

## 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	Vuyisile Precious Moyo
Project title	Conservation Assessment and action plan for a single site endemic and endangered Orchid, the Aeranthes Africana
RSG reference	21092-1
Reporting period	March 2017-March 2018
Amount of grant	£4815
Your email address	vmoyo972@gmail.com
Date of this report	09 April 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
Estimating population sizes, Locating and mapping of wild populations				We had problems with finding and establishing road networks. More so, there was drudgery, climbing up and down the hills over 5,000 feet given that some places do not even have footpaths as the <i>Aeranthus africana</i> orchid is found in the montane forest and mist belt of the Vumba Mountains, in the valley on the slopes. Access was therefore a serious challenge.
Assess the vulnerability of the species to harvest				Climate changes seem to be the greatest threats to the remaining populations. The species under study is very sensitive to climatic changes hence increasing temperature may be affecting breeding patterns.
Estimating the extent of occurrence and area of occupancy for the <i>Aeranthus Africana</i> species.				This was difficult since the this orchid has been poorly studied and little is known about its ecology, its life cycle, species of phorophytes with which it is associated, the real status of its population/s and the actual territorial area occupied by the taxon. time permitted by the funding was helpful but certainly not enough to an exhaustive study to completely achieve this objective
Conduct a market study to assess the volume and diversity of wild collected epiphytes. To develop appropriate ex situ conservation programs for the species.				The planned activities for trying to map illegal trade in orchids have been partially achieved for the reporting period. However, to achieve the objective, there is a need for orchid collection and establishment of ex situ collection storage at the National Herbarium and Botanical Garden of Zimbabwe.

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

Major setback was that of extreme weather changes. The Vumba Mountains are a place of extreme weather changes, i.e. high rainfall, extreme mists and extreme high temperatures. These extreme weather changes especially mist affected field surveys. We had to work hard to redistribute the funding we had to make sure we could continue the work, but we were successful.

There were also problems in road communication, climbing up and down the hills over 5,000 feet. As explained the above, due to road communication and also due to the very sudden changes in the weather we had not completed surveying the place. This orchid has been poorly studied and little is known about its ecology, its life cycle, species of phorophytes (trees and shrubs where the species grow as epiphyte) with which it is associated, the real status of its population/s and the actual territorial area occupied by the taxon. We realised at that time that an extra field season would be necessary to gather data on the biological traits of the orchid species we are working with so we had to work hard to redistribute the funding we had to make sure we could continue the work, but we were successful.

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

- We established the species of phorophytes with which *Aeranthes africana* is associated.
- Updated conservation assessment information which is going to inform relevant authorities with pragmatic conservation and propagation interventions recommendations.
- This survey trip help to learn ecosystem of the very places and we were able to record the rare species which are being planted naturally and propagation methods developed for on farm orchid planting.

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

None

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

Most definitely. We have plans to continue with this research. The reported project has managed to accomplish some of the planned activities. However, to fully achieve the objectives and other components, the project needs to continue. This is important to generate enough data for managing the orchids in the Vumba Mountains, to ensure orchid conservation ex situ by way of undertaking a restoration programme. Sample plots need to be successfully established in the Vumba Mountains and baseline line data on the sample plots to be continuously generated for future orchid monitoring and management interventions in situ and ex situ.

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

I am willing to share my research and experiences with other conservation organisations who are interested in orchid conservation and research. We will share the results of this study with independent growers and governmental agencies working on conservation of orchid issues in the country. We seek to publish the results of this project in a peer-reviewed publication that will help to shed more light on the conservation of epiphytic orchid species that are being overharvested from the wild. We also look forward to present the findings locally on the next RIO SET International Conference that will be taking place in Masvingo, Zimbabwe in 2018. In future, we intend to make our findings available in form of brochures, posters, technical manuals and information booklets that will be shared with relevant conservation stakeholders. The collaborating partners will be requested to avail the same publicity materials in their institutional libraries. We will also pursue the opportunity to publicise our findings through local newspaper and television. All these avenues will increase awareness on wild orchid and forest conservation.

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

We received the RSG funds March 2017 and immediately started the implementation of the activities. In March, 2018 we had successfully implemented quite a number of the project activities according to the work plan.

**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
Travel 4800 km @0.40 km	1920	2070	+150	More time was needed to compensate the time we lost to when the weather was not permitting field surveys.
Communication	70	70	0	Funds were used as budgeted
Scenario Planning Workshops	500	0	-500	Funds were allocated to other activities. The main thrust of this activity was replaced with extensive consultations that formed the basis of our conservation assessment conclusions and end of project recommendations.
Refreshments for local field	300	300	0	These were allocated as

guides				budgeted
Accommodation @ 15/night low cost lodge	1350	1650	+300	10 more days were increased because changing weather patterns affected field work. Survey trips were extended in mountainous region.
Food for Researchers	675	725	+50	More funds were needed for food as we increased the number of days in the field. Survey trips were extended in mountainous region.
	4815	4815	500	The money budgeted for scenario planning purposes was split to cover fuel, accommodation and food expenses arising from increased fieldwork days.

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

- Permanent sample plots established in the Vumba Mountains and baseline line data on the sample plots generated for future orchid monitoring and management interventions.
- Implement actual in situ conservation in the Vumba Mountains.
- Embark on the ex situ conservation by collecting the orchids and conserve them at the National Gene Bank in Harare.
- Establish trials for the orchid domestication at a local herbarium and botanical garden
- It is important to continuously monitor the progress of the wild orchid breeding and flowering processes. This will ensure that breeding or dispersal challenges encountered by the *Aeranthus africana* are addressed in time.
- There is need to initiate, sustain continuous collaboration and partnership among relevant conservation players to support the conservation of wild orchids and forest biodiversity. Increased stakeholder participation in conservation will boost the protection of forests and its biodiversity.

### 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?

Yes. In all our meetings with the respondents in key informant interviews the Rufford Foundation logo was well displayed. The research team explained that the project was supported by the Rufford Foundation small grant for nature conservation.

Further we will use the RF logo and give acknowledgement on any future publications resulting from this work, specifically in the following:

1. All reports and publications on the conservation status of orchids in the Vumba Mountains.

2. Brochures, posters, technical manuals and information booklets.

3. All the equipment purchased with funds from the RSG will have stickers with RF logo on them.

4. All nature trails, greenhouses and propagation trials equipment will have posters acknowledging support from Rufford Foundation.

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

**Vuyisile Moyo:** Team leader during the field survey.

**Tarisai Nyamucherera:** Plant identification during field surveys.

**Johannes Bhanye:** Plant identification and field surveys.

**12. Any other comments?**

We would like to thank the Rufford Small Grants Programme for supporting us financially and letting us to contribute to the practical conservation of an endangered and endemic native orchid species in Zimbabwe through applied research. We would like to earnestly thank the RSG for their kind support. The research team is looking forward for further financial support from the Rufford Foundation for a propagation conservation programme.

**Pictures from the project**

Growers and Nurseries Consultations











Consultations as we were trying to map illegal networks of harvesters and propagators

