Final Evaluation Report

Your Details	
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Project Title	Rediscovering the lost San Juan Andean Water Frog: Efforts to find it and protect it.
Application ID	23043-1
Grant Amount	£5000
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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
Distributional range of the species updated				We could not find the species, which remains lost. Through the citizen science approach, we have received few records but neither correspond to the objective species. We also carried out active search in the field. The result of this active search was not the expected, since we did not find the species. We search in type locality and streams near that locality but unfortunately, we didn't see the frog. However, we obtain important data from streams registered, such as microhabitat variables, data that will be useful once we find the species.
Frequency and severity of threats affecting this species better known				We now can confirm that exotic fishes do not occur neither in the type locality nor the streams near the area. However, local people have introduced the rainbow trout (*Oncorhynchus mykiss*) and a mojarra (*Psalidodon* sp.) in an artificial pond located 10 km from the type locality. This artificial pond is located in the river basin of Rio Gualcamayo but is isolated from the headwaters of the river since the river infiltrates. We have taken samples of *Batrachochytrium dendrobatidis* (Bd) from a few *Rhinella spinulosa* individuals, species that also occur in the study area. We had some logistical problems when analysing the samples, so the results of the presence or absence of Bd are not ready yet. With these results we could improve our knowledge on this potential threats.
Conservation status of the species updated at the IUCN Red List				This objective was not achieved since we partially achieved the previous objectives. We could update the IUCN Red List status of the species once we

				finish assessing the threats mentioned above. In 2019 there was an update of the conservation status of the species at IUCN Red List, however this new update did not fill the gaps in the knowledge of threats. Also, we were invited to the Conservation Needs Assessments Workshop for Threatened and Endemic Amphibians in the Argentine Republic, organized by the Amphibian Ark, ASG Argentina – IUCN, Ecoparque CABA, INECOA – CONICET, and Herpetological section from the UNLP. In this workshop we could use the information obtained by this project to update the knowledge and assess the species conservation needs.
A significant number of people know about this species problematic and participate in conservation activities				We reached a significant number of local people through the awareness raising campaign (workshops, social networks, scientific congress, newspaper, scientific divulgation magazine for kids, and educative material). We received through the citizen science approach a few potential records of the species. While none of these records were actually from the objective species, some of them were from other provinces. This indicated that the divulgation campaign was successful, exceeding our expectations.

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

Besides the problems arising as a result of the pandemic situation, we have two big difficulties to face: 1) the very difficult access to the study site; and 2) the few records obtained by citizen science approach.

The study site has a very difficult access not only due to the roads that have no maintenance, but also because they are impossible to transit during summer (rainy season) due to the flooding of the rivers. Thanks to the local people support, we achieved that the government made some maintenance in the roads to facilitate our access, however it was still difficult to access.

Through the citizen science approach, we received fewer records from local community than we expected. We believe that this is due to two main reasons: 1) the difficulty of access to the area and the remoteness of the site respect to towns

(in the area lives only a few families), and 2) people's lack of knowledge about the existence of the species and of amphibians in general. Lack of knowledge that is evidenced in, for example, the absence of common names of amphibians in the area.

The first reason mentioned, difficulty of access to the site, means that very few people know or have ever visited the area, limiting our possibility to obtain records from the study site. We addressed this difficulty by conducting oral interviews with the local people that inhabit the area, and here is where the second reason appears, since only a few inhabitants of the study site know about the existence of the species. So, in addition of being few people who inhabits the area, of those people there are very few who knew the frog. We obtain some records of the historical presence of the frog, but there were lesser than we expected. These records of historical presence were visited by our team, and we made an active search, but without success. We have also established contacts with local tour guides, groups of outdoor activities (trekking, motorcycling, etc.), employees of mining companies, park rangers, among others, who are potentially the main visitors to the area.

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

Overall, the project schedules were not fully followed and many of the objectives still not fully achieved, as stated above. However, we could highlight some outcomes from the project:

First, the great participation and involvement of the local people in the project. They show us very kind and collaborative in every need, and also with a great enthusiasm in participate in the project activities. Also, the resource management authorities support us and declared the project of environmental interest in the province offering logistic support.

Second, we achieved a great reach in the diffusion of the project activities, which was reflected by the arrival of potential records of the species from other provinces both to project mail and social networks, by the invitation to environmental activities (FESTECA), the invitation to publish in a science divulgation journal for kids, radio diffusion, journal notes, among others. And of course, the invitation to participate in the Conservation Needs Assessments Workshop for Threatened and Endemic Amphibians in the Argentine Republic.

