

Final Evaluation Report

Your Details	
Full Name	Santosh Bhattarai
Project Title	Conservation and Ecology of Critically Endangered Dark Sitana (<i>Sitana fusca</i>) in Nepal
Application ID	36773-1
Date of this Report	December 2023

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
Project permission and develop conservation outreach materials				A permission letter (ref no: 738/079-080) was granted by the Ministry of Industry, Tourism and Forests, Madhesh Province, Nepal. The conservation outreach materials (poster of dark sitana; n=1000 copies; t-shirts = 50 pieces) were designed, printed, and distributed. Later, 500 additional posters were also printed because of high demand in the field. The fund for additional 500 posters was supported by Katie Adamson Conservation Fund, USA.
Conduct conservation Outreach campaigns				Conservation outreach sessions in 15 schools (n=1055 students; 492 boys and 563 girls) and in five communities (n=123 members) were conducted. We supported dark sitana posters to the colleagues Bivek Gautam, Yam Rawat and Laxmi Raj Upadhyaya for additional five conservation outreach sessions outside of our project site but in other sitana species distribution range.
Habitat and distribution mapping				We found the target species other than its type locality from where it was only been reported from. We also recorded other associated species. We will prepare and submit a manuscript after data analysis.

2. Describe the three most important outcomes of your project.

a). Active participation of students and local communities

We conducted 15 school sessions and five community outreach sessions in our project site. The outreach sessions in Nepal are mainly focused on charismatic species such as tiger, rhino and elephants. The conservation outreach sessions for lesser known species such as lizards are rarely conducted in Nepal and such sessions outside of protected area systems are almost nil. We found school students and communities outside of protected area systems are also curious to understand their local fauna. In most cases, many students and communities got confused with

sympatric lizards during pre-session discussion; however, later they realised the difference between dark sitana and other local lizards. The peri-forest communities who primarily use forest resources such as firewood and grasses for their livelihood also helped us to locate the dark sitana sites after conservation outreach sessions.





Figure 1. Photo session after outreach campaigns: Top photo; Students from Dudihawa, Rautahat; Middle photo: students from Shankar school, Saptari and Bottom photo: communities from Parsa National Park.

b). Re print of outreach materials

We printed 1000 copies of dark sitana poster and 50 t-shirts for conservation outreach campaigns. We distributed the materials during outreach sessions. The poster of dark sitana was so highly revered in schools and communities that we printed an additional 500 copies for distribution. We also provided our posters to conduct similar outreach sessions beyond our project site where sitana species are known to occur.

c). Distribution mapping

We found the occurrence of dark sitana other than its known locations during our survey. The new distribution map with natural history records of dark sitana will present better understanding on its distribution and current threats in the project site.

We have also recorded associated reptile species and other herpetofauna during survey. We will prepare a manuscript on it.

SAVE THE DARK SITANA
(*Sitana fusca*)



**SAVE IT
OR LOSE IT**

IMPORTANCE

- Controls pests
- Maintains ecological balance

THREATS

- Habitat degradation
- Climate change
- Forest fire

CONSERVATION

- Habitat protection
- Research and Monitoring
- Conservation outreach

SAVING LIZARDS FROM EXTINCTION IS OUR RESPONSIBILITY

Figure 2. Printed copy of conservation poster (n=1000 copies) and reprinted (n=500 copies) for outreach campaigns.

