

The Rufford Small Grants Foundation

Final Report

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Ranjitsinh Devkar
Project title	Conservation of Microchiropteran Bats and their Habitat through Research and Community Participation
RSG reference	8487 - 1
Reporting period	12 months
Amount of grant	£5720
Your email address	rvdevkar@rediffmail.com
Date of this report	August 2011

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective/s	Not achieved	Partially achieved	Fully achieved	Comments
Survey of bat roosts			√	The proposed area could be thoroughly surveyed during the stipulated time
Identification of bat species		√		Bat species inhabiting mixed roosts or located at inaccessible places could not be identified. A need for bat detector was felt during the study.
Breeding biology of Bat			√	Breeding biology could be studied at the chosen locales during all the three seasons (summer, monsoon and winter) satisfactorily. Although, monsoon rains posed some difficulty in accessing the study areas.
Conservation and awareness campaign for bats and their habitat			√	This was the most important objective of our study. The proposed objective of the awareness campaign was completed quite satisfactory and was well received. However, more needs to be done on a regular basis to have a long reaching impact in the field of bat conservation.
Special training programs for post-graduate and college students			√	Special training program was an effective way of creating interest among students to take up conservation studies on bats.

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

Overall, the project went on well and there were no major difficulties in achieving the proposed objectives. However, identification of bats in inaccessible roosts coupled with limited permission for collection of specimens resulted in some species going unidentified. A need for a bat detector was genuinely felt for species identification. Need of a permanent field assistant was also felt as the volunteers, at times were preoccupied with their academic schedules. The sudden unanticipated rise in fuel prices in India required re-appropriation of travel budget.

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

Research: The article published in '*Current Science*' (a premier Indian journal with wide circulation and 0.688 impact factor) on *Rhinopoma microphyllum kinneri* was appreciated by the researchers working in the field of small mammals and lead to healthy scientific interactions. This was also the first published research report on Sipa mine, an important bat roost of this area (uploaded on RSG site). A major roost of *Megaderma lyra* could also be located and studied in central Gujarat by the RSG team. A detailed study through RSG helped in generating interesting data on microchiropteran bats and their habitats in and around Jambughoda wildlife sanctuary and other parts of Vadodara

District (central Gujarat). This data is being systematically analysed for more research publications. RSG will be duly acknowledged in all further publications.

Awareness campaign: A very successful bat awareness campaign could be initiated covering over 150 schools and 17 colleges in urban and rural areas of central Gujarat. Besides the printing of awareness material like charts, posters, etc, the publication of an educational booklet “*Know about Bats*” (in English) was the most significant achievement. This booklet included coloured pictures of seven species of bats (photographed by RSG team members) scientific names, classification and other information. Educational sketches (15) were also printed in this booklet to quell myths about bats and to underline their importance in our ecosystem. The same booklet was translated in vernacular language (Gujarati title – *Chamachidiya ne olkho*) and generously distributed to students, tourists and local people.

Capacity Building: Local villagers and guides were trained through awareness campaigns to spread information on importance of bats in an ecosystem. An intensive training program for college students comprising of in-field sessions on identification of microchiroptean bats, study of bat roosts, bat count, conducting awareness campaign etc were conducted. After successful completion of the training programs, students were given RSG certificates, educational material, momentos, T shirts and motivated to work towards conservation of microchiropteran bats and their habitats.

Implementation: The Forest Department, Vadodara wildlife circle took keen interest in my work on microchiropteran bats and positively motivated me and my student volunteers. Research report published in *Current Science* and other findings were appreciated and were referred for framing of the next conservation plan for Jambughoda wildlife sanctuary. Bats rarely feature in a conservation plan of any sanctuary in India and hence, I consider this achievement as **the most important outcome** of the project. My sincere thanks to RSGF.

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

It was a novel experience of working with the local village communities who were otherwise, not very tolerant to bats or were oblivious to their presence and their importance in ecosystem. Awareness campaigns were positively received by the local communities and helped them in understanding the value of conserving bats and their habitats. Local villagers were thrilled to know about importance of microchiropteran bats as insect eaters and pest controlling agents and agreed to conserve their natural habitats. Villagers, outstanding students and volunteers were felicitated with RSG T-shirt and memento. The published booklet on bats became very popular amongst the locals, students and general public.