Third, we could now ensure that there are no exotic fishes threatening the frog in the type locality and in the adjacent area. However, this problem has to be taken into account in the future since local people are introducing exotic fishes near the type locality, so this could be a potential threat in the future. Also, it is essential to inform local people, management authorities, etc., that it is a key factor to the species survival that the stream in the area remains free from exotic fishes like salmonids and other potential predators.

Finally, we did not find the frog neither in the type locality nor in adjacent areas, but we also cannot assure that the species is absent. Therefore, we will not give up and continue with the search. It should be noted that the people who lives in the study area, and especially those who knows the frog, have offered their help for future campaigns, arising our expectations and encouraging us to continue.

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

The people who inhabit the area near the type locality were very participative and willing to collaborate in everything necessary regarding the project. Thanks to the request of the local community, we were able to get the government to maintain the roads used to access the project area, roads that had been in disuse for decades according to the information of the residents. They also collaborated by answering oral interviews indicating places of historical presence of the frog that were later surveyed through active search, unfortunately without success.

On the other hand, we also had good acceptance by the authorities, who declared the initiative of environmental interest, committing to support the project. In addition, we were invited by the environmental authorities to participate in an environmental fair held in the protected area closest to the project area. Both the managers and the park rangers of the protected area committed themselves to help and logistical support with the project. Several environmental schools participated in the fair with which we were able to establish a link for future activities, local entrepreneurs also participated, who were also very participatory with the project. Finally, the fair was attended by district authorities who we were lucky to meet and talk about the activities planned and carried out and ask for their support.

The inhabitants that live near the type locality of the species benefited from the maintenance of the roads. In addition, due to the close contact with them, we were able to better understand their needs, and their perceptions and attitudes towards nature. This type of interaction with local communities' results in a mutually rewarding experience as we witness a growing appreciation for protection of the study area and its wildlife.

5. Are there any plans to continue this work?

Absolutely. Through the obtaining of the Rufford Small Grant we create the PRANA (Proyecto Rana Andina Austral) initiative, which objective is to establish a long-term monitoring plan and conservation actions for the objective species. This initiative was declared of environmental interest by government authorities. Conservation of the San Juan Andean Water Frog requires for ongoing work, parts of combined and interdisciplinary efforts. Among the future activities we could highlight the continuing search of the species, maintaining both approaches (citizen science and active search); threats assessment; diffusion activities; and conservation actions.

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

Project results will be (and are being) shared through community by social networks, since nowadays they are the mainly tool to reach people. We have a Facebook (https://www.facebook.com/proyectoranaandinaaustral)and an Instagram (https://www.instagram.com/proyectoranaandinaaustral) pages. We will programme meetings with environmental authorities and with local people to report the results of the project. We have shared advances of the project in a National Scientific Meeting, and we plan to do it again. Finally, we plan to publish in scientific journals some of the results obtained through this project.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

This grant was used over the course of 4 years, rather than one as originally proposed. This was due to the unexpected challenges described below, such as the quarantine due to pandemic situation, that made us to stop activities for most than a year, and additionally, due to other difficulties such as the rainy summers that destroyed the roads and didn't allow us to access to the study area.

8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Design and printing of posters	700		-700	The University (UNSJ) afford the costs of design and printing posters.
Design and printing of fliers	280	168	-112	The University (UNSJ) afford costs of design and printing, The Rufford Grant was used only for printing.
PCR analysis	150		-150	We have taken the samples and the analysis are being made, but we don't have yet the budget from this analysis.
Bd swab kit	11	69	+58	We contact a laboratory that suggest us another type of swab kit, more expensive but better. Also, we purchase a kit for a hundred samples (bigger than

				the one we budgeted)
Water analysis	250		-250	We don't have water samples yet, so we didn't spend money on this item yet.
Nitrile disposable gloves	25	62	+37	We bought twice the number of gloves budgeted.
Digital pH meter	18	128	+110	We budgeted a bad quality ph. meter, so we bought a better one that also includes some calibration solutions.
Dissolved Oxygen Meter	242	667	+425	We bought an Oximeter Milwaukee suggested by a colleague.
Lantern 19 LED	112	213	+101	We bought six (6) lanterns instead of four (4) as we calculated, to have a spare pair in field trips.
Pesola scales	350	135	-215	We bought two (2) pesola scales instead of the kit that we budgeted, because in our working laboratory we already have some pesola scales offered in the kit.
GPS	287		-287	We found that it could be more useful to spend the money in other items and use the apps for cell phones as GPS.
Fishing net	11		-11	After the exploratory fieldtrip we realize that the streams were not too deep and wide, so there is no need of using fishing nets.
Wader	98	67	-31	We bought two (2) waders, that we get for a cheaper cost than the budgeted.
Thermocouple TPK	43	77	+34	We budgeted only one (1) thermocouple because in our working laboratory we had a few, but in the middle of the project some thermocouples stop working correctly and we decided to buy one (1) more.
Digital thermometer TES	315		-315	We used digital thermometers from the University (UNSJ), so we spend this money in other items like buying the

