# The Rufford Foundation
# Final Report

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.

Thank you for your help.

**Josh Cole, Grants Director**

| **Grant Recipient Details** | |
|---|---|
| **Your name** | Jeevan Rai |
| **Project title** | Status Assessment and Conservation of Small Carnivore Community of Eastern Nepal with Special Focus on Binturong |
| **RSG reference** | 23483-1 |
| **Reporting period** | 2017-10-01 to 2018-12-31 |
| **Amount of grant** | £5000 |
| **Your email address** | ljeevan9211@gmail.com |
| **Date of this report** | 7 December, 2018 |

**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 |
|---|---|---|---|---|
| Document the status of small carnivores in TMJ | | | | Five small carnivores, Asiatic golden cat, red panda, leopard cat, yellow-throated marten and crab-eating mongoose, were successfully documented with the use of camera-traps in Tinjure-Milke-Jaljajale (TMJ) region. |
| Identification of threats to small carnivores in TMJ | | | | Informal interviews, camera trap images and field surveys helped us to identify threats to small carnivores in TMJ. Hunting, lack of conservation awareness and absence of monitoring agency were the major threats identified. |
| Sensitization among students and local community | | | | We published a booklet and poster on small carnivores of TMJ. Sixteen conservation camps were held in the TMJ region in six different schools reaching out to 443 students. One public conservation camp with six local participants was held. |

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

The terrain of Tinjure-Milke-Jaljale was too tough for us to follow a random design for our camera traps. Putting camera traps in random design as our initial plan required more budget and time than we had initially expected. So we had to go for opportunistic camera trap stations. This will affect our ability to infer from the data collected in the field.

Our survey period was also the start of winter in the area. This resulted in slight drizzles and snowfall at later stage of our survey period making the field work difficult. The toughest obstacle due the change in season was drying up of water sources in the area. We had to search long and hard for water sources. We also had to walk distance we planned on covering 2 days in a single day to accommodate this drying up of water sources.

Another minor difficulty was the closing day of schools in the region. Private schools closed on Mondays in Basantapur, Tehrathum, when the usual holiday in Nepal is on

Saturday. So we had to change our plans and go to another area for conservation camps that day.

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

1. *Documentation of mammal species from Tinjure-Milke-Jaljale:* Our camera trap survey was successful in capturing 15 species of mammals in the project area. This included Asiatic golden cat, Assamese macaque, barking deer, crab-eating mongoose, Asiatic wild dog, Indian hare, Nepal grey langur, leopard, leopard cat, Malayan porcupine, red panda, squirrel (species unidentified), wild boar, yellow-throated marten and rodent (species unidentified).

   This is the first record of Asiatic golden cat from Tinjure-Milke-Jaljale area and the second photographic evidence from the country making it an important record for the distribution of the species. We were also able to document red panda from Tinjure-Milke-Jaljale. Locals and organisations working at the area suspected that red panda might have gone locally extinct from the region. Our record proves that the shy carnivore is still present in the area.

2. *Identification of threats to small carnivores in Tinjure-Milke-Jaljale*: Hunting seems to be the major threat to small carnivores in Tinjure-Milke-Jaljale region. Hunters were captured in our camera traps and we also encountered them during our field. Multiple gunshots were also heard during the field survey. Informal interviews also pointed hunting as major threat to small carnivores.

   Another major threat identified was lack of conservation awareness in local community. Though hoarding boards with conservation messages were encountered in the project area, locals seem to regard wildlife as nuisance for their crop raids and livestock killing.

   Absence of governmental monitoring agency was another serious issue in conservation of small carnivores. Though not a threat in itself, this factor is responsible for uncontrolled hunting of small carnivores in the area. Based on our interviews, the project area also served as trade route for wildlife body parts to Tibet region of China.

3. *Sensitisation of students at schools in Tinjure-Milke-Jaljale:* Though this doesn't have outright impact on the conservation of small carnivores in the area, we are sure this is the most important outcome of the project in long term. Our conservation camps hopefully will help inspire and bring out next generation of conservation leaders in the region that will ensure the conservation of small carnivores in the area. Sixteen conservation camps were held in six different schools reaching out to 443 students directly.

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

Local support was essential for the completion of this project from the very beginning. Our local support team came from the communities. Similarly, all of our information on the local terrain and routes came from the local communities. Communities were more involved in the later part of the project, i.e. during the conservation camps. Since this was not possible without the support of community, permission was first requested from schools and libraries in the community to let us conduct our conservation camps. Only after their approval and support, we had the conservation camps.

Local communities were involved in our project through Rural Reconstruction Nepal, a national NGO. The NGO has been working for several years now in the region for eco-tourism and community-based conservation, and was our first point of contact with the locals. Our local support team was introduced to us through them. Their knowledge of local terrain also helped us plan our route for the field survey.

