

Abstract ID: 60

anishbanerjee27112001@gmail.com | India

**Title of the Abstract:**

Spatial Predictors of Human–Leopard and Human–Tiger Conflict Across South Asia Using a Meta-Analytical Framework

**ABSTRACTS**

---

Across South Asia, recovering large carnivore populations and rapid habitat transformation have increased human–carnivore conflict. Regional-scale drivers remain poorly understood. This meta-analysis quantifies spatial predictors of conflict risk across human–leopard and human–tiger systems in India, Nepal, Bangladesh, and Bhutan. Conflict locations comprised 4,614 human–leopard records from 34 studies and 3,380 human–tiger records from 22 studies, derived from published datasets and digitized maps with extractable GPS coordinates. Generalized linear models were fitted within a presence–background framework under multiple background sampling strategies. Predictor variables derived from open-source and remote sensing datasets included anthropogenic pressures, landscape structure, bioclimatic conditions, and topography. Models were evaluated using spatially blocked cross-validation. For human–leopard conflict, models showed moderate predictive performance (mean AUC ~0.70), with conflict risk consistently increasing with higher precipitation, proximity to forests, protected areas, and croplands. For human–tiger conflict, models showed high predictive performance (mean AUC ~0.94–0.98), with conflict risk increasing near protected areas, forests, roads, and forest edges. Extensions to the study include integration of compensation records to manage spatial bias in conflict reports and mapping conflict hotspots across their South Asian range.

**Keywords:** Carnivore Ecology, Conservation biology, Human-Wildlife Coexistence, Landscape Ecology

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Anish Banerjee - [anishbanerjee27112001@gmail.com](mailto:anishbanerjee27112001@gmail.com) Think Wildlife Foundation

Abstract ID: 54

laura.bertola@gmail.com | India

**Title of the Abstract:**

A Lion-Specific Genetic Panel for Scalable Conservation Genomics

**ABSTRACTS**

---

With the rapid increase in genomic data, it becomes increasingly feasible to incorporate such information into conservation decision-making. At the same time, a gap persists between genomic researchers and on-the-ground conservation practitioners, and genetics is still often perceived as expensive and slow. Genetic (Single Nucleotide Polymorphism; SNP) panels can help bridge this gap by enabling cost-effective and rapid data generation without requiring extensive computational infrastructure for analysis.

Here we present a lion-specific SNP panel developed by repurposing existing genomic resources and coordinating efforts among groups holding distinct sample sets from populations across Africa and India. The SNP panel was optimized and validated for the use across a range of samples, including low-quality and degraded material, such as non-invasively collected scat samples. It has been tested on blood, tissue, scat, hair, museum specimen, and ingested blood derived from tsetse flies and ticks.

To date, the panel has generated genotypes for more than 1300 individual lions from populations across their entire range, providing a highly detailed baseline dataset for future applications. It is currently used by multiple partners in Africa, e.g. for estimating population sizes through capture-mark-recapture approaches and assessing connectivity. Additionally, it has been applied to analyse forensic samples from multiple seizures and lions from the captive lion breeding industry in South Africa.

Finally, the panel is being redesigned for compatibility across multiple platforms (qPCR singleplex, multiplex Illumina and Nanopore), with the aim of enabling in-country analyses. This will increase accessibility for end-users, making sure they no longer depend on lab facilities in the Global North. It will allow us to jointly build on a shared baseline, to further improve our understanding of lion genetic variation and how to use this information for informed conservation decision-making.

**Keywords:** Africa, forensics, non-invasive, Panthera leo, SNP

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Laura Bertola - [laura.bertola@gmail.com](mailto:laura.bertola@gmail.com) National Centre for Biological Sciences, TIFR, Bangalore, India
- Göran Spong - [goran.spong@slu.se](mailto:goran.spong@slu.se) Swedish University of Agricultural Sciences, Umeå, Sweden

Abstract ID: 59

sachinbhaskar21@iisertvm.ac.in | India

**Title of the Abstract:**

From flowers to food systems: flPoster trait-based structuring of flower-pollinator interactions in the southern Western Ghats, India.