				thermocouples.
Calliper	25	70	+45	We bought an entirely metallic one instead of plastic one, so it was more expensive.
Food	1035	1324	+289	We thought that it will be more useful to expend money in fieldtrips to have more chances of finding the species, instead of buy some equipment. Also, it is important to noticed that prices of food in Argentina when the budget was made were a lot cheaper than now.
Fuel	1048	1977	+929	We thought that it will be more useful to expend money in fieldtrips to have more chances of finding the species, instead of buy some equipment. Also, it is important to noticed that prices of fuel when the budget was made were more than three times lower than now.
Sub-Total	**5000**	**4957**	**-43**	
Falcon T Tubes		44	+44	We bought these tubes to take samples for water analysis.
Shipping costs		14	+14	We didn't realize that in some cases we will have to afford shipping costs for some products.
Office supplies		15	+15	We bought some office supplies like paper, crayons, pens, etc., used in educational activities.
Cooler (for samples)		20	+20	We have to buy some coolers to preserve the chytridiomycosis samples during the fieldwork.
Camping equipment		368	+368	To ensure the safety of the team in fieldwork activities we have to buy some equipment.
Medical supplies		190	+190	To ensure the safety of the team in fieldwork activities we have to buy some medical supplies.

Dissolved oxygen meter calibration solution		190	+190	We had to buy more calibration solution because we ran out of it.
pH meter calibration solution		31	+31	We accidentally lost some calibration solution, and we ran out of some other solution, so we have to bought more.
Endoscopic camera		52	+52	Since the habitat of the species is a very rocky stream, and due to the possibility that the species uses the crevices formed by the rocks, we decided to buy an endoscopic camera that can be used with the cell phone to explore with that camera the crevices. This method allows us to search in crevices without removing the rocks that can be particularly important habitats for the species.
External disc 1 Tb		203	+203	We bought an external disc to store all the images, videos, and documents of the project.
Total	**5000**	**6085**	**+1085**	**During the course of the project, we get funding for another foundation too, so extra costs were covered by this new foundation.**

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

The most important step is to keep on searching for the species. This search must include new localities, as well as the localities already searched. Another big step to do is the assess for other potential threats like overgrazing and habitat loss and carry out conservation actions to mitigate them. Also, it is important to keep on the awareness campaign as well as educative activities.

10. 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, we used the foundation logo in every material produced by the project, both digital and printed. Additionally, we mentioned the foundation in all talks and activities carried out.

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

Tomás Agustín Martínez – Leader. Carried out the delegation of tasks. Participated in every decision and activity of the project. Elaborated and wrote all the reports. Presented the project in National Congress.

Juan Carlos Acosta – Advisor. He participated in a field trip and gave us advise in every project activity.

Graciela Blanco – Advisor. She participated in a field trip and gave us advise in every project activity.

Melina Jesús Rodriguez Muñoz – Team member. She analysed tadpoles collected on field trips for species identification. She participated in every fieldwork task and educational activities. She was in charge of the project social networks and elaboration of digital material for diffusion.

Gustavo Alfredo Fava – Team member. He was in charge of every mapping tasks. He also participated in fieldworks tasks and educational activities.

Ana Elena Victorica Erostarbe – Team member. She was in charge of logistic tasks, such as permits obtaining, purchases and equipment maintenance. She also participated in educational activities and elaboration of digital material for diffusion.

Rodrigo Alfredo Nieva Cocilio – Team member. He participated in fieldwork tasks and in the elaboration of digital material. He was in charge of coordinating and carrying out educational activities.

Rodrigo Gómez Alés – Team member. He was in charge of field trips logistics. He participated in fieldwork tasks and educational activities.

Rodrigo Acosta – Team member. He participated in fieldworks tasks and educational activities.

Franco Valdez – Team member. He participated in fieldworks tasks and educational activities.

Ruben Fernandez – Team member. He participated in fieldworks tasks and educational activities.

Lucas Corrales – Team member. He participated in fieldworks tasks and educational activities.

12. Any other comments?

We are enormously grateful for the support provided by The Rufford Foundation for the realisation of this project. The search for a lost species like the San Juan Andean

Water Frog is a project that requires a lot of logistical and economic effort, and that could not have been carried out without Rufford Small Grant support. This project is the beginning of an initiative that is established in the long term for the conservation of the species, so it lays the foundations for future work.

Following we include a series of images taken during the project activities. Please feel free to use these images however you like, and if you need original high-resolution files for anything, just let me know and I will send them individually.

Protocol for taking samples for Batrachochytrium dendrobatidis, made on Rhinella spinulosa individuals.