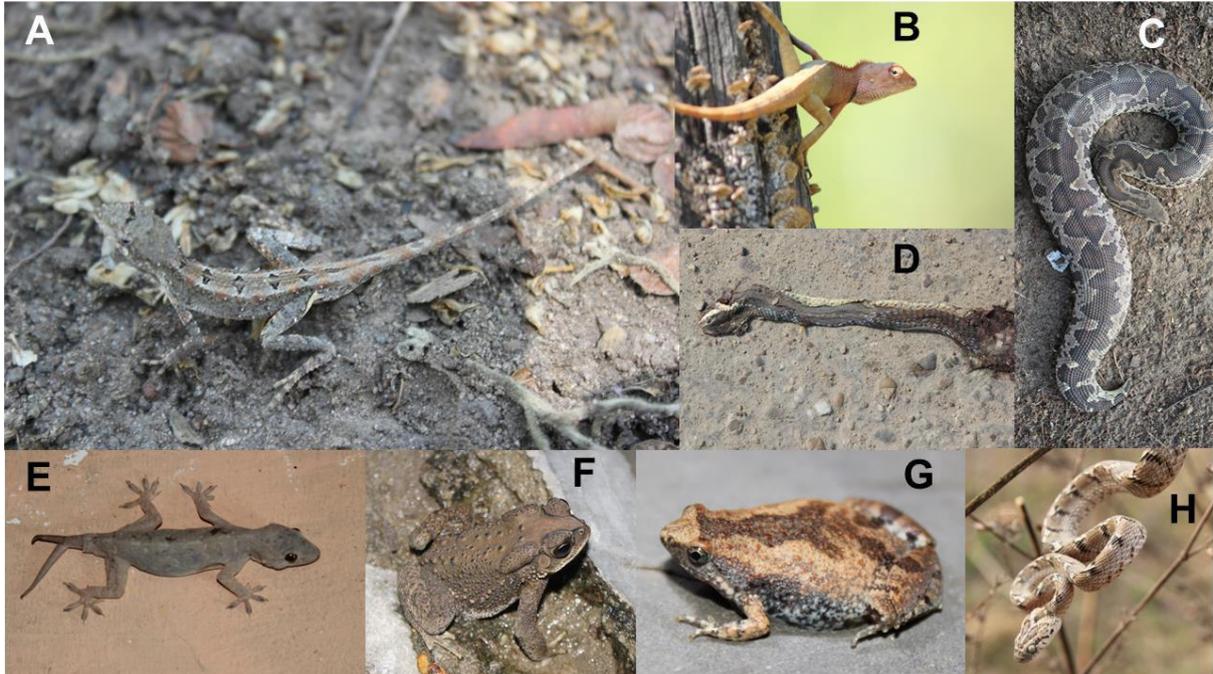


Figure 3. A snippet of Dark sitana and other herpetofauna recorded during field survey. A: Dark sitana; B: Common Garden lizard; C: Common sand boa snake; D: Roadkill of Common bronze-back snake; E: House gecko; F: Common Asian toad; G: Nilphamari narrow-mouth frog and H: Common cat snake.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

We collaborated with local partner Mithila Wildlife Trust and implemented through Nepal Conservation and Research Center. Both the organisations are field based institutions and managed the local logistics during field implementations; therefore, we did not come across any difficulty during the project period.

4. Describe the involvement of local communities and how they have benefited from the project.

We involved stakeholders in multiple ways that benefitted not only to local communities but also helped us in project implementation and even in outreach materials development.

Poster competition

We conducted a social media-based poster competition (on Facebook group herpsNEPAL) during our conservation poster design and printing phase. A total of 22 posters from colleges, university students and participants from conservation organisations from all over Nepal were submitted for the competition. We selected the two best poster winners namely Ms Shreeya Manandhar and Mr. Sanej Parsad Suwal and awarded with dark sitana T-shirts. We also distributed a final printed copy of Dark sitana poster to the contestants.



Figure 4. Team member Bishal Neupane (without glasses) handing over a Dark sitana T-shirt to the poster winners (Left photo: Ms. Shreeya Manandhar from Kathmandu University; Right photo: Mr. Sanej Prasad Suwal from Nature Conservation and Study Center).



Figure 5. Team member Bishal Neupane (with black cap) handing over the printed copy of conservation poster to the contestants (Left: Suruchi Mainali from IOF, Hetauda and Right: Bishal Khanal from IOF Hetauda).

World Wildlife Day in schools and communities

We not only conducted our regular campaigns for dark sitana conservation but also marked World Wildlife Day with communities and students. We celebrated the World Wildlife Day with Ratu women community, a women-led group for biodiversity conservation. We also marked the World Wildlife Day with more than 80 students at Shree Mahadev school.



Figure 6. Involving students (top) and local women (bottom) to mark world wildlife day 2023.

Conservation Outreach in sitana range sites

We also involved local communities and students beyond project site for lizard conservation where other species of sitana are known to occur. The conservation outreach for lizard within in and outside of sitana range sites is the first of its kind in Nepal.

The sessions are eye opening to the local communities that lizards are also equally important in ecosystems and they are to be in centre of conservation focus along with large charismatic mammalian species.



Figure 7. Poster support to involve local communities and student beyond project sites for reptile conservation. A: Panchyat secondary school, Morang; B and C: Forest officials and local police in Dang; D: Students from Krishashen Polytech, Ghorahi; E. Local communities of Banke and F: students from RME Tikapur.

World Lizard Day celebration

We marked World Lizard Day 2023 with activities such as a drawing competition among students and face painting. A sensitisation session on characteristics of dark sitana, ecological importance and habitat use was conducted so that students could better portray the characteristics of dark sitana in the drawings. A total of 18 students participated in the drawing competition. Among the contestants, the best four students were awarded with dark sitana t-shirts; five other students were honoured with a diary and a pen set; and the remaining students received poster of dark sitana. The celebration of World Lizard Day in Nepal is first of its kind. Along with drawing competition, the students who were not involved in drawing competition; a side event of dark sitana face painting event was conducted.



Figure 8. World Lizard Day 2023 marked with drawing competition and face painting event. A: drawing of one of the winners, B: The winner (middle) receiving Dark sitana T-shirt; C: Face painting event; D: Group photo after the event (students wearing Dark sitana T-shirts are winners).

5. Are there any plans to continue this work?

Yes, during this project, we were more focused on the type locality and nearby sites. However, we also found the occurrence of the species in sites other than its type locality. In the next phase, we plan to implement the project in the whole province and assess the occurrence and its co-variables and to disseminate conservation importance of this critically endangered lizard.