Our local support team were directly benefited through our project as we paid them wages for their service. They also learnt how to setup camera traps. Our project contributed to the economy of the local hotels for a month. Students of the project area were benefited from our conservation camps. Similarly, schools and libraries also received our booklets and posters.

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

Absolutely yes. We plan on doing similar surveys in other forests of eastern Nepal. This is important as there are many regions in the eastern mid-hills that are still unexplored. We will also continue our work with the locals of our project area.

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

We have shared our results through different mediums.

1. *Conservation materials*: Our booklet and poster were a way to share our results with the locals and conservation community. Booklets and posters were distributed in schools and libraries in the project area.

2. *Conservation camp*: It was another way we shared our results with the local community.

3. *Scientific article*: An article on our finding of Asiatic golden cat and red panda was published in The Himalayan Naturalist. Two more manuscripts also have been submitted to two different journals for publications. We are also planning on publishing few more articles that will help us share our results with others.

4. *Video*: A short 6-minute video titled "Small Carnivores of Tinjure Milke Jaljale, Eastern Nepal" was also made and released in YouTube which has been

viewed more than 4000 times. This video was also screened during Kathmandu International Mountain Film Festival (https://kimff.org/kimff-2018/list-of-kimff-selected-films-2018).

5. *Online website and internet*: The project was also shared through Coalition Wild website (https://coalitionwild.org/project-leader/jeevan-rai/). Similarly, it was also shared through our organisational website (http://fonnepal.org/conservation-of-small-carnivore) and social media platforms in Facebook (www.facebook.com/fonnepal2005/) and Twitter (twitter.com/FONnepal2005). A popular article was written by a team member, Raju Acharya in online news portal, PahiloPost (www.pahilopost.com/content/20180927210740.html). Similarly, another popular online news portal, Setopati, covered our story in detail (https://setopati.com/social/171673).

6. *Poster presentation and others:* The result of the project was also shared during the Nepal Owl Festival 2018 in Jiri through poster presentation. An hour long discussion with graduates was also done to share the results during "Guff Gaff" session at Resources Himalaya Foundation (https://resourceshimalaya.org/?activity=guff-gaff-may).

**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 grant was used from October 2017 to November 2018. The project was expected to run from September 2017 to September 2018. However, due to my organisational duties, I had to delay the conservation camps a few months later.

**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 |
|---|---|---|---|---|
| Accommodation | 1300 | 868 | 432 | We had to stay fewer than we expected days in the hotels |
| Booklet design and printing | 750 | 213 | 537 | Since we had both booklet and posters printed at the same press, we got discounts. |
| Conservation poster | 300 | 45 | 255 | |
| Conservation workshops at school: | 500 | 71 | 429 | Fewer days required than we expected. |
| Porter | 600 | 1344 | -744 | We needed more number of porters and the local wage was higher than expected. |

| | | | | |
|---|---|---|---|---|
| Local Guide | 1500 | 840 | 660 | Local guide was needed for shorter duration than we expected. |
| Batteries and other field equipment | 50 | 456 | -406 | We got more camera traps than we expected to have. |
| Transportation | 0 | 836 | -836 | We had to hire vehicles to transport equipment and researchers to the field. |
| Field supplies | 0 | 347 | -347 | We had to setup camps in our field area which required us to buy sleeping bags, mattresses and other essentials. |
| **Total** | **5000** | **5020** | **-20** | |

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

1. *Conducting similar surveys in other regions of eastern Nepal*: This project has made us realise the huge potential that eastern mid-hills of Nepal hold in terms of biodiversity. There are still lot of unexplored areas in the eastern mid-hills that might be important biodiversity hotspots for mammals. Some potential areas are Phedi-Sungdel area in Khotang, Timbung Pokhari area in Panchthar/Taplejung, Yangshila in Morang, Sabhapokhari in higher Tinjure Milke Jaljale region and Tapethok in Taplejung.

2. *Making the communities leaders of conservation:* Now that we know the threats and the biodiversity of Tinjure Milke Jaljale, we can work for conservation together with the community. For a sustainable conservation, communities must realise the importance of conservation and lead conservation. This includes building their capacity, trusting their decisions and making sure that prior consent is taken before any projects are initiated in their region.

3. *Focused conservation projects for school students*: Young students of today will lead the conservation of tomorrow. Though the academic curriculum talks about biodiversity and conservation is some ways, visits during conservation camps made us realise that there is an urgent need to initiate focused conservation projects for school students. The project's aim should be to introduce nature and wildlife to students, encourage students to be curious and investigate about nature, learn the importance of wildlife and conservation about them, and teach them how they can be part of conservation.

