MANVI SHARMA

Assistant Professor

Ashoka University

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Ashoka University

https://sites.google.com/view/manvigsharma/home

PROFILE

I am a behavioural ecologist interested in understanding the diversity in predator and prey behaviour and how biological communities interact and are assembled. I use approaches from behavioural, population, and community ecology to answer questions about how animals can show a diverse set of responses to the changing problems around them.

RESEARCH FOCUS

- Behavioural ecology
- Population ecology
- Thermal ecology
- Movement ecology
- Carnivore biology
- Snow leopard conservation

EDUCATION

PHD

Indian Institute of Science

2012 - 2018

MASTER OF SCIENCE

Indian Institute of Science

2010 - 2012

BACHELOR OF SCIENCE

University of Delhi

2007 - 2010

EXPERIENCE

SERB NATIONAL POSTDOCTORAL FELLOW

Nature Conservation Foundation

April 2022 – August 2022

I investigated effects of thermal refuges on the mesocarnivore community in the Indian Himalaya. I used species occurrence information from camera traps to model habitat use during periods of thermal stress.

POSTDOCTORAL FELLOW

Nature Conservation Foundation

September 2019 - March 2022

I studied the behaviour, ecology, and population dynamics of snow leopards and their prey at multiple scales of ecological complexity. I worked on four projects:

- Investigating the role of livestock grazing in disrupting density-dependent population dynamics of a wild ungulate (Manuscript under review)
- Population ecology of snow leopards and their primary prey. (Manuscript published)
- Carnivore community assembly in Himalaya (Manuscript under review)
- Species distribution modelling of functionally important taxa to inform conservation action (Manuscript under review)

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AWARDS AND GRANTS

- National post-doctoral fellowship by Science and Engineering Research Board, Government of India 2021
- Highlighted Student Research paper in Oecologia. 2020
- DST AWSAR Award by the Department of Science and Technology for science outreach and communication. 2019.
- Carl Storm International Diversity Award. Gordon Research Conference. 2018
- Bridging research fellowship award. Indian Institute of Science. 2017-2018
- IISc student fellowship. Indian Institute of Science. 2012-2017
- Conference travel award International Society for Behavioural Ecology. 2016
- CSIR grant for doctoral research work. 2014-2018

EXPERIENCE

VISITING RESEARCHER

Ashoka Trust for Research in Ecology and the Environment

August 2018 - March 2019

At ATREE, I worked with Dr Abi Vanak to understand how dog contact network structures (based on telemetry data) vary along a rural-urban gradient. This can have consequences for disease spill-over from dogs to carnivores. (Manuscript in preparation)

GRADUATE STUDENT

Indian Institute of Science

August 2012 - Febraury 2018

I worked with Dr Kavita Isvaran to study trait evolution in spatially and temporally heterogeneous environments in a predator-prey model system. I investigated prey habitat selection when predation risk varies predictably and unpredictably, a relatively less studied form of variation in the environment.

PUBLICATIONS

Kulbhushansingh Suryawanshi,.**Manvi Sharma**,..Charudutt Mishra. Prevalence of traditional wolf traps Shandong across Ladakh and a community-led solution for wolf conservation. Frontiers in Ecology And Evolution. 2022.

Kulbhushansingh Suryawanshi,**Manvi Sharma***,.,Charudutt Mishra. Estimating snow leopard and prey populations at large spatial scales. Ecological Solutions and Evidence. 2021

Manvi Sharma*, Suhel Quader, Vishwesha Guttal, Kavita Isvaran The enemy of my enemy: multiple competing selection pressures lead to unexpected antipredator response. Oecologia 192 1-12 2020

Manvi Sharma*, Kavita Isvaran. Trait evolution under multiple selection pressures: Prey responses to predictable and unpredictable variation https://doi.org/10.1101/816314 2019

Archana Murthy, **Manvi Sharma**, Kavita Isvaran Groups constrain the use of risky habitat by individuals: a new cost to sociality? Animal Behaviour 113 167-175 2016

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SKILLS

- **Data analyses:**Population estimation (spatially explicit capture-recapture), network analyses, spatial data analyses (species distribution modelling, animal relocation data), statistical modelling
- **Mentoring:** I have mentored 13 students. I was invited by the MoEFCC (Ministry of Environment, Forest, and Climate change) for a panel discussion on mentoring women in science
- **Science communication:**My popular science article on disease ecology won an award in a national competition organized by DST (Department of Science and Technology, Government of India)
- **Bridging Science and policy:**I worked closely with the Himachal Pradesh Forest Department and conducted capacity building training
- **Peer-review:**I have served as a reviewer for multiple manuscripts for the Journal of Applied Ecology, Biological Conservation, and Plos One.

PUBLICATIONS

Manvi Sharma*,.., Kulbhushansingh Suryawanshi. Shining the spotlight on pheasants of snow-leopard landscapes: examining distribution patterns using a multi-species approach. Under review in Biodiversity and Conservation.

Manvi Sharma*, Charudutt Mishra,.., Kulbhushansingh Suryawanshi. Can livestock grazing disrupt density-dependent population dynamics of a wild ungulate? Under review in Journal of Animal Ecology

Manvi Sharma* and Kavita Isvaran. A priori quantification of predictable and unpredictable predation risk. Under review in Oikos.

Jenis Patel,..**Manvi Sharma**.., Kulbhushansingh Suryawanshi. Relative effects of predator suppression and prey availability on the presence of carnivores in western Himalaya. Submitted to Proc. B.

Manvi Sharma* and Kavita Isvaran. Spoilt for choice: how choice repertoire shapes reproduction-related decision making. Under review in American Naturalist.

Munib Khaniyari, **Manvi Sharma**, ., Kulbhushansingh Suryawanshi. Predicting and reducing parasite infection between migratory livestock and resident Asiatic Ibex in the Himalaya. Under review in Animal Conservation.

Draft prepared

I'd be happy to share drafts of the following manuscripts:

Manvi Sharma*, ., Abi Vanak. Reservoir dogs: Consequences of variable dog network structures for disease spread along a rural- urban gradient

Manvi Sharma*,..Kavita Isvaran. Ovipositing females use multiple sources of information for egg-laying decisions