logging 7 days for seminars per two person	350	350	0	
Logging spent by one person during 40 days field sample collection	1000	1000	0	
Per diem	540	540	0	
<b>TOTAL</b>	<b>5000</b>	<b>4959</b>	<b>41</b>	

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

We will continue advocacy of honeybees not only among beekeepers but in ordinary schools. The most efficiently nature related skills and knowledge can be acquired in childhood (eight seminars carried out by us are not sufficient for covering wide audience).

Most important step will be collaboration on changes in honeybee import related policy with Ministry of Agriculture and Ministry of Environment and Natural Resources Protection of Georgia.

**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?**

Yes, we have used RSGF logo each time in the PowerPoint presentations during planned (8) seminars and one meeting in Ministry of Environment and Natural Resources Protection of Georgia.

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

**12. Any other comments?**

Annex below

## Annex 1

Sample ID	Place of collection	country	Latitude	Longitude	Elevation	How many drones in the sample?	Operation type (traditional/modern)?	Local or non-local bees?	Does the beekeeper move the bees?	Does the beekeeper produce queens?	Does the beekeeper sell queens?	Does the beekeeper buy queens?	Queens mated at mating station? y/n	Name of the beekeeper	Additional comments
IJO-001	Khobi (Nojikhevi Monastery)	Georgia	42.336563	41.907006	42.00 m	5	traditional	Local	n	y	y	n	n	Ana Museliani	
IJO-002	Nokalakevi	Georgia	42.3546884	42.1930039	96.44 m	5	traditional	Local	n	y	n	n	n	Paata Machavariani	
IJO-003	Senaki (Eki)	Georgia	42.3415694	42.1096516	102.50 m	6	traditional	Local	n	y	y	n	n	Kakha Papava	
IJO-004	Senaki (Shkhepi)	Georgia	42.281354	42.1085787	43.32 m	6	traditional	Local	n	y	y	n	n	Giga Chemia	
IJO-005	Khobi (Zemo Kvaloni)	Georgia	42.3027314	41.9576454	16.00 m	6	traditional	Local	n	y	y	n	n	Avksenti Papava	
IJO-006	Cageri	Georgia	42.6409548	42.7670288	487.00 m	5	traditional	Local	n	y	n	n	n	Archil Rachvelishvili	
IJO-007	Tsalenjikha (Jgali)	Georgia	42.6526975	42.1289635	290.74 m	6	traditional	Local	n	y	n	n	n	Gela Bobokhia	
IJO-008	Zugdidi	Georgia	42.509	41.867	102.95 m	6	traditional	Local	y	y	n	n	n	Kakha Bigvava	
IJO-009	Senaki	Georgia	42.2598295	42.0621872	23.67 m	7	traditional	Local	n	y	y	n	n	Irakli Janashia	
IJO-010	Tsalenjikha (Potskho Etseri)	Georgia	42.7425748	42.0532608	316.49 m	7	traditional	Local	n	n	n	n	n	Kakha Bigvava	Swarm found coming out from hollow, in forest
IJO-011	Khorga (kharebava)	Georgia	42.311196	41.892767	14.65 m	7	traditional	Local	n	y	y	n	n	David Kharebava	
IJO-012	Senaki (Isula)	Georgia	42.2005024	42.0640218	9.94 m	7	traditional	Local	n	y	n	n	n	Vakhtangi	

