

## Final Evaluation Report

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Your Details	
Full Name	Pratichhya Shrestha
Project Title	Baseline information and conservation initiatives of Hispid Hare ( <i>Caprolagus hispidus</i> (Pearson,1839)) in Chitwan National Park, Nepal
Application ID	25498-1
Grant Amount	£4,971
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Date of this Report	May 2020

1. 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
Exploring the status and distribution of Hispid Hare				<p>As hispid hares mostly prefer to live in tall grasslands, direct sighting is difficult, so a pellet survey was done to explore its status in Chitwan National Park (CNP). The areas where the pellets are found to be more abundant will probably be more used by hispid hare. The presence of indirect signs, i.e. pellets and feeding signs of hispid hare on the Sukhibhar grassland, confirms the presence of the species in Chitwan National Park. However, the finding of very few pellet groups shows a low population density of hispid hare in the area and urges the rapid conservation strategies for its sustainable conservation. The pellet survey was carried out once in every surveyed grassland patch. The pellet density of hispid hare was found to be 0.0018/m<sup>2</sup> (17.9/ha) and population density was 1.99 individuals/ha. Though we placed 20 camera traps for 30 days before grassland burning and 5 traps for 15 days after burning, following the protocols in probable sites after pellet survey, we could not capture any photograph of hispid hare but photographs of Indian hare and other fauna have been captured. The species was found to be distributed along the tall grassland patches away (at least 500 m away) from the water sources. Its distribution overlaps to the study of Oliver (1984) and shows clumped type of distribution. Pellets</p>

			<p>were absent on riverbanks, in forest areas and short grassland patches. In contrast to the target species, pellets of Indian hare were mostly found near the riverbanks. Pellets were found in restricted pocket area of tall grasslands in CNP along the riverbanks of Rapti river.</p>
Habitat analysis of Hispid Hare			<p>Hispid hare, being an elusive species, mostly is an inhabitant of tall grassland patches. Out of 184 transects laid in the tall grasslands, forest areas and open short grasslands, pellets were found in only nine transects laid in tall grasslands dominated by <i>Sachharum bengalensis</i>, <i>Themeda arundinacea</i>, <i>Sachharum narenga</i> and <i>Imperata cylindrica</i>. Preferable grassland habitat for the target species was found to be grasslands along the riverbanks of Rapti River. Target species used tall grasses in order to protect themselves from predator and also increase the breeding success.</p>
Identifying potential threats to Hispid Hare			<p>Uncontrolled and unmanaged grassland burning in some grassland patches, collection of grasses for elephants, illegal thatch cutting, flooding, invasion of grassland by some invasive species like <i>Mikania</i> spp., <i>Lantana camera</i>, <i>Ageratum</i> spp., and lack of active concern for elusive species like hispid hare.</p>
Increment in awareness level of local people			<p>Most of the locals were unfamiliar with rabbits with short ears and tail. They were familiar with the presence of long-eared Indian hare but replied that the photograph of hispid hare must be "Thulomusa" or "Udharmus" meaning big rat or bandicoots. We conducted workshops in which members of mother's group and youth clubs participated. We also</p>

			<p>conducted meetings with park authorities and local NGOs to share our knowledge and to gain different ideas about species in the national park and its areas. Moreover, we conducted one round of awareness lectures with visual displays and presentation and then after we conducted drawing, essay writing competition and also speech competition in different schools located in the buffer zone of CNP. Winners were awarded with prize and gift hampers. Along with the awareness programmes, we also collected views of local people living nearby park area in regard to their willingness to conserve hispid hare. Majority of people were unaware about such species and were very much welcoming to help anytime for the conservation of target species. Questionnaire survey shows that there is an immediate need of widespread awareness campaign regarding hispid hare and its sustainable conservation.</p>
<p>Identification of alternative appropriate grassland management strategies</p>			<p>Cutting of grasses, uprooting of saplings of trees, removal of weeds, patch burning and change in the timing of grassland burning should be done as alternatives to the present method of burning for grassland management. In addition to one horned rhinoceros and prey species of tiger, tall grasslands are the home of different small mammals and flightless birds like Bengal florican whose conservation is also equally important, so government and concerned authorities should pay attention to other small protected species like hispid hare whose existence depends upon the presence or availability of</p>

			<p>their habitat. Uncontrolled burning or large-scale burning could seem much more brutal to species like hispid hare. Development of proper guidelines for controlled patch burning in the same grassland and leaving the explored habitat of hispid hare without burning just by cutting old grasses is suggested. Appropriate action plan should be made focussing such rare endangered species for its sustainable existence.</p>
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.**

The present research gave us good experience of working in wild. In the initial phase, we had some problems regarding permissions but later we were fully supported by each and every official. In the field, we had problems to visit some of the dense grasslands, so we had to discard them. Beside hispid hare, other large mammals like one horned rhinoceros, Asian elephant, wild boar, Bengal tiger, etc. also used those tall grassland habitats so we felt difficulty to work freely in such grasslands. However, using elephants made somehow easier for us to work in such core areas having high density of tigers and rhinoceros.

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

- Baseline information regarding status, distribution and potential habitat sites of hispid hare in CNP was explored.
- People at grass root level were made aware about target species and its conservation importance.
- Potential threats to hispid hare were identified through direct observation, camera traps and interviews.

