

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	Jacqueline Sapoama Kumadoh
Project title	Conservation Assessment of Herpetofauna and the Endemic Endangered Ghana Worm-Lizard (<i>Cynisca kraussi</i>), Bandai Hills Forest Reserve, Ghana
RSG reference	12403-1
Reporting period	October 2012-December 2013
Amount of grant	£6,000
Your email address	sapsj@yahoo.com
Date of this report	31 st December 2013

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
Assess distribution and abundance of the Ghana worm-lizard (<i>Cynisca kraussi</i>) and other herpetofauna species		x		We established the first-ever data for the herpetofauna of the Bandai Hills Forest Reserve, south-eastern Ghana. We recorded a total of 348 herpetofauna specimens, representing 15 species: five reptiles (three snakes and two lizards) and 10 amphibians (seven frogs, two toads and one caecilian). This list included one Near Threatened frog (<i>Phrynobatrachus alleni</i>), and a secretive fossorial amphibian (caecilian) <i>Geotrypetes seraphini</i> that is rarely encountered in surveys. We however, could not find the endangered Ghana worm-lizard (<i>Cynisca kraussi</i>) in the field surveys, only local people reported its presence claiming they sighted it the previous year. We also believe <i>C. kraussi</i> is still present but because of its fossorial and secretive nature more systematic and long-term surveys are required to discover it.
Investigate the ecological requirements and threats to determine habitat suitability of the Ghana worm-lizard (<i>Cynisca kraussi</i>) and other herpetofauna species.		x		We established data that provide insights into understanding the ecological parameters that limit the presence/absence of herpetofauna and the Ghana worm-lizard. We administered standardised questionnaires to 60 local people, and also made observations of major threats at the Bandai Hills Forest Reserve. In ranking the threats, cattle grazing, illegal farming, fires and felling of trees for charcoal production, ranked in order of importance. Most parts of the reserve have used by Fulani herdsmen to graze hundreds of cattle. The herdsmen usually set the forest ablaze to create more grazing space and to quicken the growth of lush grass for their cattle. Large tracts of the species habitats have also been pulled down for the production of crops especially water melon, maize and tomatoes.
Build capacities for the long-term management of the Ghana worm-lizard			x	The project involved and trained five local community members, and staff members of Ghana Forestry Commission in the ecology of

<p>(<i>Cynisca kraussi</i>) and other herptofauna species.</p>			<p>worm-lizards and other herpetofuana. We also trained them on surveying and monitoring protocols for the Ghana worm-lizard other Ghanaian herpetofauna in general.</p> <p>We did also collaborate with a group of alumni local scientists of Cambridge Tropical Biology Association (TBA). In addition, we fully involved Ghana's only two herpetological non-profit organisations, SAVE THE FROGS! Ghana (www.savethefrogs.com/ghana) and HERP-Ghana (www.herpghana.org).</p>
<p>Increase awareness among local the long-term management of the Ghana worm-lizard (<i>Cynisca kraussi</i>) and other herptofauna species.</p>		<p>x</p>	<p>This project served as a platform for increasing local awareness on the effects of habitat degradation on the Ghana worm-lizard and other biodiversity of the Bandai Hills Forest Reserve. We teamed up with the District Information Services Department, which allowed us to not only reach tens of local people but also we succeeded in getting well our message across. We educated people at churches, social gatherings; we made house-to-house and on-farm visits, which made it easy to appeal directly to culprit farmers and loggers. We also developed project banners, t-shirts, flyers and information cards and distributed freely to local stakeholders. We dubbed our conservation messages "Save the Bandai Hills Forest". With the help of the District Information Services Department, we developed a press article and sent it to local journalists. The press release made the headlines in the local for one of the online leading media houses, modernghana.com. It was titled: Environmental Alert! Lizard Heading Towards Extinction--Ghana Worm Lizard Project Warns ...<i>Fires, Cattle Grazing And Farming At Its Bandai Hills Forest Are Culprits</i>. We also posted and shared this and other relevant educational messages about the worm-lizard protection on the social network Facebook.</p>

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

Fear gripped all team members when we got news that the Fulani herdsman who graze their cattle in the forest had killed some local people there in the recent past. For our safety we employed five local people including “community volunteers” (people specially trained to contain such heinous acts); and we camped in a town (Agogo) far off the forest. We also left out nocturnal surveys and we only conducted diurnal surveys but early enough before dusk.

