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	Shahriar Caesar Rahman
Project title	Ecology and Conservation of Burmese Pythons in Bangladesh
RSG reference	17769-1
Reporting period	
Amount of grant	4994
Your email address	Caesar_rahman2004@yahoo.com
Date of this report	September 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
Quantify seasonal movement patterns, home range characteristics, and habitat use of free ranging pythons			x	• Radio tracked eight adult Burmese pythons-the first ever radio telemetry study of pythons in South Asia. • Collected important information on their movement, home range, homing behavior, habitat use, diet and human-python conflict.
Obtain data on various aspects of python natural history, including reproduction, diet and growth			x	• We have collected opportunistic natural history data on reproduction, mortality, diet, growth etc.
Formulate a sustainable model to mitigate human-python conflict		x		• This is the most challenging task considering the tremendous human pressure on the remaining forest areas in Bangladesh. We have recorded 26 incidents of human-python conflict during our study. We have a much better understanding of the situation and have been working with multiple stakeholders to formulate a sustainable plan to mitigate human-python conflict.
Create employment opportunities for the tribal people who will act as local ambassador for python conservation for years to come			x	• We have trained three tea plantation workers as parabiologists and they are currently being employed in the project. They became local celebrities and villagers and even Forest Department officials

				contact them whenever they find pythons and other conflict wildlife.
Leverage preliminary results to attract additional funding for longer term research			x	• We have raised additional funds from other small grants programmes, Bangladesh Python Project Workshops, and private donations.
Publish results in the peer-reviewed scientific literature and the popular press			x	• After removal of the transmitters from the remaining individuals we will analyse data and prepare scientific publications. We have collected adequate information to publish scientific papers on: 1) ecology of Burmese pythons 2) Field surgery technique. • Reports of our work have been published in multiple popular media outlets.
Develop management recommendations to aid in the preservation of pythons and the habitats on which they depend		x		• This is the first study of this kind in Bangladesh and the field work is still ongoing. • Preliminary recommendations have been provided to the Forest Department through various workshops and seminars. • Radio transmitters have been removed from four pythons and we are currently radio tracking four individuals. After removal of the transmitters from the remaining individuals we will analyse data and prepare a comprehensive management plan engaging different stakeholders.

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

Thus far the government has been supportive of our work, which is one of the reasons we have achieved so much in so little time. But despite all the good will and interest, it is difficult to maintain a consistent and coordinated effort for conservation with the government every day. At the beginning of the study we had problems with the local Forest Department staff. Snakes, in general, are the least studied group in Bangladesh and our radio telemetry study of Burmese python is first of its kind in the country. Therefore, the local communities, at the beginning, did not have a proper understanding of our work method. Due to the communication barrier, one of the local Forest Department staff accused us of smuggling "python venom" which caused some confusion between us and the higher officials. We took this matter seriously by conducting seminars and workshops involving Forest Department officials and local community leaders, and communicated details of our work methods including the fact that pythons do not possess venom. We have solved these issues and our communication with government agencies is far better now.

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

Better understanding on the ecology and conservation of Burmese pythons in a human modified landscape

This is the first ever radio telemetry study of any snake species in Bangladesh. In fact, there is no published data available on the ecology, home range, habitat use, or activity pattern of Burmese pythons anywhere in their native range in Asia. We have successfully radio tracked eight adult Burmese pythons and collected important data on their home range, habitat use, activity pattern, and human-python conflicts. This data not only increases our understanding of the biology of giant serpents, but it is also very useful for creating a conservation and management action plan for this species in their native range, especially in human-dominated landscape.

Provided a unique platform for local and international students and professionals to study wildlife in Bangladesh

First, this project provided internship opportunities for at least 10 Bangladeshi undergraduate and graduate level students. Three of them volunteered with us after completing their internship and now working with us full time in our conservation organization. To the best of our knowledge, there is no other project in Bangladesh which provides such unique opportunity to gain such hands-on field experience. Second, since inception a total of 14 international participants from six different

countries (India, Singapore, United States, England, Canada and Switzerland) volunteered in our project and gained valuable wildlife and cultural experience. Our staff and students have learned a lot from this cultural exchange.

