

## 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. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
<b>Your name</b>	Navendu Page
<b>Project title</b>	Assessing the status and distribution of endemic and threatened trees of the Western Ghats
<b>RSG reference</b>	10801-1
<b>Reporting period</b>	22 <sup>nd</sup> Feb 2012 to 31 <sup>st</sup> Aug 2013
<b>Amount of grant</b>	£5995
<b>Your email address</b>	<a href="mailto:navendu.page@gmail.com">navendu.page@gmail.com</a>
<b>Date of this report</b>	31st August 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
To generate a database of distribution and status of endemic woody plants of the Western Ghats			✓	The database comprises of ca. 6500 occurrence points belonging to more than 200 species, collected through 156 vegetation plots and various field surveys. This database was used to build distribution maps for these species.
To carry out species assessments for the endemic woody plants of the Western Ghats			✓	Species occurrence points were used to predict area of occupancy using species distribution models. Following the IUCN guidelines and using these measures of range size and number of locations, we carried out species assessments for more than 150 species of woody plants.
To identify areas critical for conservation of endemic woody species		✓		Based on the distribution of endemic woody plants, we were able to identify important areas at a very broad scale. However, once we include as many endemic species as possible, we will be able to identify more specific areas based on criteria such as number of and complementarity of endemic woody plants.
To produce a pictorial handbook on endemic and threatened woody plants of the Western Ghats			✓	The pictorial handbook features information on distribution and conservation status of 100 species of endemic woody plants. The booklet can also be used as a field guide to identify these plants and contains all the relevant information that has been used in the species assessments.

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

Inaccessibility of remote sampling areas due to lack of roads, elephant movement as well as unexpected weather conditions were some of the hindrances that we faced during the course of our sampling. However, we wish to revisit some of these important sites in the future to take this project forward.

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

1. We put together for the first time, a comprehensive database on the distribution and status of more than 150 endemic species of the Western Ghats. These distribution maps and population estimates would serve as a baseline data for monitoring these species over the

subsequent years. This kind of information would allow subsequent evaluations to be based on the criteria which weren't used in the present study. This will make the future evaluations even more robust and informative.

2. Based on the data generated through this study, species assessments of more than 150 species of endemic woody plants of the Western Ghats were carried out, many of which were evaluated for the first time. We used a novel approach to quantify species ranges using species distribution models and to assign conservation status to endemic woody plants. Our approach makes these species evaluations much more objective and transparent.
3. A pictorial booklet which showcases endemic woody plants of the Western Ghats containing information on their identification features and distribution maps will be one of the significant outcomes of this study. This booklet is aimed at creating awareness about these poorly known species among forest department officials, conservation practitioners, and students.

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

The project did not have a pre-defined component to involve local communities directly as such. However, most of the people who we hired as field assistants during our sampling period belonged to the local tribal communities.

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

We wish to strengthen and consolidate the database generated on the endemic woody plants of Western Ghats by carrying out further field surveys. The purpose of the field surveys is two-fold. Firstly, to validate the predictions of the species distribution models and secondly, to carry out more focused field surveys to locate populations of rare and narrowly endemic species for which we could not collect enough data during the current study period. The current database holds significant information on more than half the number of endemic woody plants. We plan to continue this exercise until we have substantial information on most, if not all, the endemic woody plants of the Western Ghats.

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

1. The findings from this study will be presented in the form of a poster during the Students Conference in Conservation Science, Bangalore, 2013.
2. A manuscript that outlines some of the shortcomings of the IUCN criteria used for species assessments as well as possible solutions to overcome these, highlighting the species assessment results for the endemic woody plants of the Western Ghats, will be communicated to a suitable scientific journal.
3. This study has also resulted in the discovery of few species that are new to science. These species will be described as new taxa in botanical taxonomy journals. A manuscript describing one such species has already been submitted to the journal Phytotaxa.

4. A pictorial booklet that showcases the endemic woody plants of Western Ghats along with their identification features, IUCN status and distribution is currently under preparation. This booklet will also serve as a document containing all the essential details and information that has been used in the assessment and evaluations of the species status of endemic woody plants. This booklet will be communicated to all the Forest Departments of the relevant states as well as various educational and research institutions and NGOs.

**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 over a period of 18 months from 22<sup>nd</sup> Feb 2012 to 31<sup>st</sup> Aug 2013, which was approximately for half of the duration of the actual length of 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.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Field assistant wages	1233	666	567	The cost of field assistant wages was shared with other projects
Food, accommodation and travel	2500	1321	1179	Travel expenditures was also shared with other projects
Hardware and computer supplies	100	81.75	18.25	
Field equipment	1000	480	520	Items such as range-finder included under this budget head was purchased through a different project.
Booklet designing and publication	1162	Yet to be utilised	—	The booklet is currently in the designing stage and this amount will be completely utilised to cover the publication cost once the book is ready.
<b>Total</b>	5995	<b>2548</b>	2284	

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

The first step as a follow up of this study would be to communicate the results through the right channel so that the species assessments can be reviewed and eventually updated on the IUCN Red List of Threatened Species. One of the ways this can be achieved is by organising a Conservation Assessment and Management Plan (CAMP) workshop with participation from regional experts where these results can be verified, scrutinised and finalised to be published in the form of CAMP report.

Communicating the results of the assessment to the forest department officials will also be a crucial step in taking this study forward. Involving the patrolling staff such as the forest guards and watchers by making them aware of the threatened woody plants may help locate more populations of rare endemic species.

We would also like to eventually publish our dataset on open source web portals such as the India Biodiversity Portal where the contents of the database would be available freely for other researchers and interested stakeholders.

**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?**

- The RSGF logo will be used on the poster that that is being presented in the SCCS conference 2013, held in Bangalore, India.
- The RSGF logo will also be used in the pictorial handbook that will be published as part of the outcomes of this project.
- RSGF was also acknowledged as the primary funding source in the research papers that has already been communicated to the journal Phytotaxa.

**11. Any other comments?**

We are grateful to RSGF for funding this project, for being extremely patient and accommodative of all our requests and for granting couple of extensions due to which we could achieve most of our project objectives.