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

We stayed at local houses made as home stay so locals were benefitted by receiving incentives.

Locals were also involved in field survey as well as conservation awareness and paid incentives as field assistants which helped them to get some earnings.

Workshops and school programmes helped the members of women's group and youth clubs to gain basic knowledge regarding techniques of research such as using GPS, camera traps, compass, etc.

Understanding the role of students in the society, we conducted school programmes in different localities. School programmes also helped local students to know about rare animal like hispid hare and the underlying possibilities and opportunities of research and conservation work in their locality. They were found to be amazed to know that there is some rabbit species with short ear and tail. We delivered lectures, videos and also awarded the winners with prizes and gift hampers. There was provision of refreshments for the attendees of workshops and meetings.

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

Definitely, this work was just an initiation to get baseline information about the species. After knowing the status and possible habitat areas of hispid hare, it is now most essential to work for conserving its habitat therein. So further research will be done to conserve the home habitat of hispid hare and to further increase the awareness among local regarding hispid hare, its status and importance. Furthermore, there is need to explore other possible areas and research on biology and behaviour for the conservation of hispid hare.

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

Results of the current research has been disseminated in the printed as well as softcopy report to DNPWC and CNP. The result will also be soon published in good peer-reviewed journal for wide dissemination.

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

The whole timescale has been slightly delayed due to delay in the permission and also due to different security issues. However, the present survey has been very successful to meet its objectives.

**8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Communication and miscellaneous	60	60		
Report printing	60	60		
Hoarding board designing, printing and installation	290		-290	Hoarding board was not installed due to lack of budget and permission by the park authority

Media expenses	50	34	-16	
Conservation awareness materials	1123	1023	-100	Flex and pamphlets were printed in cheaper rate than budgeted
Stationery materials	120	127	+7	Additional gift hampers were purchased as additional speech competition was also held in one of the schools
Field materials	120	251	+131	Amount for batteries of camera traps was not previously added, camera traps were supported by Green Governance Nepal and Small Mammals conservation and Research Foundation, GPS and projector was also supported by SMCRF
First aid kit	85	68	-17	Luckily, we did not meet with any severe injuries besides minor cuts, strains and other health problems
Local transportation	55	65.92	10.92	
Assistance for research assistant and local guide	1764	2071	+307	We have to pay for the elephants and elephant mouths on the daily basis during field survey inside the park as most of the sites contain good population of one horned rhinoceros, wild elephants and tiger, elephants were used only in those areas where walking by foot was at high risk
Food and accommodation	1146	1110	-36	Staying at local home stay cost a bit cheaper to us
Transportation	98	123	+25	Additional trip to headquarter of Chitwan National Park, Kasara was made twice for the permission process and disseminating results 3-person x 5 times (two way) x 8.18= 122.7
<b>Totals</b>	<b>4971</b>	<b>4971</b>		

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

The current project has confirmed the presence of hispid hare in Chitwan National Park but in very few numbers as discovered from pellet survey. They are found to be

distributed in isolated pockets of tall grasslands. Local people were totally unknown about such hare with short ear and tail looking similar to rat due to its colour and appearance.

Knowing the current status and distribution of any species is the first priority but conservation of explored potential habitat is much more crucial for long term in-situ conservation of endangered species like hispid hare which can be conserved only in its natural habitat as captive breeding is not much suggested. Exploring the current status and distribution of the species in our country and conserving the habitat by planning and forming proper management strategies is of utmost importance.

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

The Rufford Foundation logo was happily used in all the conservation awareness materials. Of course, the foundation has received much more publicity during our awareness programmes, workshops, meetings and through radio programme as well. In the programmes we have shared that recent as well as many more conservation programmes and research in our country are possible due to the very helpful hands from The Rufford Foundation. Queries of students from different schools regarding the foundation, its application processes, criteria's basics of research were also addressed and the same was also done through radio programme as well.

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

**Pratichhya Shrestha** (M.Sc. in Zoology, Principal researcher)

**Baburam Mahato** (Field guide, Nepal Tiger Trust)

**Raju Kumal** (Field guide, Nepal Tiger Trust)

**Ishwari Mahato** (Ranger, CNP)

**Shyam Kumari Saru** (M.Sc. in Zoology, Field assistant)

**Kabita Karki** (M.Sc. in Environmental Science, Field assistant)

**Samjhana Barali** (M.Sc. in Botany, Field assistant)

**Sangam Chaudhary** (Elephant Mouth)

**Ram kumar Chaudhary** (Elephant Mouth)

**Arun K. Singh** (Elephant Mouth)

**Umesh K. Chaudhary** (Elephant Mouth)

## 12. Any other comments?

First and foremost, we would like to express our immense thanks to The Rufford Foundation, UK for providing us this grant to accomplish such an urgent work of conservation need. We would also like to thank DNPWC and CNP for providing us permission of carrying out this survey. We are indebted to tireless support and motivation of Mr. Bhupendra Yadav, Mr. Sanjan Thapa, Director and Mr. Bed Bahadur Khadka. We would also like to thank Green Governance Nepal for providing us with camera traps. We are heartily thankful to all the helping hands for their kind support during this project.

This survey has explored the baseline information of Hispid Hare. It has identified the potential habitats and threats and need of management strategies to prevent this target species from extinction. Extinction is forever, so we have to understand the importance of both small and large animals and conserve both for the actual biodiversity conservation.