

## 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	
Your name	Jenis R. Patel
Project title	Assessment of the status, distribution and conservation issue of forest owlet ( <i>Heteroglaux blewitti</i> ) in Gujarat, India.
RSG reference	17923-1
Reporting period	2015-2016
Amount of grant	£5000
Your email address	<a href="mailto:Jenisbpatel@gmail.com">Jenisbpatel@gmail.com</a>
Date of this report	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
Assessing status, distribution and threats of forest owlets in Gujarat				<p>A total of 84 individual forest owlets were sighted during our survey from nearly 50 locations in Dang forest. Considering its restricted habitat range and fragmented population of 50-249 mature individuals in central India and northern Western Ghats, these results are very significant.</p> <p>Going beyond our proposed study sites, we expanded our surveys in non-protected area of other district also, which included Narmada District, Tapi District, Navsari district and Valsad District.</p> <p>In Narmada district, we surveyed Shoolpaneshwar WLS. Habitat and terrain is very similar to the Dang forest and this forest has connectivity with the Toranmal WLS (approximate aerial distance 65 km) and Dangs forest (approximate aerial distance 81 km), which are the key sites for forest owlet, but we did not confirm forest owlet presence in this area.</p> <p>Tapi district is adjoining district of Dangs and many forest patches overlapped between these two districts, in our surveys we found two locations in Tapi district, but considering its close proximity (&lt; 0.5 km) with Dang district we considered these locations in Dang district. Navsari and Valsad districts were never surveyed before for forest owlet occurrence, thus our survey was the first survey in this area, and we successfully found location in each of these two districts.</p>
Site occupancy and habitat use by Forest owlets in Gujarat				<p>In Dang forest we laid 500 x 500 m sub grids within 2 x 2 km grids for site occupancy and habitat use by forest owlet. In total we covered 183 grids, in these we gathered two sessions of presence/absence data on forest owlet along with different habitat variables and anthropogenic parameters such as tree height, diameter at breast height, grass</p>

			cover, leaf litter, grazing, logging and lopping. Data is being analysed at the moment.
Capacity building of forest staff and local communities through participatory initiative.			<p>Unexpectedly, we have found a very significant forest owl population in the Dang forest of Gujarat. We also found occurrence of forest owlets in the neighbouring districts - Navsari and Valsad. This surveying of forest owlets in other new areas took our more time, and we are still surveying more areas.</p> <p>We are designing a small booklet in local language that covers the all owl species found in Dang forest. That booklet has information regarding owl's habits, preferred habitat and identification keys. This booklet will be distributed primarily amongst the forest department staff, NGOs and researchers to engage in systematic forest owl monitoring.</p> <p>We have also designed a guide map for the forest department, which will allow them to find priority area for forest owl conservation and also help them to understand forest owl distribution in different beats and ranges of the Dang forest. A training workshop is underway for the forest department for the same.</p> <p>It is found that the forest owlets inhabit areas which are near agricultural landscapes and/or human habitations. This findings demand that a monitoring and conservation plan that involve community in the process. In fact, we already have involved some local people during monitoring. They regularly kept us informed of any sighting they had. This system has to become organised and implemented.</p>

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

- 1) We have faced some difficulties in acquiring a permit from forest department and since this project's primary study area falls under the protected areas there are no other ways that we can start our studies without that permission. It took 7 months to get that permission, but it only cost us 2 months in this project as we applied 5 months before we get this grant.

- 2) We have also faced some difficulties in our methodology. Dang was surveyed many times for the forest owl before we began our surveys, but none of those surveys confirm its presence considering these survey efforts, we assume that forest owl population will be low and restricted to certain area, Contrary to our belief our surveys resulted into fairly high population which spread across the whole Dang district. Another difficulty is changing season. The Dang vegetation structure is kept changing according to season and it's difficult to cover whole Dang district for vegetation sampling in one season. Due to these difficulties we were able to cover only 183 grids.

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

Briefly describe the three most important outcomes of your project.

1) India's second largest population of forest owl  
Through this survey we were able to find this amazing population, forest owl which was unknown to everyone. As we mention above, this population represents the 33.73% of its total population. Till date Melghat Tiger Reserve is considered as a stronghold for the forest owl (100 individuals recorded) population, but after our efforts (184 individuals recorded till now), this region will serve as second stronghold for this endemic bird.

2) Forest owl in the other two districts of Gujarat.  
Navsari and Valsad districts were never surveyed before, despite continuations and habitat similarity. Our surveys not only covers these two districts, but also confirmed the presence of this rare bird. These findings are significant because until now ornithologist believe that forest owl is endemic to central India but all our findings are suggesting that Western Ghats also harbouring a good population of forest owl.

3) Forest Owllet or Farmers Owllet.  
This opportunity gave us a chance to look into tribal knowledge, their relation with wildlife and forest in terms of forest owl as well as all other wildlife. In our study, we have witnessed that local farmers (age group 35-50) can differentiate forest owl and spotted owl which are look alike, they are also good at identifying these owls from their calls. Our observation also suggests that forest owllets are quite tolerant to these farmers and not see them as threats. So all these our primary observations will help us to develop a long term monitoring system with the help of the local community.

