

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details

Your name	Tawanda Tinago
Project title	Incorporating genetic data into conservation assessments for <i>Doratogonus</i> Attems 1914 species (Diplopoda, Spirostreptida, Spirostreptidae)
RSG reference	18265-1
Reporting period	
Amount of grant	£4991
Your email address	tinagotawanda@gmail.com
Date of this report	14/5/2018

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
<i>Doratogonus</i> specimen sampling				<i>Doratogonus</i> specimen collection was achieved in 36 of the 40 targeted sites. An average of 10 specimens were collected per site. There were no sightings of <i>Doratogonus</i> species in the four outstanding sites despite multiple visits.
Provide genetic tools such as genetic markers which will be used for phylogenetic population genetic analysis of <i>Doratogonus</i> species				Due to the large number of the sampling sites, a decision was taken to sample all sites prior to conducting any laboratory work.

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

The greatest major challenge was obtaining specimens. Sampling efforts were hampered by erratic rainfall patterns due to drought. Given that millipede surface activity is triggered by rainfall this posed a challenge to our sampling effort. Given that our project hinged on our success in obtaining specimens from 40 sampling sites, we decided to concentrate all our efforts into sampling. We engaged our local contacts to assist us with expediting specimen collection. Most of the local contacts were tertiary education students

This meant that the laboratory work had to take a step back. Now that we have achieved 90% of sampling we can now focus on the molecular work. We may have to source additional funding for the DNA sequencing because we diverted some of the funds meant for DNA sequencing to transport for sample collection.

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

We managed obtain *Doratogonus* specimens from 36 out of the target 40 sites. We managed to obtain a minimum of 10 specimens from each of the 36 sites.

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

Local communities (in particular local students) were involved in the specimen collection. They also learnt of the role that understudied macroinvertebrates such as

millipedes play within our Southern African ecosystems (nutrient cycling). They also learnt to identify millipedes (taxonomic skills).

5. Are there any plans to continue this work?

This project is still on going given that some of the objectives have not been realised. Furthermore, this project forms the core of my PhD research. Hence the work will be continued.

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

- Proposal of the work has been presented at Faculty of Agriculture & Natural Sciences, Seminar. University of Mpumalanga, Mbombela South Africa 26/01/ 2017 and Combined Congress of the Entomological and Zoological Societies of Southern Africa. CSIR ICC, Pretoria, South Africa. 3/07/ 2017.
- Once the project is completed the results will be presented in my PhD thesis. Furthermore, the work will be published in peer reviewed journals.

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 project was expected to run from November 2015 to March 2018. Due to challenges in obtaining specimens the molecular laboratory work is yet to be completed.

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
Transport (University vehicle hire rate of £0.2083/km x 10 000 km)	2083	3344	-1261	We had to hire a local private 4x4 truck at £44/ day for 76 days.
Camping gear (tent, sleeping bags, table and chairs)	313	313	0	
100% ethanol (£0.62/litre x 50)	31	31	0	
Plastic jars (£0.21 x 400)	84	84	0	
Stationery (pens and markers)	8	8	0	
DNA extraction kits (£276 each x2)	552	552	0	
DNA sequencing (£4.80 per sample)	1920	0	1920	DNA sequencing is yet to be done.
Total	4991	4332	659	

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

- To ensure that the molecular laboratory work of this project is completed successfully. We may need to source additional funding to achieve molecular laboratory work (DNA sequencing).
- Given that millipedes are understudied another important next step would be to extend the research to other Southern African countries such as Zimbabwe, Zambia, Botswana, Mozambique and Malawi. This can be achieved through collaborations with local researchers.

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. It received publicity at the following events:

1. Faculty of Agriculture & Natural Sciences, Seminar. University of Mpumalanga, Mbombela South Africa 26/01/ 2017
2. Combined Congress of the Entomological and Zoological Societies of Southern Africa. CSIR ICC, Pretoria, South Africa. 3/07/ 2017

11. Any other comments?

I would like to thank RF for this grant because without this grant I would not have been able to begin my PhD studies. I would like to thank RF for their patience and understanding.