4. *Detailed study of Asiatic Golden Cat, Red Panda and Asiatic Wild Dog in Tinjure-Milke-Jaljale:* These three species documented during the camera trap survey need more detailed study on their part. The photo captured of Asiatic golden cat is the second verifiable record of the species from the country. Red panda and Asiatic wild dog are both endangered species recorded for

the first time from the region. They can also play an important role as umbrella species for conservation in the region and boost eco-tourism in the region.

5. *Landscape level approach conservation with focus on connectivity*: The forest of Tinjure-Milke-Jaljale along with other forests of eastern Nepal is highly fragmented. This needs a landscape level approach for conservation. This will ensure that local extinctions don't happen and also help in genetic flow of the species.

**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?**

Rufford Foundation logo was used in the posters and booklets published during the project.

Rufford Foundation was acknowledged as one of the funding agency in each article published and submitted as a result of this project.

The foundation will be acknowledged as funding agency in all our future manuscripts too related to this project. The foundation has also been acknowledged as funding agency in our short video titled "Small Carnivores of Tinjure Milke Jaljale, Eastern Nepal".

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

**Jeevan Rai** (Team Leader): He was involved in the project from start to finish. He designed the survey, collected data in the field, designed and wrote the booklet and poster, and conducted the conservation camps.

**Nitesh Singh**: He was involved in writing and publishing of the conservation materials.

**Kaushal Yadav**: He collected data in the field and was involved in the writing and publishing of the conservation materials.

**Raju Acharya**: He was involved in the design of the survey as well as writing and publishing of the conservation materials.

**Yadav Ghimirey**: He was involved in the design of the survey and was involved in the writing and publishing of the conservation materials.

**12. Any other comments?**

A huge thanks to Rufford Foundation for funding this project. Thank you for letting me do what I love to do.

The Rufford Foundation
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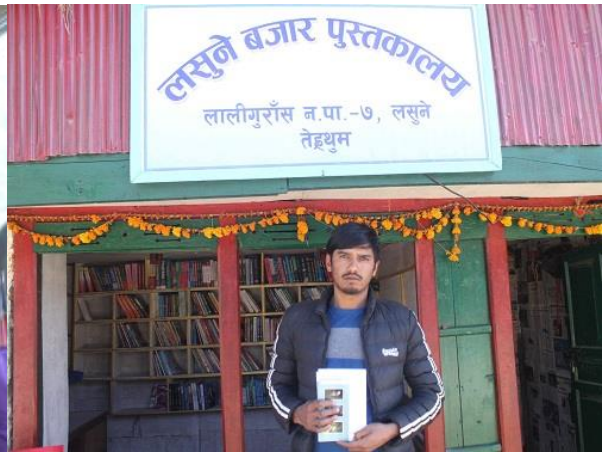
*Clockwise from top left*: Team moving camps during camera trap survey; putting camera traps for small carnivores; Red Panda captured in Gauthale; Yellow-throated Marten, the most common small carnivore of the area; Crab-eating Mongoose captured near Gufa Pokhari; Leopard Cat near Gauthale; Asiatic Golden Cat captured in mixed Rhododendron forest.


*Clockwise from top left*: students reading booklet on small carnivores in Shree Basanta Secondary School; evaluation forms were used to measure the effectiveness of the conservation camp; posters used as conservation material during conservation camp in Kanchanjungha English Boarding School; booklet were handed to Lasune Bajar Library for public; staff from Shree Tinjure Community Learning Centre and Library with the booklet; students share booklet among them in Mount Makalu English School.

**Table 1 Results from quick survey done prior to the conservation camp in schools of Tinjure-Milke-Jaljale periphery.**

| S.N | Name of School | Class | Students | How many have | | | | | How many have catapult ? | Evaluation sheet filled |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | seen small carnivores | heard small carnivores | seen their dens | killed small carnivores | heard of its trade | | |
| 1 | Shree Basanta Secondary School | 4, 5, 6, 7, 8 | 113 | 41 | 14 | 0 | 0 | 0 | 9 | 9 |
| 2 | Shree Jalapa Devi Primary School | 4, 5, 6 | 53 | 14 | 0 | 0 | 0 | 0 | 12 | 5 |
| 3 | Kanchenjunga English Boarding School | 4, 5 | 23 | 7 | 0 | 0 | 0 | 0 | 3 | 6 |
| 4 | Shree Tinjure Secondary School | 6, 7, 8 | 66 | 9 | 0 | 0 | 1 | 0 | 5 | 0 |
| 5 | Mount Makalu English School | 5, 6, 7, 8 | 116 | 73 | 25 | 21 | 11 | 0 | 28 | 12 |
| 7 | Shree Basanta Sadan English School | 6, 7, 8 | 72 | 42 | 28 | 0 | 5 | 0 | 23 | 9 |
| **Total** | | | **443** | **186** | **67** | **21** | **17** | **0** | **80** | 41 |