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

On many occasions I had to interact with the local peoples for getting information about the forest owl. My field assistant also belonged to a tribe inhabiting this region. On many a times we stayed with the local people, who shared their knowledge of forest owl and its habitat.

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

As I have moved to a different place for working with Nature Conservation Foundation in Bangalore, I would not be able to continue the same work on forest owlets. However, my team members intend to continue the work and are planning to raise funds for the same.

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

The results would be shared through articles, research papers in journals and popular articles in natural history magazines. In fact, we already have published some articles and submitted to some more. The information is provide as below.

### *Journal Articles:*

Patel J. R., A. Vasava., & N. Patel (In prep.) Occurrence of Forest owlet (*Heteroglaux blewitti*) in Navsari and Valsad district of Gujarat, India. (To be submitted to Indian Birds)

Note: We are also analysing data of Land use patterns and land cover data. We will incorporate all these data with our survey data and explore more about forest owlet distribution and current land use patterns.

### *Popular articles:*

Patel J. R., A. Vasava., & K. Gamit. Lost and Found (In review): Forest owlets (*Heteroglaux blewitti*) in Dang Forest, Gujarat, MISTNET.

Note: We are working on a one more Article which will be about our conversation with local farmers about forest owlet and other wildlife and that article will be written in local/regional language.

### *Interview in News Paper:*

Interview of Jenis Patel (PI) and Dhaval Patel (Managing trustee of VNC) in TIMES OF INDIA.

Title: Rare owlet believed extinct for 113 yrs. thriving in dang.

Link: (<http://timesofindia.indiatimes.com/city/vadodara/rare-owlet-believed-extinct-for-113-yrs-thriving-in-dang/articleshow/56382553.cms>)

### *Technical report (In preparation)*

Technical report will be prepared soon which will be shared with forest department and all other important stack holders.

Owls of Dang, Booklet. (In preparation)

### *T-shirts (In preparation)*

(Design for t-shirts which represents owls and its relation with local farmers and habitat)



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

We started utilising RSG fund from October, 2015 and use it for December, 2016. We also extended our field work 4 months as we found a significant huge population of this elusive bird and not only that, we also extended our pilot surveys to nearby districts which lead us to positive results.

**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
Project Incharge (1 Person x 240 Days x 5.5 GBP)	1320	1320	0	
Field Assistants (1 Person x 240 days x 2.5 GBP)	600	600	0	
Vehicle hiring, Fuel costs & maintenance (240 days x 3	720	930	-210	More areas were surveyed than proposed

GBP)				earlier. This took more time and resources.
Food & Accommodation (2 Person x 240 days x 2 GBP)	960	1012	-52	
GPS instrument (Garmin etrex20)	145	0	145	GPS and Rangefinder were also donated by VNC. The available fund is being used to survey new areas and designing and printing awareness materials to create awareness amongst the local communities.
Nikon 8358 Monarch Gold Laser1200 Rangefinder	290	0	290	
Binocular (Bushnell 10x42 Power view roof prism)	170	154.94	15.06	
Spherical Crown Densitometer	70	75.67	-5.67	
Portable Amplifier (Ahuja NBA-15)	50	42.12	7.88	
Satellite Imagery data acquisition (LANDSAT images, land cover maps, BIOCLIM images; and terrain map)	300	0	300	Will be used as proposed
Canon Powershot sx 60	365	365.65	-0.65	
<b>Total</b>	<b>4990</b>	<b>4500.38</b>		

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

Important steps that I would suggest would be to extensively engage the local communities in monitoring and conservation work. Our findings show that majority of the sightings were in human occupied areas and not in forest, the involvement of local people becomes indispensable. Also more and more intensive surveys are needed in surrounding areas, which are also potential regions for forest owlets.

### 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?

Till now we have not produced any printed material. The t-shirts and posters are being designed right now. We will use RSGF logo in our booklets, guide map, technical report, t-shirts, presentations and in publications. Also RSG was duly acknowledged as the funding agency who supported this project, during the presentations.

**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?**

I would like to thank the staff at Rufford Foundation for facilitating the whole process of RSGF. This grant supported the project which is to become a milestone in the natural history of forest owlets. We probably have found the second most stronghold population of this endemic and endangered bird in India. With new records that we found in the neighbouring districts of Navsari and Valsad. This area could probably be the most important forest owl site in the world. The results are amazing. This raises a great hope and prospectus for the survival of this species. This would have not been possible without the support provided by Rufford Foundation. And we feel an enormous gratitude and want to thank Rufford Small Grants' support.

During our field work we have found one bird species and Bat species which are not recorded in Dang before.

- King quail (*Excalfactoria chinensis*)

Patel J. R., B. Desai & K. Gamit (2017) Sighting record of King Quail (*Coturnix chinensis*) in Dang Forest, Gujarat, India. Flamingo.

- Painted Bat (*Kerivoula picta*) (Accepted)

Patel J. R., K. Gamit., N. Gamit & S. Debata (In press) First record of Painted bat (*Kerivoula picta*) (Pallas, 1767) (Mammalia: Chiroptera: Vespertilionidae) from Gujarat, India. Small mammal mail.