

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

---

Grant Recipient Details	
Your name	Alen Shakirov
Project title	The study of endemic fish species of the South-Eastern Kazakhstan
RSG reference	25320-1
Reporting period	September 2018 - August 2019
Amount of grant	£4,850
Your email address	<a href="mailto:alen_shakirov@mail.ru">alen_shakirov@mail.ru</a>
Date of this report	16.10.2019

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
<p>The overall goal of the project is to clarify the modern status of indigenous ichthyofauna in watercourses of the Lake Balkhash basin, identify key territories and habitats and determinate main threats. Definition of modern ranges of endemic fish, development of recommendations for the conservation of endangered fish species.</p>				<p>The diversity of fish in the Balkhash watershed water bodies had been investigated for the project period implementation from July 2018 until October 2019. In total, 69 sampling sites (instead of 48 planned) on 46 (instead of 29 planned) water bodies of the Balkhash basin have been investigated in 2018–2019. There are 37 fish species in the ichthyofauna of the Balkhash Basin found during the research, the vast majority of which are non-indigenous. 12 indigenous and 25 alien species of fishes have been found. The rare aboriginal species are common dace (<i>Leuciscus leuciscus</i>), plain stone loach (<i>Triplophysa labiata</i>), scaled osman (<i>Diptychus maculates</i>), Severtzov's stone loach (<i>Nemacheilus sewerzowii</i>), common minnow (<i>Phoxinus phoxinus</i>) and Seven River's minnow (<i>Phoxinus brachyurus</i>). The major essential habitats and modern ranges refined (map available), but due to quite huge area there still some watercourses uncovered.</p>
<p>Nonindigenous fish species, previously not enumerated as found in region, will be described and added to database. For all registered species, a data/photo base will be created.</p>				<p>During regular field visits to the waterbodies of the Balkhash basin of Almaty and Karagandy regions, it was observed that the distribution of alien species is increasing in the water bodies within and outside of Almaty city from year to year. Five species new for basin have been found by the project team in Almaty city and in the region, appeared as a result of introduction activities for recreational fishing. Our</p>

				statistics shows an upward trend of the alien species dissemination both in urban and rural area.
Identification of areas with increased, unjustified water intake, or illegal hydroengineering. Identification of the pollution sites				<p>The research shows that an immense tugay forests leads to the degradation of habitats (ephemeral waterbodies), which are highly important for the endemic fish species' environment, and, respectively mass death of juvenile and adult fish. We have noted that the most of intermittent rivers and creeks in lower sections is a consequence of high withdrawals of water (mostly illegal).</p> <p>All rivers and creeks on the territory of Almaty city polluted with household and municipal wastewaters, which leads to habitats destruction and to the loss of faunal communities. Pollution of waterbodies contaminate ground and surface waters, which not only worsening the habitats, but exposing the people population to environmentally related diseases.</p>
Creating of model aquariums for indigenous fish species of the Almaty region.				A biotope aquarium with endemic species to be created by the author and will be presented at international Biotope Aquarium Contest in 2020. In addition, there is a possibility of creating of indigenous aquarium in Almaty Zoo.
Creating of database				An extensive database (fish samples, pictures, photography, maps) was collected.
Publications				<p>Series of publications/reports on the field trips in social media and blogs (Facebook, fishing.kz) made for the whole period of the project implementation.</p> <p>An article for the CIS Collection of the Reports of Recipients of a Rufford Small Grant prepared (results of the research, autumn and winter 2018-2019).</p> <p>An article for scientific per-reviewing magazine is now preparing.</p>

				The calendar is currently under development.
--	--	--	--	--

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

During the field trips there were some problems with local authorities in Almaty region; they were not supportive enough. The other serious challenge was total restructuring of road networks within territory of two regions (Almaty and Karagandy region) in 2019, that led to frequent vehicle maintenance and spare parts ordering. As a result, we were experiencing loss of time and spent more financial resources for this item. The vehicle maintenance had been partly covered by the own costs of the project team members, or by reducing of some project costs/expenses.

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

Modern data on the current state of ichthyofauna and environmental situation of the river ecosystems of Almaty and Karagandy regions received. Modern natural ranges of indigenous fish species clarified, the major essential habitats and spawning grounds refined. An extensive database (fish samples, pictures, photography, maps) collected and the results will be available in media.

New alien species, previously not described in the Ili-Balkhash basin, added to the project database (five species).

Potential sites for the reproduction of rare, native species of animals, and the boundaries of future protected habitats detected; the main indigenous fish habitats situated in the north-eastern part of the Almaty region and in the south-eastern part of the East-Kazakhstan region.

