

Final Project Evaluation Report

Your Details	
Full Name	Oscar Barroso Vitorino Júnior
Project Title	Pirapitinga Project - conservation and environmental education allied for maintenance of headwaters from the Brazilian Cerrado
Application ID	23595-2
Grant Amount	£ 4770
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Date of this Report	26/12/2018

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
Biological material analysis				We have finished the analysis of the fishes sampled in 2017, reproductive and stomach contents of the fishes, and currently we are working on the analysis of the biological material sampled during the last year.
Field sampling				We undertook a sampling expedition that could not be performed in the scheduled time of the year due to several problems including a strike of the truck drivers in Brazil that closed the roads of the country. An expedition was performed later in the proposed area and sampling points and we have resources for another sampling activity that will be performed in the end of the rainy season.
Awareness campaigns				We had better results than we expected with the World Fish Migration day event in the Tocantins state as awareness campaigns are scarce and many people from cities of the region participated of our activities.

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

We found the access to rural properties of the Tocantins state more complicated than the ones we sampled previously in the state of Goiás mainly because most of them have no workers during most of the time of the year and due to its remoteness and lack of safety some of the rural properties in which we planned to work were not available. This difficulty was tackled through gathering contacts of rural properties on the environmental agency of the Tocantins state.

Lack of access to the public schools was also observed once only one of the three awareness activities programmed to happen in this environments occurred and this was due to the low interest of the school boards on engaging in environmental related activities. We expect this interest to raise as our activities are shown in the

social media and we have each time more people interested in participating of the project's events. We found that the best way to tackle this difficulty was to show people how interesting it could be to talk about the aquatic environments and fish species.

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

- First register of the endangered fish species *Brycon nattereri* in the state of Tocantins.
- Description of a new fish species and sampling of several undescribed ones, as well as others threatened with extinction or with low biological information.
- Raise awareness for the importance of the conservation of aquatic environments and the species that live in them, especially through the World Fish Migration Day.

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

In this year, we have plenty of participation of the local community mainly through the realisation of the World Fish Migration Day event on the environmental agency of the Tocantins state in which we gathered more than 200 people for an exposition of scientific collection fishes of endangered and rare fish species as well as living specimens in aquariums of some of the most important species used as fisheries resources. Also, we had two seminars with professors Dr Fernando Pelicice and Dr Carlos Agostinho from the Federal University of Tocantins in which they presented the results of more than 20 years of environmental research in the state and the concerning situation of the threatened fish species.

5. Are there any plans to continue this work?

The project will continue as most of the sampled biological material is still being analysed. Also, we are currently sampling the fishes of protected areas in the Tocantins state in which we found several threatened and/or rare fish species. The work will continue as we plan to perform at least one more sampling expedition and several manuscripts on the biological information of the sampled species are being prepared.

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

Manuscripts with the lists of the sampled species in the states of Goiás and Tocantins, the expansion of the distribution range of *Brycon nattereri* and *Moenkhausia goya* and the ecological preferences of the species are currently being prepared. Also, results are being shared with others through the project's social media. Our event of the World Fish Migration Day was also shown in the media of the environmental

agency of the Tocantins state as well as other media that discuss rural and general news as follows:

<https://naturatins.to.gov.br/noticia/2018/4/19/dia-mundial-de-migracao-de-peixes-sera-discutido-no-naturatins-nesta-sexta/>

<https://naturatins.to.gov.br/noticia/2018/4/20/reducao-de-pescados-e-construcao-de-barragens-nos-rios-tocantinenses-sao-temas-no-dia-mundial-da-migracao-de-peixes/>

<https://piscishoweavisuleite.com.br/2018/04/19/piracema-tocantins-promove-dia-mundial-de-migracao-de-peixes/>

<https://conexaoto.com.br/2018/04/22/naturatins-discute-a-reducao-de-peixes-nos-rios-tocantinenses-e-a-construcao-de-barragens>

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

The resources that were aimed for the awareness campaign were used in the programmed schedule of the project. We had some delay on the use of the resources of the sampling expeditions mainly due to the difficulties related to field activities explained in the item 2. There are still resources available for one more sampling activity and a few more months of laboratory material.

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
Website maintenance	200	120	80	The resources available should be enough for another year of the subscription of the service.
Camping equipment	100		100	No additional camping equipment was necessary.
Feeding costs	560	710	-150	Higher than expected due to higher costs in some touristic points close to the Jalapão state park.

Hosting fees	960	260	700	Lower due to the use of camping sites rather than hosting.
Weigh balance	1200	740	460	Costs of shipping the balance were no longer necessary once laboratory material was sampled in the parana state where the proponent constantly travels for his PhD studies.
Laboratory material	300	150	150	We could repurpose most of the material used in the last year such as plastic bags for fish storage as well as plates and other items.
Office material	50	30	20	
Alcohol 70%	150	250	-100	A larger volume of fish individuals was sampled than expected
Formalin	50	200	-150	A larger volume of fish individuals was sampled than expected
Vehicle maintenance	350	300	50	
Fuel	450	620	-170	
Printed material	400	400		
Aquarium material		300	-300	Exposition of aquarium and scientific specimens of fishes was made during the Fish Migration Day.
Total	4770	4080	690	

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

We plan to continue our sampling and analysis procedures especially due to the large amount of fishes sampled in the last 2 years. Also, we have registered for the first time the endangered fish species *Brycon nattereri* in the state of Tocantins at the municipality of Ponte Alta do Bom Jesus in a low order stream at the boundary of the Tocantins and Bahia states, Tocantins River and São Francisco river basins (.kmz attached). After confirming this identification, we are currently working on the other sampled species so we'll have a more extensive list of species in which the first important outcome is the extension of this species distribution range, as well as for *Moenkhausia goya*, recently described with the support of the Rufford Foundation.

We think to the future it could be important to evaluate the extension and abundance in which these species occur in the Tocantins state for conservation measures for the scientific knowledge it represents as well as the importance of this information for conservation planning and decision making.

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?

All the printed material produced and media in which the project activities have been cited during this period have a mention of the fundamental support of the Rufford Foundation (see item 6). As for the one already produced, all the future manuscripts that use this biological material will also contain at least an acknowledgment to this support. We think the naming of a species with a homage to the Rufford Foundation should be possible for *Knodus* sp. 2 thanks to the other participant researchers (namely Gabriel Deprá and Katiane Ferreira).

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

Marco Aurélio Alves Santos - Master's degree student – Federal University of Tocantins – field sampling and laboratory analysis

Eder Jofre Alves Wanzeler - Biologist at Environmental Institute of Tocantins (NATURATINS) – field sampling

Samara Bezerra Almeida – Biologist at Environmental Institute of Tocantins (NATURATINS) – World Fish Migration Day organization

Kelly Amaral - Biologist at Environmental Institute of Tocantins (NATURATINS) – World Fish Migration Day organization

Lívia Helena Tonella – Doctoral student at State University of Maringá UEM – laboratory analysis

Gabriel Deprá - Doctoral student at State University of Maringá UEM – laboratory analysis

12. Any other comments?

It is very important to us to use every opportunity to acknowledge all the support the Rufford Foundation has been given to our project, once it is fundamental to the execution of most of what the project has been realising in the last years. We plan to keep up reporting to the Rufford Foundation once new outcomes of the project are to come, as several manuscripts are currently being prepared.



Retroculus lapidifer is often sampled in couples due to its parental care



Retroculus lapidifer

