Final Project Evaluation Report

Your Details	
Full Name	Jiba Magwaza
Project Title	Pickersgill's Reed Frog population monitoring and surveillance in response to conservation management interventions at four coastal wetlands.
Application ID	18899-1
Grant Amount	£4250
Email Address	jibam@ewt.org.za
Date of this Report	04 December 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
1) Obtain baseline population estimates for Pickersgill's Reed Frog at five sites (Adams Mission, Widenham, Mt Moreland's, Isipingo and Simbithi Eco-Estate) within the eThekwini Municipal Area. (Partially achieved)				Pickersgill's reed frog (*Hyperolius pickersgilli*) is a small frog, known only from coastal wetland habitat in the KwaZulu-Natal Province of South Africa and has been prioritised for conservation action. We used acoustic recorders at three sites (Mount Moreland, Widenham and Simbithi) and conducted manual call surveys at two sites (Adam's Mission and Isipingo) to gauge breeding activity for the species. Presence was confirmed at each site over the 3-year period. A population estimate of approximately 2000 adult frogs was obtained for the Froggy Pond wetland at Mount Moreland in 2011 (Bowman) using call transects. During this study, we also confirmed the species at the Lake Victoria wetland. We were also pleased to confirm the continued presence of Pickersgill's reed frog at the Isipingo site, which despite our alien clearing efforts faces degradation as a result of siltation and waste. I am pleased to report that I have been allowed to do some of my research at Simbithi Eco Estate, which is a well-managed site for Pickersgill's reed frog. I used this site as a benchmark since it is well taken care of so it allowed me to gauge Pickersgill's population behaviour in a well-managed site and in a degraded site.
2) Obtain baseline wetland health measurements at four sites using WET Health guidelines				This project initiated rehabilitation and monitoring of five selected, critical wetland habitats supporting the Endangered *Hyperolius pickersgilli* (Pickersgill's reed frog), in the

				eThekwini Municipality (Durban, South Africa). In consultation with wetland specialists, we conducted wetland health assessments at four sites (Adams Mission, Mount Moreland, Isipingo and Widenham) at which alien plant clearing activities took place between 2015 and 2018 to gauge the effectiveness of that intervention as a rehabilitation strategy. Assessment of the present ecological state (PES) of the delineated wetland units using the Level 2 WET-Health assessment tool were conducted. These assessments entailed the identification of the main causes of ecosystem degradation and assessment of hydrological, geomorphological and vegetation condition in the five wetlands. Through the WET-Health we identified the main causes of ecosystem degradation and developed a long-term monitoring programme for the wetlands that will provide steps and indicators for changes in habitat condition over time (full reports are available for each site).
3) Assist with captive breeding of Pickersgill's Reed Frog				In 2017, we assisted in the collection of breeding stock for the captive breeding programme for Pickersgill's reed frog being conducted by Johannesburg Zoo. In September 2018, 200 juvenile Pickersgill's reed frogs that had been bred in captivity at the zoo were brought back to Durban for release back into the wild. This marked an exciting leap for amphibian conservation in South Africa. Through the collaborative efforts of several organisations, including EWT as the in-situ partner, Ezemvelo KZN Wildlife, SANBI and the zoo, the release is the first reintroduction of a captive-bred threatened South African frog species back into the wild took place and is the culmination of a decade of work.

				Continuous monitoring of the released frogs is required, which we will assist with through the use of visual implant elastomers.
4) Engage with local schools through experiential learning using a pre and post-surveys to assess changes in attitudes				Through the Endangered Wildlife Trust, Threatened Amphibian Programme, the project aimed to promote social change by creating "a shift in public attitude towards the importance of frogs and the conservation of their habitats". We have worked with six schools (both primary and high school) in the Durban area and engaged with pupils to gauge their attitude towards frogs and the environment in general. Step one was to do a pre-survey prior to any engagement with the pupils; step two was to engage with them (teach them about the importance of the environment, with a focus on wetlands and frogs); and step three we did a post-survey where we repeated step one to measure any changes in attitude. From all the surveys conducted, results show that attitudes towards frogs after our intervention has been positive. This project has also helped with producing new teaching resources and tools. These tools include: frogs in the classroom, water quality testing. The frogs in the classroom tool allowed us to do different activities with school kids including bringing live frogs for kids to see and touch, this helps take away the fear they have for frogs. Our water testing tool allows us to involve kids where they collect water from their local river and then together we test.
5) Engage with local community that are employed to carry out alien plant clearing work to assess their use of the wetlands				In South Africa many people believe that frogs are evil due to cultural superstitions. This project assisted us in understating the myths and superstitions associated with frogs in the Zulu culture, which lead to negative attitudes about them. I had

				an opportunity to interact with different people from different communities and managed to record beliefs or myths that they had towards amphibians. Through pre and post-surveys and community engagements we have reached out to more than 1000 community members in Adams Mission and Isipingo and instilled a positive change in them towards frogs and the environment. We have also held tool box talks with the alien clearing teams every morning before they started working in the field, these included talks on understanding the importance of the natural environment and the role it plays in the lives of humans. This is not fully achieved because the process of social change is a gradual one. People do not change overnight, especially if they have grown up believing ideas that are culturally ingrained.

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

One of the unforeseen difficulties that arose was analysing call data from the acoustic recorders which then required the team to have a tutorial workshop with the expert to show us how to use the software for analysis.

Social engagement has sometimes been difficult to do because most people work during the week so I had to work during the weekends as well to reach more people.

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

1. Through the Pickersgill's reed frog monitoring project we have discovered new sites at which the species occurs (an increase from 10 to 26 sites between 2008 and 2018), which has helped to downgrade the species' conservation status from Critically Endangered (IUCN 2010) to Endangered (IUCN 2016).