**ABSTRACTS**

---

Pollination is an important ecosystem service that links biodiversity to food production and human health. Animals, especially insects, are important pollinators across natural and urban landscapes. Specific flPoster traits like colour, symmetry, and resource traits may be better suited to some pollinators compared to others, thereby potentially structuring plant-pollinator communities. Yet, how different pollinator groups are structured in the flPoster functional space and whether these pollinators associate with particular flPoster traits remains unclear in species-rich tropical ecosystems, such as the southern Western Ghats.

We hypothesised that 1) Bee-pollinated flowers will occupy a large area in the flPoster trait space in comparison to bird/butterfly pollinated flowers, 2) Generalist fly and beetle pollinated flowers should show a greater overlap in the flPoster trait space, 3) Carpenter bees would be strongly associated with flowers having large display area and poricidal anthers, and 4) Stingless bees and flies will show a strong association to low-rewarding accessible flowers. For 205 plant species, we measured 18 flPoster traits and conducted flower-pollinator observations across an urban-plantation-forest gradient during the wet and dry seasons from 2023-2024 to designate the major pollinator group for each plant species.

We computed the flPoster trait space using principal coordinate analysis. Pollinator functional groups occupied overlapping regions along the major axes of variation, with separation primarily driven by corolla tube length and nectar traits. There were significant differences in the flPoster trait composition between the pollinator groups, with bees showing the largest occupancy in the trait space. Redundancy analyses revealed that flPoster traits significantly explain the variation in the pollinator group visitation patterns. Carpenter bees visit flowers with poricidal anthers and higher nectar concentrations, while stingless bees visit flowers with open corollas. This study highlights the importance of using trait-based approaches to understand plant-pollinator interactions in natural and human-modified tropical communities.

**Keywords:** flPoster traits, One health, Pollination, southern Western Ghats

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Sachin Bhaskar - [sachinbhaskar21@iisertvm.ac.in](mailto:sachinbhaskar21@iisertvm.ac.in) IISER Thiruvananthapuram
- Manish R - [manish21@iisertvm.ac.in](mailto:manish21@iisertvm.ac.in) IISER Thiruvananthapuram
- Hema Somanathan - [hsomanathan@iisertvm.ac.in](mailto:hsomanathan@iisertvm.ac.in) IISER Thiruvananthapuram

Abstract ID: 117

sc25rs024@iiserkol.ac.in | India

**Title of the Abstract:**

Intentional Gestural Communication in Free-ranging Hanuman Langurs Across Anthropogenic Landscapes of Southern West Bengal

**ABSTRACTS**

---

The Anthropocene has escalated human-wildlife interactions creating interfaces enabling novel behavioural interactions such as human-directed food solicitation. Such communications are being increasingly reported in animals that live in anthropogenic areas and have frequent human interactions. In some animals these communications tend to be intentional. Intentional Gestural Communication (IGC) refers to a repertoire of goal-directed, recipient-oriented gestures flexibly adjusted according to social and contextual factors to achieve specific communicative outcome. Though extensively studied in apes, non-ape primates remain unexplored, particularly under free-ranging conditions. This drove us to investigate whether human-directed food-solicitation gestures used by free-ranging Hanuman langurs (*Semnopithecus entellus*) exhibit behavioural hallmarks of intentional communication across six human-modified habitats in southern West Bengal, India.

A total of 360 trials (180 experimental & 180 control) were conducted across langur troops of six different sites. During the experimental trials, an experimenter displayed bread while raising one arm; in the control trials, the same procedure was performed without food. Behavioural responses were video-recorded and coded for established hallmarks of intentionality, including audience checking, goal-directedness, social use, volitional control, and means-end dissociation.