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

We posted almost all the activities on social media on Facebook; Instagram; TikTok and Twitter (now X) for wider reach/views of project activities. Our project activity was also covered in popular conservation media platform, and we also have uploaded some of our activities on YouTube.

YouTube link of the project activities:

- Dark sitana conservation outreach in Nepal (<https://www.youtube.com/watch?v=wojZpGiFoUg&t=9s>)
- World Lizard Day Celebration in Nepal (<https://www.youtube.com/watch?v=6XXjevVGp2E>)

Media coverage:

- Nepal's BP Highway threatens endemic critically endangered lizard. (<https://news.mongabay.com/2023/07/nepals-bp-highway-threatens-endemic-critically-endangered-lizard/>)

Publications:

- Conservation of critically endangered Dark sitana in Nepal through education campaigns. 2023. Oryx. (<https://www.cambridge.org/core/journals/oryx/article/conservation-of-the-critically-endangered-dark-sitana-in-nepal-through-education-campaigns/FF04358FE5C5704518CFEDD5AD535EA0>)

- National wildlife week marked for Dark sitana conservation in Nepal. 2023.

HerpBuzz- April Issue.

(https://drive.google.com/file/d/1_T5432jKdYFNIsbhkx3l30gF0cQy5SGr/view)

- Conservation of Dark sitana in Nepal. 2023. HerpBuzz- March Issue. (<https://drive.google.com/file/d/17AcEbRlXXpPIXuaHeyvoEspzRBZEsYY6/view>)

We have completed field activities of the project and will work on research article in near future.

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

The dark sitana is distributed outside of protected area network systems. The conservation of wildlife is negligible in this part of Nepal and species like lizards are never priority even from conservation organisations and government agencies. Therefore, continuation of outreach in communities is essential for better understanding of the critically endangered dark sitana. During this project, we managed to find distribution dots of the species but more detailed survey on its habitat uses, and site occupancy is needed to better suggest conservation strategy.

8. 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?

A big yes; we used The Rufford Foundation logo in all form of presentations. We used The Rufford Foundation logo in printed form such as posters (n=1500) and t-shirts (n=50).

We also used the Rufford Foundation logo on power point slides and mentioned during oral presentations. We also mentioned in text of outlet publications of the project (such as in Oryx journal; and HerpBUZZ). The project also got featured on Conservation news platform; Mongabay. We posted almost all activities on social media such as:

Facebook: <https://www.facebook.com/groups/628689110483521>

Instagram: <https://www.instagram.com/ncrcnepal/?hl=en>

Twitter: <https://twitter.com/herpsNEPAL>

YouTube: <https://www.youtube.com/@nepalconservationandresearch9448/featured>

TikTok: <https://www.tiktok.com/@herpsnepal>

We used the logo of the foundation or tagged/mentioned wherever applicable. With all these efforts, we believe that we have contributed significantly for the publicity of the foundation.



Figure 9. A snippet of some of the activities where The Rufford Foundation Logo was used.

9. Provide a full list of all the members of your team and their role in the project.

Santosh Bhattarai: Mr. Bhattarai worked as a team leader and implemented the project activities through Nepal Conservation and Research Center with support from local partner Mithila Wildlife Trust.

Bishal Prasad Neupane: Mr. Neupane worked as team member and helped in conservation outreach activities and field survey. He is associated with Nepal Conservation and Research Center.

Bivek Gautam: Mr. Gautam work as a team member and involved in conservation outreach and field survey.

Dev Narayan Mandal: Mr. Mandal is a chairperson of Mithila Wildlife Trust and worked as a team member in permission of the project. The Mithila Wildlife Trust was local partner and managed to provide logistics such as vehicle; motorbike and staff whenever needed.

Yam Rawat: Mr. Rawat is a park ranger, based in Banke National Park Nepal; primarily focuses his work on reptiles. Mr. Rawat conducted outreach activities for

sitana and other lizard conservation in Banke and Dang and distributed the conservation posters of the Dark sitana supported from this project.

Ganesh Sah: Mr. Sah; a staff of Mithila Wildlife Trust and assisted in the field for identification of local peri-forest communities and schools for outreach campaigns.

Sita Paudel: Ms. Paudel; a staff of Mithila Wildlife Trust and assisted in the field for identification of local peri-forest communities and schools for outreach campaigns.

Laxmi Prasad Upadhyaya: Mr. Upadhyaya is a science teacher and snake rescuer based in Tikapur, Kailali. He supported the project in conservation outreach sessions in RME Tikapur and Tikapur Polytechnic Institute.

Sujan Khanal: Mr. Khanal is associated with Nepal Conservation and Research Center. He works as a team member in GIS related work of the project.

Suruchi Mainali: Ms Mainali is a student of Forestry campus from IOF, Hetauda. She coordinated and conducted face painting event to mark world lizard day.

10. Any other comments?

We are thankful to The Rufford Foundation for providing grant support for conservation and research of the critically endangered dark sitana in Nepal. We acknowledge all the communities, school students and teachers for their active involvement during the project period.