2. I had the opportunity to present my work in two very important conservation platforms in South Africa: the Symposium of Contemporary Conservation Practice in 2016 (https://m.youtube.com>watch) and the South African Wetland Forum (iNdaba) in 2017. Furthermore, Rand Merchant Bank

sponsored a documentary (found in YouTube) on the work that I am involved with in the Threatened Amphibian Programme. https://www.youtube.com/watch?v=0Jkj6ArzhEs&feature=youtu.be

3. Through the hard work of the Endangered Wildlife Trust and Ezemvelo KZN Wildlife and other stakeholders, a Biodiversity Management Plan for Pickersgill's reed frog was gazetted by the minister of Environmental Affairs in June 2017. This is the first in its kind for a threatened frog species in South Africa, and guides the conservation action for this species through the collaboration of an extensive range of stakeholders.

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

Through the Natural Resource Management (NRM) programme, funded by the National Department of Environmental Affairs, which focused on wetland rehabilitation at four sites in Durban at which Pickersgill's reed frog occurs, about 75 community members were employed over three years (2015-2018) to clear invasive alien plants. My job was to engage with these community members on a regular basis, as well as convey feedback from the research and monitoring aspects of the project on whether the rehabilitation was helping the frog population. The overall Pickersgill's recovery project has also trained and employed two biodiversity protection officers from Adam's Mission, who I am responsible for mentoring and overseeing wetland ecological goods and services research.

5. Are there any plans to continue this work?

Yes, with new sites being discovered I need to engage with additional communities and schools around those areas so that we develop local champions to look after and create appreciation for these Pickersgill's reed frog habitats. A year cannot change people's believes and because sites are far apart more time is needed to be effective enough.

Additional Pickersgill's reed frogs were collected from the wild at the Adam's Mission site for the captive breeding programme, offspring from which are planned to be released in September 2019. This will require proper monitoring to gauge whether the reintroductions are successful. Monitoring of the first released frogs at Mount Moreland is taking place already.

I have started with a folklore project that looks at researching about the stories people have about frogs and snakes in the world and how those stories came about. This project looks at international stories, how they impact on frogs and snakes and then local stories and how these impact on frogs and snakes. Unfortunately this aspect of the project still needs to be completed.

Our alien plant clearing and other wetland rehabilitation interventions will resume in 2019, so there is a need for the project to continue with the Pickersgill's reed frog

population monitoring especially since we want to further downgrade its conservation status.

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

We will share the relevant stakeholders through various platforms, including the Pickersgill's reed frog forum, which was established in April 2018 as part of the biodiversity management plan for the species. This includes an annual report. Other information and news about the project will be made available through the organisation's social media pages and on the Rufford Foundation website as required. The project has been featured in multiple popular articles as well as television and online documentaries.

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

The funding from the RF was used through February 2016 to March 2018 although some work was done prior to the fund. The project took longer because of massive data analysis and software training. Schools terms and distance between schools also prolonged the project.

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
Personnel costs - Student stipend (Jiba Magwaza)	2,500	2,500		
Travel costs	1,000	1,000		
Subsistence - Meetings/Training and education workshop costs	500	500		
Printing services - Educational materials	250	250		
Total	**4,250**	**4,250**		

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

As an important next step, the project will need the following.

i. Continued educational engagements are needed, including development of a folklore booklet; this will help us make a booklet with all amphibian myths stories and how these came about.

ii. Analysis of call data in collaboration with University of KwaZulu-Natal to determine population estimates and densities; in order to help downgrade the conservation status of the Pickersgill's reed frog we need to know their population numbers. This also helps organisations to plan for better conservation measures.

iii. Ongoing wetland rehabilitation and habitat assessments; wetlands play a significant role not only as a habitat for amphibians and other animals but for humans as well. So it is important to protect and rehabilitate wetlands.

iv. Ongoing species monitoring, especially as part of determining success of released captive-bred individuals; without monitoring we would not know if our work is making a difference or not so this should never end.

v. We need more Zulu education resources that talk on frogs because this can encourage more people to talk about frogs especially our older generation whom we learn these myths and superstition stories.

vi. More funding is needed to help drive citizen science in communities that we work in to conserve amphibians and wetlands.

vii. Bioacoustics are very important in monitoring frogs and analysing population data, so it is important that I am equipped with such acoustic skills for the benefit of frogs and other animals.

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, the RF logo was used on presentations (available online) and on Facebook. Our team continuously mentioned RF to key stakeholders and university academics.

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

Dr Jeanne Tarrant: Threatened Amphibian Programme Manager – project supervision and coordination

Cherise Acker-Cooper: Senior Operations Officer – Natural Resource Project Management

Ryan Edwards: Eco-Pulse Consultant – Wetland Health Assessments

Nathi Dlamini: Student/Volunteer

Khanyisani Goba: Student/Volunteer

12. Any other comments?

Rufford has granted me an opportunity to grow in the field of conservation and has helped me protect and conserve threatened species like the amphibians and threatened habitats like wetlands. The Biodiversity Management Plan (BMP) is a plan that is gazetted by the Minister of Environmental Affairs to protect a species highly threatened. My work does not stop here, there is a lot to do and I am determined to save the frogs and support human development. The Pickersgill's Reed Frog BMP was gazetted to protect the species from extinction and I am honoured that this project also contributed to the overall BMP.

Other Media Links as part of this project:
https://m.news24.com>Maritzburg-Fever
https://cbc.iclei.org/empowerment-knowledge-ilembe-district-municipality