



**The University of Hong Kong
School of Biological Sciences**

**Guest
Seminar**

Ecological Interactions: Predator Coexistence and Competitive Dynamics in the Central Himalayas, Nepal

Date: 23 October 2024

Time: 1600

Venue: KBSB 3N-01



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CENTRE FOR EXPLORATION
THE UNIVERSITY OF HONG KONG



About the speaker:

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Abstract:

The coexistence and competition dynamics of apex predators in the central Himalayas are critical for understanding ecosystem stability. This study examined the spatiotemporal interactions among leopards (*Panthera pardus*), snow leopards (*P. uncia*), Himalayan wolves (*Canis lupus*) and Himalayan black bears (*Ursus arctos*) in the Lapchi Valley, Gaurishankar Conservation Area, Nepal. From 2018 to 2023, camera traps at elevations between 2200 m and 4900 m recorded 21 species of wild mammals and 2 domesticated livestock species. Activity pattern analysis indicated significant spatiotemporal overlap among these apex predators. Scat analysis of snow leopards indicated seasonal dietary plasticity, aligning with prey availability. The land use and land cover (LULC) analysis showed considerable change with habitat fragmentation due to linear infrastructure development in prime forest areas. This fragmentation, coupled with warmer and wetter conditions brought by climate change, forced the forest-dwelling species to shift to alpine zones, increasing the likelihood of predator encounters and intensifying competition for resources. Such rivalry for food and space may lead to the local extinction of certain predators or increase human-wildlife conflict. These shifts in behaviour dynamics highlight the urgent need for targeted biodiversity conservation, particularly in light of climate change and habitat alterations. The findings emphasize the ecological richness of Lapchi Valley and the importance of collaborative transboundary conservation efforts to ensure effective ecosystem management.