

## The Rufford Foundation

### Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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| Grant Recipient Details    |  |
|----------------------------|--|
| <b>Your name</b>           | Cheten Dorji   |
| <b>Project title</b>       | Saproxylic beetle diversity in different forest types within Punakha |
| <b>RSG reference</b>       | 19289-1  |
| <b>Reporting period</b>    | April 2016 – April 2017  |
| <b>Amount of grant</b>     | £4854  |
| <b>Your email address</b>  | cd@cnr.edu.bt  |
| <b>Date of this report</b> | 6 April, 2017  |

**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 survey and generate baseline information       |              |                    |                | Four times a field survey in different forest types of study area was completed with more than 10 species of large Saproxyllic beetles. |
| Collection of voucher specimens (include rearing) |              |                    |                | Specimens are processed and preserved in National Invertebrates Museum in National Biodiversity Centre, Bhutan and CNR                  |
| Awareness to public and educational institutions  |              |                    |                | Awareness on ecological importance and basic methods of collection of beetles were presented. Poster printing is not achieved.          |

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

Unavailability of high definition micro lens camera/ Trinocular microscope and with few species (identified), the preparation of posters for awareness is not fulfilled. However, the budget allocated for it was efficiently used for purchasing other necessary equipment. Efforts will be made in future to prepare posters on common beetles of Bhutan with more collections from wider area.

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

Since the study was of first kind in Bhutan, it has contributed to the list of coleoptera fauna in Bhutan. All the species recorded are of new record to Bhutan. Therefore, this study have helped in generating the interest in the field of beetle's diversity in the country.

The voucher specimens collected with more than 30 specimens were contributed to National Invertebrates Museum, in National Biodiversity Centre with proper reference

number. The copy of specimens are preserved in College of Natural Resources for further study by author and for taxonomic study to the students.

During the field visit, two forestry officials (in-service) and two first year students undergoing BSc in the College of Natural Resources were trained the different collection and preservation of specimens techniques.

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

As mentioned, this project is of first kind, there was no direct involvement of local people in the project this time. However, indirectly, rural people who accompanied during the field visit were financially benefited and were also engage in field collection.

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

Yes, the project will be continued. I am also involved in of nationwide survey of coleoptera with the counterparts from Natuarilis Biodiversity Centre, Netherlands. Species recorded will be acknowledged and has supplemented to the beetles species of Bhutan.

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

The checklist together with specimens submitted to National Biodiversity Centre, Bhutan will be used by the interested national and international researchers. With hundreds of beetles collected from the country in addition to species collected during this project will be compiled together to have a comprehensive paper on coleoptera which will be submitted for publication. Presentation will be made available as and when required during any seminar.

**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 fund was efficiently used for project purposes from March 2016 to April 2017. It took 1 more month than anticipated project length due to adjustment of presentation and awareness. However, awareness will be made available as and when required in future else well.

**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 visit (Salary for field assistant pony, transportation, accommodation)<br>£1019+£350+£728+£510=   | £2,607          | £2,607        | £0         |   |
| Purchase of equipment and field materials (water soluble glue, mounting cards, stainless steel insect pins, PVP solution, pointed & soft forceps, pinning stage, 5% kaliumhydroxide solution, 5% acetic acid, 70% ethanol measuring scale for small beetles, a coleopterists handbook by Cooter & Barclay<br>£354+£400= | £754            | £354          | +£400      | Procured extra necessary items. Extra amount was adjusted from budget allocated for poster and overhead. Items lists are given in parenthesis on the left |
| Hiring of equipment (camera and GPS)<br>£404+£40=   | £444            | £444          | £0         |   |
| Awareness (mobility, refreshments, preparation for dissemination, banner)<br>£202+£253+£101+£100=   | £656            | £656          | £0         |   |
| Experimental setup and other expenses<br>£303+£90=  | £393            | £393          | £0         |   |
| <b>TOTAL</b>  | £4854           | £4854         | £0         |   |

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

As I am involved in the documentation of beetles species of Bhutan, the study on this group of beetles will be continue for couple more years. Definitely, the survey will be carried out to lager extend. The study will be supplement with additional

documentation from other parts of the country and in due course of time, publication of papers, seminars, field guide book will be pursued. Further, the significance of this group of beetles in the maintaining the forest ecosystem will be assessed for the proper management of forest in the country.

**10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?**

Yes, RSGF logos along with the institutional logos are used in the report submitted to the National Biodiversity Centre, Bhutan. Logos were also used during the seminar presentation. RSGF will be also prominently acknowledged in the report during the publication.

**11. Please provide a full list of all the members of your team and briefly what was their role in the project.**

**12. Any other comments?**

Overall, the project was successful and to further build the capacity of myself and people, possible training, workshops, seminars, and awareness programme will be continued. Capacity built in me with this project, I could now collaborate with other national and international agencies such as National Biodiversity Centre, Bhutan and Naturalis Biodiversity Centre, Netherlands. Now I believe that I have built enough capacity in me to carry out any taxonomic study on beetles.

