

## The Rufford Small Grants Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	
<b>Your name</b>	Daniel Konzin
<b>Project title</b>	Assessment and Conservation of the Threatened Crocodiles <i>Mecistops cataphractus</i> and <i>Osteolaemus tetraspis</i> in Southern Ghana
<b>RSG reference</b>	17472-1
<b>Reporting period</b>	May 2015 to May 2016
<b>Amount of grant</b>	£5000
<b>Your email address</b>	<a href="mailto:danielkonzin@yahoo.com">danielkonzin@yahoo.com</a>
<b>Date of this report</b>	15 <sup>th</sup> June, 2016

**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
Awareness campaigns and capacity building programmes			x	<p>We have successfully carried out conservation education programmes in five fringe communities of the project areas. Our education took the form of one-on-one interactions with local hunters, group discussions, video shows and PowerPoint presentations in community centres and schools and radio broadcasts. Also, we distributed educational materials such as conservation t-shirts, leaflets etc. among our audience. Through this we were able to directly interact and educate over 1500 people on the importance of crocodiles.</p> <p>Through this project, we have trained two undergraduate students from Department of Wildlife and Range Management, Kwame Nkrumah University of Science and Technology (KNUST) in crocodile survey. We have helped these students to successfully undertake their theses work on crocodiles. We have also trained 10 community volunteers thus five for each project area to help protect crocodiles.</p>
Population status and distribution of <i>Mecistops cataphractus</i> and <i>Osteolaemus tetraspis</i> in the study areas		x		<p>We are happy to report that for the first time in the history of crocodile research in Ghana, we have been able to record significant population of <i>O. tetraspis</i> in both Draw River Forest Reserve (DRFR) and Tano-Offin Forest Reserve (TOFR) and developed distributional maps of the species in both reserves.</p>

				<p>At DRFR, we surveyed 14 km of forest streams and rivers and directly sighted 23 individuals (eight hatchlings, five juveniles, three adults and seven eye shine only) giving an encounter rate of 1.6 per km. A total of 47 active burrows (burrows with new footprints of <i>O. tetraspis</i>) were also recorded indicating higher abundance than directly encountered.</p> <p>At TOFR, we surveyed 11 km of streams and rivers and directly sighted 13 individuals (six hatchlings, one juvenile, and one adult and five eye shine only) giving encounter rate of 1.1 per km. A total of 32 active burrows were also recorded.</p> <p>Unfortunately, we did not encounter or see any sign of the <i>M. cataphractus</i> during our field surveys although locals speculate its presence in the study areas. It could be that its population is critically low in the study areas which might have reduced our chances of sighting the species.</p>
Assessment of threats to crocodiles in project areas			x	<p>Habitat encroachments resulting from agricultural activities, hunting pressure, illegal logging and depletion of prey-based resources were identified as major threats to crocodiles in the two study areas. We observed that, during dry season, farmers clear portions of rivers banks to grow vegetables and use the water to irrigate their crops. This is greatly affecting nesting sites of crocodiles. Through a social survey among 70 respondents in each sites, we find out that at DRFR, 59.1% of the respondents confirmed eating crocodile meat while that of TOFR was 56%. This is very alarming to crocodile persistence in the sites.</p>

			<p>Consistent with other areas in Ghana, we realised that there is high hunting pressure as hunting indices were recorded in almost every area we found the presence of <i>O. tetraspis</i>. Sadly, hunters have identified an association between <i>O. tetraspis</i> and a particular weaver bird (species yet to be identified) and use the condition of its nest to determine the presence of <i>O. tetraspis</i>. This situation has worsened the plight of the species in the study areas. Also we noticed the use of Dichlorodiphenyltrichloroethane (DDT) in fishing in the streams and rivers which have reduced prey available and water quality for survival of crocodiles.</p>
Development of crocodile conservation action plan		x	<p>Workshops were held with key stakeholders (Department of Wildlife and Range Management, KNUST, Forest Service Division, Wildlife Division and Local/Traditional Authorities) to deliberate on the best way we can collaboratively protect crocodiles in the study areas.</p> <p>Based on the consultations we made with stakeholders and information we gathered during field surveys, we have drafted crocodile conservation action plan and will be circulating it to stakeholders for their inputs. After this the final document will be produced.</p>

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

The major unforeseen challenge that arose during this project was doubtfulness of local hunters about the project team true identity. Locals could hardly believe that we will move all the way from the city to the village just in search of crocodiles. They suspected we were there to check illegalities in the forest and report for their arrest and that crocodile issue was just a cover up. This slightly delayed smooth take off of the project but eventually we were able to convince them and more hunters

voluntarily joined our team in search of crocodiles after they realised we are not threat to their security.

