

## 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>	Ranjitsinh Devkar
<b>Project title</b>	An integrated approach towards conservation of bats and their habitat
<b>RSG reference</b>	14614-2
<b>Reporting period</b>	12 months
<b>Amount of grant</b>	£5800
<b>Your email address</b>	<a href="mailto:rvdevkar@rediffmail.com">rvdevkar@rediffmail.com</a>
<b>Date of this report</b>	March 2015

**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
Study of bats in neo-habitats (mines and monuments)		√		The proposed area covering 11 districts of Gujarat State (India) was too big to be covered in 1 year. This objective was too ambitious and hence could be partially achieved. Banaskanta, Dahod, Mehsana, Ahmedabad and Sabarkanta could be studied (20-50%). Bat populations in these areas housed ancient ruins, temples and monuments were documented and awareness programmes were conducted for the local people. The results of awareness campaign were fruitful as there was a considerable interest created amongst people (students and general public). Observations on midwife like behaviour in fulvous fruit bat and first report on <i>Megaderma spasma</i> from Gujarat were the highlights of our work.
Mapping of bat habitats			√	All the bat habitats surveyed during this work were mapped. A final technical report is being compiled and the map will be incorporated along with other data generated herein.
Bat awareness campaign			√	Awareness campaigns were conducted as per the proposal modus operandi. Awareness campaigns were performed at museum, community science centre, Science open house (at M.S. University of Baroda) archaeological monuments (23), ecotourism campsites (18), schools (433) etc. Educational material bats and other awareness material was distributed during various awareness campaigns. Bat awareness video was the highlight of this objective widely acclaimed. A strong need for educating the forest officials, policy makers and other bureaucrats was felt for effective policy making and implementation on bat conservation. Hence, the same was initiated with an aim of having far reaching impact.
Volunteer training programs			√	Volunteer training programme was conducted wherein; observing behaviour of bats and studying their ecology was prioritised. Later, bat counts at three micro and two megachiropteran roosts were conducted on a season basis to assess population variations. Sessions on bat handling were also conducted and rescue methods were taught to the aspiring bat biologists. I could

				<p>motivate volunteers to conduct extensive surveys of the proposed areas and this exercise will be continued even after completion of RSG project. Two student volunteers (graduate students of Zoology) opted to study bats for their Master's project work and could successfully complete their work on evening emergence pattern and diurnal behaviour of fruit bats. Other interesting observation made by the volunteers was that of niche sharing between black bearded tomb bat and fulvous fruit bat. Scientific data is being analysed and processed for research publications wherein; RSG has been acknowledged in all the manuscripts.</p>
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

The first Rufford small grant gave wings to our work on bats and their conservation as all the objectives could be fast tracked. The advantage was a small geographical area and a realistic timeline. This led to an ambitious proposal submitted in RSG II wherein, 11 districts of Gujarat State (India) were proposed to be surveyed. This proved to be too big to be covered in 1 year. Hence, Banaskanta, Dahod, Mehsana, Ahmedabad and Sabarkanta could be partially studied (20-50%). Bat populations in these areas were housed ancient ruins, temples and monuments. All of them could not be covered due to lack of time.

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

I could motivate volunteers to conduct extensive surveys of the proposed areas. Student volunteers from zoology were thrilled to learn about bats and wanted to extend their interest in the field of bat biology into research. Two student volunteers (graduate student of zoology) opted to study bats for their Master's project work and could successfully complete their work on evening emergence pattern and diurnal behaviour of fruit bats.

Innovative methods of conducting awareness campaigns were employed. A short video film on bat awareness was widely appreciated by the general populace, students and tourists.

Observations on niche sharing between black bearded tomb bat and Fulvous fruit bat, midwife like behaviour in fulvous fruit bat and first report on sighting of *Megaderma spasma* colony in Gujarat were the three most important outcomes of my project. Scientific data is being analysed and processed for research publications wherein; RSG has been acknowledged in all the manuscripts.