														Meshkia	
IJO-013	Tsalenjikha	Georgia	42.6204947	42.0802116	200.74 m	7	traditional	Local	n	y	y	n	n	Irakli Chiqovani	
IJO-014	Kharagauli (kitskhi)	Georgia	42.022939	43.1905818	371.92 m	7	traditional	Local	n	y	n	n	n	David Giorgadze	
IJO-015	Kharagauli (Boriti)	Georgia	42.1137854	43.2753181	322.20 m	7	traditional	Local	n	y	n	n	n	Zurab Machavariani	
IJO-016	Kharagauli (Tskalaporeti)	Georgia	42.0364933	43.0725431	496.18 m	7	traditional	Local	n	y	n	n	n	Gela Dvali	
IJO-017	Kharagauli (Vardzia)	Georgia	42.0254767	43.1040859	474.47 m	7	traditional	Local	n	y	n	n	n	Badri Khidjakadze	
IJO-018	Bagdati (Pirveli Obcha)	Georgia	42.0983307	42.8685665	203.25 m	7	traditional	Local	n	y	n	n	n	Ramini kupreiSvili	
IJO-019	Samteria (laneti)	Georgia	42.1914793	42.4218178	42.29 m	7	traditional	Local	n	y	n	n	n	Marina Vardoshvili	
IJO-020	Zestafoni	Georgia	42.106985	43.019371	156.38 m	6	traditional	Local	y	y	n	n	n	Zura Churadze	
IJO-021	Chiatura (Tabagrebi)	Georgia	42.3265955	43.2747173	630.20 m	7	traditional	Local	n	y	n	n	n	Lauri Kveladze	
IJO-022	Sachkhere (chorvila)	Georgia	42.2787567	43.3929062	774.46 m	7	traditional	Local	n	y	n	n	n	Jurkha Nadiradze	
IJO-023	Sachkhere (Sairkhe)	Georgia	42.3173556	43.4009743	483.09 m	7	traditional	Local	n	y	y	n	n	Nodar Shukakidze	
IJO-024	Sachkhere	Georgia	42.3417216	43.4035492	502.39 m	7	traditional	Local	n	y	n	n	n	Oquna Sadunishvili	
IJO-025	Oni	Georgia	42.5862531	43.419342	866.65 m	6	traditional	Local	n	y	n	n	n	Paata Jafaridze	
IJO-026	Oni	Georgia	42.5784166	43.4394264	805.70 m	6	traditional	Local	n	y	n	n	n	Akaki Jafaridze	
IJO-027	Oni	Georgia	42.5996235	43.4625149	831.97 m	6	traditional	Local	n	y	n	n	n	Mamuka Togonidze	
IJO-028	Lentekhi	Georgia	42.789203	42.7302933	747.88 m	6	traditional	Local	n	y	n	n	n	Tamar Pureliani	
IJO-029	Lentekhi	Georgia	42.7906895	42.7108526	751.23 m	0	traditional	Local	n	y	n	n	n	David Pureliani	

IJO-030	Aspindza	Georgia	41.5685565	43.2504272	1098.01 m	7	traditional	Local	n	y	n	n	n	Lia Nadibaidze
IJO-031	Akhaltikhe	Georgia	41.6325859	42.9929352	1027.00 m	7	traditional	Local	y	y	n	n	n	E. Nadibaidze
IJO-032	Ambrolauri	Georgia	42.5149299	43.1361008	652.52 m	7	traditional	Local	n	y	n	n	n	Eka Abutidze
IJO-033	Gori (brotseti)	Georgia	42.1776147	44.0290833	824.19 m	7	traditional	Local	n	y	y	n	n	Giorgi Gviniashvili
IJO-034	Gori (shindisi)	Georgia	42.1362698	44.0002441	762.99 m	7	traditional	Local	n	y	n	n	n	Gocha Gviniashvili
IJO-035	Gori (Megvrekisi)	Georgia	42.1853106	43.9980984	833.84 m	7	traditional	Local	n	y	n	n	n	Amiran Maisuradze
IJO-036	tianeti (Verkhveli)	Georgia	42.1769786	44.9134827	1494.04 m	6	traditional	Local	n	y	n	n	n	Kakha Gorgiashvili
IJO-037	Tianeti	Georgia	42.1197193	44.9804306	1113.43 m	0	traditional	Local	n	y	n	n	n	Tornike Gogolauri
IJO-038	Tianeti (Qushxevi)	Georgia	42.2094099	44.9009514	1663.55 m	2	traditional	Local	n	y	n	n	n	Gocha Otarashvili
IJO-039	Khashuri	Georgia	41.9911907	43.6100578	694.25 m	4	traditional	Local	y	y	n	n	n	Aleko Lomidze
IJO-040	Tbilisi (Lisi)	Georgia	41.7579763	44.6827269	777.61 m	7	traditional	Local	n	y	n	n	n	Maia Gvritishvili
IJO-041	Bolnisi	Georgia	41.3877309	44.5100784	655.45 m	5	traditional	Local	n	y	y	n	n	Xvicha Guramishvili
IJO-042	bolnisi	Georgia	41.3797455	44.4324875	765.29 m	7	traditional	Local	n	y	n	n	n	David Jakeli
IJO-043	bolnisi	Georgia	41.3629987	44.384079	782.96 m	7	traditional	Local	n	y	n	n	n	Geronti Khucishvili
IJO-044	Tbilisi	Georgia	41.6729888	44.8035336	549.13 m	3	traditional	Local	y	y	n	y	n	Irakli Menteshashvili
IJO-045	Tbilisi	Georgia	41.7138532	44.9917603	633.20 m	0	traditional	Local	y	y	n	y	n	Giorgi Menteshashvili
IJO-046	Dusheti	Georgia	42.0369013	44.7555542	628.70 m	5	traditional	Local	n	y	n	n	n	Roman Tsiklauri
IJO-047	Kutaisi	Georgia	42.258305	42.7776718	257.05 m	7	traditional	Local	n	y	n	n	n	Joni Katamadze
IJO-048	Martvili (Jolevi)	Georgia	42.3749306	42.2526455	97.12 m	6	traditional	Local	n	y	n	n	n	Malhkaz Kakulia
IJO-049	Martvili	Georgia	42.5161067	42.3368454	265.15 m	5	traditional	Local	n	y	y	n	n	Shukuri