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

Below are brief descriptions of the three most important outcomes of this project:

- Principally, this project has helped to produce for the first time, information on the population status, distribution and intensities of threats to crocodiles in the study areas. This work has led to the scientific discovery of the only known significant populations of *Osteolaemus tetraspis* in Ghana. Until this study, most records available were incidentals sightings of just one or few individuals. The 23 individuals of *O. tetraspis* recorded in DRFR represents the highest recorded in single locations in Ghana so far. This study has helped revealed an ecological indicator that has become great threat to the survival of the *Osteolaemus tetraspis*. That is the association between *O. tetraspis* and the unknown weaver bird which hunters are using its nest in tracking *O. tetraspis*. This documentation will serve as baseline information for both current and future conservation interventions to protect crocodiles and their habitats in the two forest reserves.
- The capacity building programmes organised during this project have helped train 10 community volunteers (made up of local crocodile hunters) and two undergraduate students from Department of Wildlife and Range Management, KNUST in basic ecology, survey and conservation of crocodiles. Training of the two undergraduate students is one of the important outcomes because inadequate expertise is a major challenge to crocodile conservation in Ghana. These students have developed strong interest in crocodile research and have successfully undertaken their theses work on crocodiles. We believe the capacity built will go a long way to help increase research and conservation efforts on crocodiles in Ghana.
- Another important outcome of this project is the improved understanding of fringe communities on the importance of crocodiles and their current threat status. Prior to our conservation education programmes, majority of the locals did not understand why we should conserve crocodiles because they believe crocodiles are dangerous animals and threats to human life. However, we are happy to report that after series of interactions with them through PowerPoint presentations, group discussions, video shows, radio programmes and other educational media, many of the locals have given their full support to crocodile conservation. We believe this support is very important because they are the people living close to the resources and our success of protecting these species depends largely on them. Although some people

still remain adamant to their initial belief, we hope future awareness campaigns will help win more people to our side.

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

Local communities have been integral part of both the planning and execution of this project. During the reconnaissance survey, we consulted traditional leaders, assembly members and other opinion leaders on our intention to undertake such project. They provided us with information on the traditional rites to perform before entering forest as well as procedures to use in gathering the local community for education programmes. In each community, we worked with local hunters during data collection. Additionally, five hunters who showed great interest in our activities were selected from each project area and trained as community volunteers.

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

Yes. We intend to continue with the next phase of this project.

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

We are happy to report that we had the privilege to present our preliminary results at the IUCN/SSC West and Central Africa Crocodile Specialist Group meeting held in Abidjan, Ivory Coast in December, 2015. Again, we recently presented our final findings in May, 2016 at the 24<sup>th</sup> working meeting of the IUCN/SSC Crocodile Specialist Group held in Kruger National Park, South Africa. Further to these, we plan to share our detailed report with all stakeholders in Ghana and the IUCN/SSC Crocodile Specialist Group. We are also striving to publish our research findings in an international peer-reviewed journal for accessibility by the larger conservation community.

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

The RSG was used in a period of one year as proposed by the project

**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.**

<b>Item</b>	<b>Budgeted Amount</b>	<b>Actual Amount</b>	<b>Difference</b>	<b>Comments</b>
Reconnaissance survey + pre-project training	225	225	0	
Hiring of vehicle for field surveys	600	640	-40	There was slight increase in vehicle rental prices during the project period
Cost of fuel for field surveys	450	510	-60	This difference is mainly due to increases in fuel prices in Ghana.
Cost of hiring water craft for data collection	100	0	100	The conditions in forest streams and rivers did not permit the use of water craft. So survey was done solely on foot.
Equipment	284	212	72	The difference was due to no purchase on headlamps. Dr. Matthew Shirley, an advisor to this project, donated headlamps to the project team.
Conservation education	1500	1540	-40	The difference was due to increase in price of t-shirts
Daily subsistence allowance for project team members	1000	1000	0	
Organisation of 4 stakeholder workshops to deliberate on the best means to protect crocodiles in the study areas	840	870	-30	There was slight increase in transport fares due to increase in fuel prices.
<b>TOTAL</b>	<b>4999</b>	<b>4997</b>		

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

- a) In the next phase of this project, we will focus mainly on the Vulnerable *Osteolaemus tetraspis* and monitor its population and distribution in the two project areas to ensure its long term survival.
- b) We will continue and intensify crocodile conservation awareness campaigns in the fringe communities of the project areas to help reduce threats to this species.
- c) We will continue to train university students and community volunteers in the next phase of this project.
- d) We will research into the preferred alternative livelihood by fringe communities in order to come out with programmes in subsequent phases to help reduce pressure on forest resources.

## 10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

Yes. The logo of RSGF was embossed on project banner, t-shirts, leaflets and other educational materials. We acknowledged RSGF during meeting with community members and radio broadcast programmes. During our presentations at the IUCN/SSC Crocodile Specialist Group (CSG) meetings, the logo of RSGF was put on every slide of the PowerPoint. Aside this, we formally acknowledged RSGF before starting the presentations at the IUCN/SSC CSG meeting held in Abidjan in Ivory Coast and Kruger National Park in South Africa.

## 11. Any other comments?

We are very grateful to the RSGF for providing us with funds to undertake this project. We thank Prof. Grahame Webb, Chairman, the IUCN/SSC Crocodile Specialist Group and Dr Matthew Shirley, for their support throughout the project. Finally, we thank all stakeholders for their collaborative support.