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

Awareness campaigns for both micro and megachiropterans were conducted at the grassroots level in vernacular language with an aim of having far reaching impact amongst local communities. The younger lot comprising of tribal students and school dropouts were more receptive and eager to

learn about bats. They extended help in form of showing us new bat roosts. My volunteers were instructed to interact in local language which proved to be of great help in involving the local communities. However, at the archaeological sites, monuments, temples and ancient ruins it was difficult to convince the visitors on conservation of bats.

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

Educating people on conservation of bats and their habitat cannot be achieved in 1 year and hence, awareness campaigns will be an inseparable component of bat conservation. Though, I could motivate a few volunteers to conduct extensive surveys of the proposed areas, this exercise will have to be continued. One graduate student has shown interest in choosing a topic related to bats for her Doctoral thesis. Presently, she is conducting literature survey for drafting a research proposal. So, I have a big idea of conducting a statewide awareness on bats at the grassroots level and also to document new bat habitats.

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

I will be soon uploading an edited version of the educational film (made during RSG II) on bats on you tube and its link will be shared on social networking sites and my RSG webpage. Scientific data generated herein is being analysed and processed for research publications wherein; RSG has been acknowledged in all the manuscripts.

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

RSG was used for the proposed duration of 12 months wherein Banaskanta, Dahod, Mehsana, Ahmedabad and Sabarkanta districts of Gujarat could be surveyed on a seasonal basis.

**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	2100	2100	00	The total geographical area proposed herein, was vast. The fuel costs were fluctuating in India during the major part of field work. Hence, extra care was taken not to overshoot travel budget.
Accommodation and food	1600	990	+610	Cost on food and stay was waived off at some venues that were under the purview of the forest department. On other occasions, local hospitality was managed by the local communities. Hence, money was surplus in this budget.
Educational material (development and	800	1190	-390	Educational material ran out of stock midway and hence reprint of the same

printing)				had to be ordered. Also, a calendar-2015 of bat photographs was printed and given as a token of appreciation to the volunteers, participants and some locals. Extra expenses incurred herein were partially met from the second budget head.
Awareness Campaigns and related activities	800	800	00	Expenses for conducting awareness campaigns were met through this budget head. Besides the routine expenses, actual fuel costs incurred by volunteers to travel at various sites for conducting awareness campaigns were reimbursed.
Incidentals and contingency	500	700	+200	Purchase of safety gear, battery backups, torches, first aid kits, etc for the entire team was met herein. Owing to larger number of participants, extra expenses were adjusted against the second budget head. Expenses of park entry fee were met herein.
<b>TOTAL</b>	5800	5800	Nil	

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

After completion of my second RSG I feel that I have just made a beginning towards conservation of bats and their habitat. The biggest threat to bats is habitat loss and hence, people need to be educated towards conserving bats in their habitats. The important next steps are as follows:

- a. Identifying and red flagging the threatened bat habitats.
- b. Alert and sensitise the concerned authorities and officials in this regard by conducting tailored awareness campaigns for these officials.
- c. Conducting a state (Gujarat) level awareness campaign at the grassroots level.
- d. Encourage university and college students to take up studies on bats and their habitats.
- e. More effective use of print media and internet for spreading of scientific facts and threats on bats and their habitats.

### 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?

RSGF received maximum publicity through the awareness campaigns conducted at various parts of the proposed study area. RSG logo was prominently displayed on posters, calendars, banners, leaflets, t-shirts and other educational material. RSG logo generated maximum curiosity as one of the funny queries was “why are you using a tiger logo for bat conservation”. People were curious to know more about Rufford’s foundation and its work.

**11. Any other comments?**

I had a wonderful team of volunteers working for my project and I appreciate their kind gesture. Efforts of Mittal Patel and Rahul Bhatt (trained mountaineers and naturalists) are specially acknowledged for their help during data collection by reaching inaccessible heights. I acknowledge Gujarat State Biodiversity Board (GBB) for granting official permission to my team member Kartik Upadhyay. Also, the print media needs a special mention for publishing educational content and creating awareness on bats.