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

1. Capacity Building: Before this project, knowledge of the biology and ecology of the endangered Ghana worm lizard (*C. kraussi*) was completely non-existent among local researchers including even wildlife personnel. The project successfully trained five local people and three other ecologists in the surveying and monitoring protocols of the endangered Ghana worm-lizard and other herps.
2. Awareness Creation and Memorandum of Understanding: This project also succeeded in increasing awareness among local stakeholders. We held meetings with chiefs (traditional leaders), forestry professionals and local community members. We sensitised the stakeholders to take pride in the Ghana worm-lizard that is found nowhere else but their forest. We also educated local children, which will ensure they grow up with respect and appreciation for their heritage. Thankfully, the chiefs on behalf of their subjects entered a Memorandum of Understanding (MOU) with us to thenceforth watch over their forest. The postings on social media and press release (<http://www.modernghana.com/news/504294/1/environmental-alert-lizard-heading-towards-extinct.html>) were also instrumental in creating the awareness of the general Ghanaian and global public.
3. Networking and Potential IUCN Upgrading: For a better political power to save the Ghana worm-lizard and the entire Bandai Hills Forest Reserve this project forged partnership with the Forestry Commission, Information Services Department, and Ghana’s only two herpetological non-profit organisations, SAVE THE FROGS! Ghana (www.savethefrogs.com/ghana) and HERP-Ghana (www.herpghana.org). We also teamed up with fellow members of the Ghanaian Group of Cambridge Tropical Biology Association. With the help of all these partners the project called on the Ghana government to rescind its decision to destroy the Bandai Hills Forest for hydro-power development. We also called on the IUCN to upgrade the status of the Ghana worm-lizard from its current Red List status of Endangered to Critically Endangered.

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

We fully involved local people throughout the project: planning, data collection and interpretation, awareness creation and networking. Five local people received professional training in the identification and surveying of worm-lizards and other herps. Apart from the immediate cash that these local persons received from the project, it is clear that either us or other researchers will find them useful and employ them to assist on other similar projects. It is also certain that we got the local school children whom we interacted with on daily basis inspired to be better stewards of their forest.

5. Are there any plans to continue this work?

Yes

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

We have already worked hard in getting press releases of our project findings across to relevant stakeholders. We have also shared with the general public on social media our project findings, highlighting the plight of the endangered Ghana worm-lizard. We have encouraged all our partnering organisations to promote this project among their respective memberships. Beyond this project, when we succeed in garnering any information relevant to the protection of the Ghana worm-lizard and the Bandai Hills Forest Reserve we will also make the necessary updates available to stakeholders and partnering organisations.

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

This project lasted 14 months, as against the original plan of covering 12 months.

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.

Yes. The Rufford Foundation logo was used on the t-shirts, flyers, info cards and banners that were used during the project. RSGF was also acknowledged in all publications that were made concerning the project.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Reconnaissance	336	600	264	We secured the additional funding support from the Tropical Biology Association. With the additional funds we had an extra field day of training. We were also able to add up two local people to the team, which also beefed up security considering the danger Fulani herdsmen posed to local people and researchers in the forest.
Fieldwork (Surveys, lodging, transport and stipends)	3360	4300	940	We secured the additional funding support from the Tropical Biology Association. With the additional funds we covered 5 more days.
Field Equipment	475	771	296	We secured the additional funding support from the Tropical Biology Association. With the additional funds we bought an extra GPS device and digital camera.

Conservation Education, Building Workshops	Capacity and	1829	1829	0	
Total		6000	7500	1500	

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

1. As Worm-lizards and in the case of also *C. kraussi* are fossorial and secretive by nature we suggest further and more systematic surveys should be conducted. These surveys should focus especially on the North Bandai Hills Forest Reserve. Our surveys focused on only the South Bandai Hills Forest Reserve. But complete surveys of both the south and north ranges will especially be useful for the IUCN to speed up their process of reassessing the species.
2. We also recommend that firebreaks should be created around the original sites of the endangered worm-lizard and new areas that local people claimed they have sighted it.
3. We also suggest surveys to be conducted on sustainable livelihood options that can meet economic needs of local people to prevent their encroachment of the species' habitats.

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. We used the logo in our all designs: banners, flyers, information cards, letters and t-shirts. In all our presentations, press releases and online postings we duly acknowledged the support of RSGF.

11. Any other comments?

We would like to thank the Rufford Small Grants Foundation for the financial support to carry out this project. We are especially grateful to Jane Raymond for all her tireless efforts put into ensuring we had a successful project. We are grateful to Mr. Michael Boakye and the Juaso District Forestry Office for granting us access to the Bandai Hills Forest Reserve. We thank the chiefs, elders, assembly members, church ministers and all people of Aberewa Krom and the entire Akyem East District for making the project successful. We also acknowledge the support of Madam Dinah Ditas Sarpey, an Information Officer at the district Information Services Department. We thank Professor William Oduro, KNUST, and Dr Rosie Trevelyan, TBA Director, for their advice on appropriate design and data collection methods. We are also thankful to Dr. Markus Eichhorn, lecturer at Nottingham University, UK, for donating to the project a Reptile Biodiversity Book (Standard Methods for Inventory and Monitoring). We also thank the Executive Directors of SAVE THE FROGS! Ghana (Gilbert Adum) and HERP-Ghana (Dr Caleb Ofori Boateng) for the collaboration of their NGOs and their own availability for the success of the project.



View of the Bandai Hills Forest



Banner-design for Ghana Worm-lizard project



Ghana Worm-lizard project team and trainees