	(Salkhino)													Nachkebia	
IJO-050	Rachisubani (Lagodekhi)	Georgia	41.81441019	46.2985754	415	7	traditional	Local	n	y	y	n	n	Papuna Lobjanidze	
IJO-051	Kartubani (Lagodekhi)	Georgia	41.7932965	46.1321497	266	7	traditional	Local	n	y	y	n	n	Shalva Tsartsidze	
IJO-052	Matsimi (Lagodekhi)	Georgia	41.79831963	46.30411148	395	7	traditional	Local	n	y	y	n	n	Anri Sakhiaşvili	
IJO-053	Sakdari (Lentekhi)	Georgia	42.8414228	42.87852287	1022	7	traditional	Local	n	y	n	n	n	Zaqaria Bendeliani	
IJO-054	BaileTi (Ozurgeti)	Georgia	41.9780391	41.9674806	61	7	traditional	Local	n	y	n	n	n	Lali Chanqseliani	
IJO-055	Meleqeduri (Ozurgeti)	Georgia	41.9489145	42.0237808	110	7	traditional	Local	n	y	n	n	n	Otar Ghloni	
IJO-056	Vakijvari (Ozurgeti)	Georgia	41.9212497	42.1233174	290	7	traditional	Local	n	y	n	n	n	Iakob Urushadze	
IJO-057	Abi (Akhaltsikhe)	Georgia	41.62599721	43.00147533	1066	7	traditional	Local	n	y	y	n	n	Guram Zedgenidze	
IJO-058	Arali (Adigeni)	Georgia	41.6311679	42.8214806	1143	7	traditional	Local	n	y	n	n	n	Pavle Chilingarishvili	
IJO-059	Akhaltsikhe	Georgia	41.6434293	42.9934449	961	7	traditional	Local	n	y	n	n	n	Zura Chilingarishvili	
IJO-060	QiQineti (Adigeni)	Georgia	41.7027842	42.8962276	1145	7	traditional	Local	n	y	n	n	n	Zurab Chilingarishvili	
IJO-061	Sadakhlo (Marneuli)	Georgia	41.2403636	44.7861929	476	7	traditional	Local	n	y	n	n	n	Ioseb Guramishvili	
IJO-062	Nagomari (Ozurgeti)	Georgia	41.9991484	42.1073381	72	7	traditional	Local	n	y	y	n	n	Kakha Chkhaidze	
IJO-063	Likhauri (Ozurgeti)	Georgia	41.8753852	42.0070811	135	7	traditional	Local	n	y	n	n	n	Vakhtang Sikharulidze	
IJO-064	Laituri (Ozurgeti)	Georgia	41.9150071	41.9067358	71	7	traditional	Local	n	y	n	n	n	Nikoloz Khomeriki	