Use of parabiologists as an efficient, cost-effective method to conduct long term studies on wildlife

We trained and recruited at least six local tea plantation workers as a parabiologists who were responsible for daily monitoring and radio tracking of pythons and collect other ecological information. These parabiologists act as an ambassador for local wildlife conservation in the area. The local parabiologists helped bring a sense of investment in wildlife conservation in the area. Our work shows that the use of local parabiologists is efficient and cost-effective tools to conduct long term study of wildlife in this region.

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

Local communities played a huge role in the success of our project. Pythons are elusive species and are very difficult to locate in the field. We created a network in local villages and with the support from the local villagers, we have captured and released more than two dozen pythons during the last 5 years, eight of which were fitted with radio transmitters. We have trained a total of six tea plantation workers as parabiologists. Three of these parabiologists are currently employed in the project and are responsible for the daily tracking of pythons, making liaison with the government and local communities, and acting as ambassadors for python conservation in our study area. Two of them are supporting their families and kids with the salary from our project, and one of them is currently supporting his college education with the money provided by our project.

5. Are there any plans to continue this work?

Yes, absolutely. We continue to radio track pythons and conduct awareness events regularly using funds raised through our Bangladesh Python Project Workshops. Next year we will be collaborating with Delta State University and offer three undergraduate credits for students attending the workshops. We are planning our next phase of work to conserve pythons, and other wildlife, and their habitat in other parts of Bangladesh through the help of parabiologists.

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

After removal of the transmitters from the remaining individuals, we will analyse the data and prepare for scientific publications. We have collected adequate information to publish at least two scientific papers in peer-reviewed journals. Our work updates were also featured in a newsletter for the IUCN/SSC Boa & Python Specialist Group and popular news portals in Bangladesh. We have already organised multiple seminars and workshops at our field site to share our work with the Forest Department and the local communities. We are also planning to conduct awareness events in our study area involving the local religious leaders.

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 RSG was used for a 12 month period as mentioned in our funding proposal.

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
Holohil Radio Transmitters	648	648	0	
ATS Radio receiver	676	676	0	
Local field assistants	1218	1809	+591	We had to hire additional field assistant as one of our field assistant, Kanai Das, had bronchitis. Since he didn't have any other sources of income so we supported him till he recovered.
Maxim Temperature loggers	338	0	-338	One of our Australian volunteers donated us some temperature loggers
GPS	203	100	-103	
Food	933	1000	+67	
Transportation	708	750	+42	
Headlights, flashlights and	270	300	+30	

batteries				
Total	4994	5283	+289	Additional funds were raised through revenues earned from Bangladesh Python Project Workshop.

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

We will use the information gathered to formulate a python conservation and management plan to be implemented by the Forest Department of Bangladesh. The ongoing destruction of the remaining natural habitat in Bangladesh is the major threat for pythons and other imperilled wildlife in Bangladesh. We have formed a registered organisation (The Creative Conservation Alliance) and will be working in the coming years to protect and restore the last remaining wild places in Bangladesh. Our ongoing work in Lawachara National Park will act as an experimental platform where we will conduct species-specific research resulting in sustainable management decisions applicable to species conservation in human-modified landscapes. Additionally, we will apply a landscape-scale approach to conservation of relatively larger patches of tropical forest in the Chittagong Hill Tracts, where there is critical habitat for Burmese and reticulated pythons.

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?

We have put RSGF logo on our newly formed organization, Creative Conservation Alliance's website. Here is the link of our website: http://conservationalliance.org/.

11. Any other comments?

Our work shows that parabiologists are an effective tool to conduct studies on wildlife. We want to establish this as a conservation model and take it to the next level which can be replicated elsewhere. We want to expand our work in Chittagong Hill Tracts, where there are large tracts of forest remaining and subsistence hunting by indigenous people is one of the major threats to pythons and other imperilled wildlife. We are planning to apply for the second RSG to mitigate hunting using our parabiologist model.