It is indeed surprising that even the researchers, NGOs and wild lifers were a bit apprehensive about studying bats. Awareness campaigns resulted in a major surge in their interest in learning more about bats and their interspecies differences. Teachers too, accepted their ignorance about bats and agreed that the awareness campaign helped them in finding answers pertaining to the myths associated with bats. Vampire bats topped the list of frequently asked questions. The bat colony of Indian false vampire at Jambughoda wildlife sanctuary was the most visited by the students and tourists.

The myths associated with bats were prevalent amongst villagers as well as the city dwellers, but the student community were the most interactive and receptive in imbibing the information on bats.

5. Are there any plans to continue this work?

I think that a lot needs to be done for the conservation of bats in western India. Results obtained in this study highlight a need to increase the geographical area of study for a better understanding of their dispersal pattern and use of alternative roosts in different seasons. A state level awareness campaign dedicated to conservation and awareness of bats is an urgent necessity for protecting the bat and their habitats. In my future study, I wish to conduct an effective state level awareness campaign by developing newer and more effective conservation and awareness modules. Also, I did not include fruit bats in my present work and hence, in my future work, I wish to have a combined study module for conserving both micro and megachiropterans.

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

A detailed technical report of RSG project (consisting of colour photographs of the bat species, habitats, awareness campaigns, special training sessions and other scientific details) will be submitted to The Rufford Small Grants Foundation. Copies of this report will be sent to the Gujarat state Forest department, local NGOs, state university departments, faculties and scientists sharing common research interests. A part of the study has already been published in *Current Science* whereas; other data is being processed for drafting research papers that are to be published in reputed journals.

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

August 2010 – July 2011 as originally proposed.

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	£ 2500	£ 2770	- 270	Extensive field surveys were conducted for studying bat habitats. Owing to sudden hike in Fuel charges/hiring charges in India this budget head overshoot the proposed amount.
Food and Accommodation	£ 1200	£ 1000	+200	Due to an overwhelming response generated through awareness campaigns, extra expenses were incurred to allow maximum participation.
Printing of Educational Material	£ 800	£ 1200	-400	Printing of educational booklets, banner, poster, photographs and other educational material was achieved in this budget. Generous distribution of educational booklets led to extra expenses that were met from budget head no.5.
Educational and awareness activities	£ 600	£ 550	+50	Intensive 'in field' training sessions for chosen students was achieved in this budget.

Park fee/ Guide fee	£ 500	£ 100	+400	Local Forest Department is acknowledged for waiving off the park entry fee for RSG team, students and volunteers. Hence, the balance amount was utilized for printing more amount of educational material.
Contingency	£ 120	£ 50	+70	Since there were no major incidental expenses incurred, balance amount was utilized to partially meet the deficit in travel budget.
Total	£ 5720	£ 5720	+50*	*£ 50 Retained for printing hard copies of final report (in colour) Total amount proposed £ 5720 @ £ 1= 72 Total amount received £ 5720= 408000 @ £ 1= 71.32

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

Looking ahead, I feel that following areas needs immediate attention.

1. State level mapping of prime microchiropteran bat habitats is an urgent need.
2. Decipher threats to these bat habitats and to develop strategies for conservation.
3. State level awareness campaign for microchiropteran bats with students as the focal community.

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?

Use of RSGF logo was made at all possible venues/articles during the awareness campaign. General public were curious to know more about the RSGF, its activities and its criteria for funding a project. My fellow professors working in my Institute as well as in other Universities of Gujarat were quite inquisitive in knowing more about the RSGF. Following are the details pertaining to the use of RSGF logo:-

1. On memento, t-shirts and certificates distributed to the student participants.
2. On large sized coloured photographs of various bat species and used during awareness campaigns.
3. In all the PowerPoint presentations made as a part of the awareness campaign.
4. Printed on awareness booklets, posters and brochures.
5. On RSGF banners used during various awareness campaigns.

11. Any other comments?

Though, I had opted for this Grant as an individual (PI) and could work well independently, help rendered by the volunteers and NGOs is specially acknowledged. Also, the cooperation of the Forest Department, Govt. of Gujarat in form of promptly granting necessary permission for conducting the survey is duly acknowledged. Overall, it had been a wonderful experience and I thank Dr. Jane Raymond and RSG for guiding me through the course of my work and for solving all my queries instantly.