All in all, this allows to continue further research work on the creation of specially protected areas on the investigated rivers.

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

People in rural and urban areas informed about a special status of endemic species; local authorities were involved into this research. Local authorities in Karagandy and Almaty regions were provided with some reports and additionally, a presentation on the Project results has been prepared.

Local fishermen communities were informed on the current situation of the local ichthyofauna, special status and threats of indigenous fish species, and main existing and potential problems for small waterbodies of the region.

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

We are certain that it is necessary to continue the research for new data acquisition.

From year to year the situation is worsening, and future work is needed to raise more awareness among public concerned, NGOs, local authorities and local communities, as well as to improve the ecological status of small water bodies.

Despite of multiple field trips, there are a number of remoted waterbodies/habitats still not researched. We would like to continue fieldwork in future, to cover the region for obtaining quality data and refreshing results of first year.

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

The results of this project (especially most evident, effective and useful), both in scientific and conservation educational local communities' sides will be published in the scientific articles and in the popular environmental magazines in the Republic of Kazakhstan, including electronic newsletters and websites. A scientific article published and one more is in edition.

In addition, in future we would like to develop the Atlas of the fish of Almaty region.

**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 whole duration of project activity planned for 12 months, and the budget was used from July 2018 to October 2019. However, the final report is presented later than was planned on the reason of the delaying of final field trip in September 2019 due to vehicle maintenance and reconstruction of most of the roads in the East of Kazakhstan.

**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
Stipend for project leader/ principal investigator: 30£/month x 1-person x 12 month = 360 £	360	360		The financial resources under this item was completely used
Stipend for project team members: 30£/month x 2 persons x 4 month = 240 £	240	240		The financial resources under this item was completely used
Travel allowance/Meals, £4,5/1 day*3 persons*120 days = 360 days	1850	1622	-228	It was used more financial resources under this item on the reason described above (more

				field trips, longer period of expeditions, etc.)
Gasoline 0,35£ for 1 litre*20 km*10000 km litres/100	850	770	- 80	It was used more resources under this item on the reason described above (roads reconstruction, longer period of expeditions, etc.)
Native Ultimate FX 15 Tandem kayak and shipping costs	900	1450	+550	A cheaper boat was purchased in Almaty, Kazakhstan, not in Russia as planned before; due to this fact some money amount saved
Expenses for edition of flip desk calendar	200	200		The financial resources under this item not used at the moment
Unexpected: vehicle maintenance	500		-500	Partly covered by the project team members
<b>Total</b>	<b>4850</b>	<b>4642</b>	<b>-208</b>	The financial resources under this item will be completely used. The rest of the sum=208 £ will be used for publishing of calendar.

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

Monitoring of poaching and seeking a permanent solution to the problem of predacious and illegal fishing practices on small waterbodies (such as electrofishing), which is typical for rural area in Kazakhstan. Regular monitoring of waterbodies, especially ponds for commercial angling, not only for seeking of habitats of indigenous fish species, but also for study of the distribution of new alien species. Regular monitoring of assessment of the rivers is indispensable within and around cities and in the rural area, due to numerous cases of dumping wastewaters into watercourses.

Besides, developing of the first atlas of the fish of Almaty region is highly desirable to convey modern environmental and ichthyological data to public, since the vast proportion of the population is completely ignorant on aboriginal ichthyofauna and an importance of its conservation.

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

The Rufford Foundation logo was used as sponsor on field team vehicle (sticker).

The Rufford Foundation has also been acknowledged in presentations and in articles; mentioned in internet publications on project implementation (Facebook, fishing.kz etc.).

The Rufford Foundation (with input logo) will be also mentioned as a funder of the Project in the articles at "Wind of wandering" magazine'.

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

**Alen Shakirov** – ichthyology, sampling, biological analysis; leading, planning, coordination, writing, reporting on the project. Driving, navigation.

**Alexey Pavlenko** – ichthyology, hydrobiology; sampling, biological analysis and laboratory tests. Field cook. Driving.

**Feodor Karpov** – zoology, extensive knowledge in botany; author and photographer.

**Eugene Fyodorov** - ecology; experienced photography and filmmaking skills. Field and office work assistance.

**12. Any other comments?**

As we expected, there are some delayed results of this project, related to research activities, analysis of the received results, publications. We plan to continue these activities and will stay in touch and inform you about new results and achievements (articles, calendar publishing, etc). The article in Russian dedicated to results of the research for the Collection of the Reports of Recipients of a Rufford Small Grant (CIS edition), published in spring 2019, is attached to this report additionally.