Project Update: February 2024

I am happy to report that we have completed our field sampling and the last field visit for camera trapping was conducted from 3rd-6th February 2024. Based on the results generated, this project has generated more remarkable field observations out of all the camera trapping surveys (in terms of camera footage) we've been conducting for the past 5 years. We must thank The Rufford Foundation for allowing us to purchase 10 new camera traps in addition to our weathering bunch of cameras from our previous projects and facilitating this research project during difficult times that prevailed in Sri Lanka. I also appreciate my young and passionate team members of Wildlife Circle – USJ for their hard work.

We could establish 42 camera trap stations to cover all available habitat types within Kumana National Park. With a trapping effort of ~4000 camera trap days we obtained more than 6700 images of mammals, birds and reptiles. There are approximately ~ 5000 medium and large mammal images including 92 leopard and 48 sloth bear camera trap captures. We have recorded ~ 700 images of target species of carnivores. Since we just concluded our trapping sessions, a lot of analyses are yet to be conducted.

However, halfway through the project, supplementing our preliminary work, we could publish our work in several symposia and conferences (references are available at the end of this document). We are also working on some full papers based on the data that has been generated and plan to publish them by the second quarter of 2024.

Following are objectives we have set under this project and the current progress:

1. Preliminary surveys to evaluate habitat availability: completed and maps are generated (full paper to be published).

2. Purchase of new camera traps to supplement the available camera traps: 10 new camera traps were purchased which helped us immensely during our fieldwork. Camera trapping sessions already completed. Deploying the camera traps/field surveys: completed with excellent results.

3. Awareness programmes/establishment of information boards: one awareness programme (during the pilgrimage) and one information board establishment has been already completed. However, I believe it is essential to conduct at least one more awareness and capacity building programme for the local community, school children and relevant stakeholders. We plan to establish more awareness raising and information boards as the final step.

4. Publications/symposia/conferences: the work has been presented in three symposia as conference proceedings. However, we plan to publish at least four full papers in peer-reviewed journals to disseminate the knowledge generated.

5. Documentary creation (continues from previous project): This work has been

ongoing, and our plan is to release the segment of documentary within the next 3 months.

6. Data analysis/species and habitat map generation/knowledge sharing: we have already completed habitat categorisation based on a remote sensing approach and ground surveys, abundance estimates, activity analysis and occupancy modeling. However, with the large amount of data that was generated and extensive field sampling throughout the past year in demanding conditions of elephant, leopard and sloth bear range and heat of Kumana left us with limited time for further analysis. Our target is to complete the population density estimation for all species using new modeling techniques and identification of species-specific critical habitats during the next 6 months. It will be the first population estimate for almost all the focal species for this region.

The following table includes a list of medium and large mammals that were recorded during our surveys with their IUCN status.

Species	**IUCN red list status**	
	National	**Global**
Indian crested porcupine *Hystrix indica* (Kerr, 1792)	LC	LC
Black-naped hare *Lepus nigricollis* (Cuvier, 1823)	LC	LC
Indian pangolin *Manis crassicaudata* (Geoffroy, 1803)	NT	NT
Jackal *Canis aureus* (Linnaeus, 1758)	LC	LC
Jungle cat *Felis chaus* (Gueldenstaedt, 1776)	NT	LC
Rusty-spotted cat *Prionailurus rubiginosus* (Geoffroy, 1831)	EN	VU
Fishing cat *Prionailurus viverrinus* (Bennett, 1833)	EN	EN
Brown mongoose *Urva fuscus* (Gray, 1837)	LC	-
Grey mongoose *Urva edwardsii* (Geoffroy, 1818)	LC	LC
Ruddy mongoose *Urva smithii* (Gray, 1837)	LC	LC
Stripe-necked or badger mongoose *Urva vitticollis* (Bennett, 1835)	VU	LC
Common palm civet *Paradoxurus hermaphoditus* (Pallas, 1777)	LC	LC
Golden palm civet	EN	-

Paradoxurus zeylonensis (Cuvier, 1822)		
Ring-tailed civet *Viverricula indica* (Desmarest, 1817)	LC	LC
Sri Lankan spotted chevrotain *Moschiola meminna* (Erxleben, 1777)	LC	LC
Yellow-striped chevrotain *Moschiola kathygre* (Groves & Meijaard, 2005)	VU	LC
Sri Lankan leopard *Panthera pardus kotiya* (Deraniyagala, 1956)	EN	EN
Sloth bear *Melursus ursinus inornatus* (Pucheran, 1855))	EN	EN
Sri Lankan elephant *Elephas maximus maximus* (Linnaeus, 1758)	EN	EN
Sambar deer *Rusa unicolor unicolor* (Kerr, 1792)	NT	VU
Wild water buffalo *Bubalus arnee* (Kerr, 1792)	VU	EN
Axis deer *Axis axis*	LC	LC

Out of the 14 targeted species we could observe 13 at Kumana National Park and outside areas. Otter (*Lutra lutra*) could not be recorded from the area.

Activities to be completed

Awareness and capacity building workshop for school children, local villagers, other stakeholders (Planned to be conducted between March 2024 – May 2024).

- Establishment of information boards.
- Video documentary.
- Further analysis and full paper publications.
- Newspaper articles and social media posts for conservation awareness.

Some video screenshots of species captured in our camera traps and our activities at Kumana are included below.

Sri Lankan Leopard – Panthera pardus kotiya.


Sloth Bear - Melursus ursinus.

Axis deer – Axis axis (Main prey species of leopard).

Sri Lankan elephant – Elephas maximus maximus.

Awareness activities.

During field work.

"Paada Yathra" pilgrimage and subsequent cleanup programs.

Our TEAM!

Publications

Rodrigo, B.K.P.D., Gunathilaka, W.D.C.N., Jayasekara, E.G.D.P. and Mahaulpatha, W.A.D. (2023). Spatiotemporal Habitat Use of Family Viverridae in Kumana National Park, Sri Lanka. In: *Proceedings of International Forestry and Environment Symposium* (Vol. 29). University of Sri Jayewardenepura.

Rodrigo, B.K.P.D., Gunathilaka, W.D.C.N., Jayasekara, E.G.D.P., Dissanayaka, D.M.W. and Mahaulpatha, W.A.D. (2024). Activity and temporal niche overlap of Sri Lankan Leopard (*Panthera pardus kotiya*) with sympatric medium-sized mammals in Kumana National Park, Sri Lanka. In: Proceedings of Wildlanka International Symposium 2023.

Acknowledgement

I express my sincere gratitude to Department of Zoology, University of Sri Jayewardenepura for providing me with this great opportunity and for the guidance and support to make a successful academic path

I highly appreciate the support received from Park Warden, Mr. R.A.D. Samaranayaka, Park Manager, Mr. Wasantha Disanayaka, Wildlife Ranger, Mr. Ajith Kumara and all the supporting staff of Kumana National Park, Sri Lanka

My heartfelt gratitude goes to my research team for the support and encouragement I received during the research work

DWC Permit No – WL/3/2/44/22

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Acknowledgement slide from one of our team members symposium presentations.