Audience checking was mostly absent in the control trials but occurred in nearly all the experimental trials, with significantly longer looking durations in experimental conditions. Begging gestures, approach behaviours, and nose-body orientation towards the experimenter were strongly condition dependent and largely restricted to experimental trials. Begging ceased immediately after food acquisition fulfilling the apparently satisfactory outcome (ASO) criterion. Use of multiple gesture types across sites demonstrated gestural flexibility and means-end dissociation.

Our findings demonstrate the presence of multiple intentionality hallmarks among these free-ranging colobine primates supporting the previous study that langurs use human-directed solicitation gestures to obtain food, suggesting that such gestures are structured communicative acts rather than mere reflexive responses. This study reflects the behavioural flexibility and adaptive communication in these non-human primates highlighting how they respond to the rapidly changing human-dominated environment.

**Keywords:** Anthropogenic environments, Gestural communication, Hanuman langur, Intentionality, Primate cognition

**Mode:** Poster Presentation

## AUTHORS

---

- **Presenter:** Shriparna Chattopadhyay - [sc25rs024@iiserkol.ac.in](mailto:sc25rs024@iiserkol.ac.in) (IISER Kolkata)
- Dishari Dasgupta - [dishari.1992@gmail.com](mailto:dishari.1992@gmail.com) (IISER Kolkata)
- Manabi Paul - [Manabii.paul@gmail.com](mailto:Manabii.paul@gmail.com) University of Calcutta
- Anindita Bhadra - [abhadra@iiserkol.ac.in](mailto:abhadra@iiserkol.ac.in) (IISER Kolkata)

Abstract ID: 24

gladjesty9@gmail.com | Ghana

**Title of the Abstract:**

How science has invested and contributed to inputs on policies in the west africa

**ABSTRACTS**

---

Science has played a transformative role in shaping public policy in West Africa by generating evidence, strengthening institutions, and fostering collaboration between researchers and policymakers. Over the past decade, significant investments in research systems and knowledge translation platforms have enhanced the region's capacity to produce and apply scientific evidence in decision-making processes.

One major contribution of science is the development of evidence-informed policymaking frameworks. Initiatives such as the Evidence-Policy-Action (EPA) regional hub have created networks that link scientists, governments, and development actors to ensure that policies are grounded in reliable data. These platforms support the synthesis, translation, and dissemination of research findings into actionable policy recommendations, particularly in sectors such as health, agriculture, climate change, and social development.

In the health sector, scientific research has directly informed policy reforms through evidence-based interventions promoted by regional bodies like the West African Health Organization. Evidence-informed policymaking has improved health outcomes by guiding efficient resource allocation, disease control strategies, and health system strengthening.

Science has also contributed by building institutional and human capacity. Programs such as the Science Granting Councils Initiative have enhanced the ability of national institutions to generate data, evaluate policies, and align science, technology, and innovation strategies with development goals. This has promoted a culture of data-driven governance across West African states.

Furthermore, recent investments in scientific collaborations, such as climate and health research consortiums, demonstrate how science is increasingly co-produced with policymakers to address emerging challenges. These partnerships ensure that locally relevant evidence is rapidly translated into policies that respond to climate risks, food insecurity, and public health threats.

Despite these advances, challenges remain, including limited access to timely research, weak researcher-policy engagement, and resource constraints. Nonetheless, science continues to play a critical role in shaping more inclusive, effective, and sustainable policies in West Africa.

**Keywords:** Challenges, Contribution, Investment, Policy makers, Sciences

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Ademola Chichi Progress - [gladjesty9@gmail.com](mailto:gladjesty9@gmail.com) Enchi Government Hospital

Abstract ID: 84

sarbarid@ncbs.res.in | India

**Title of the Abstract:**

Insect herbivory and plant relative abundances in a tropical community

**ABSTRACTS**

---

The causes of and mechanisms governing the relative frequencies of species in a community have been studied for long. Factors like competition, resource acquisition strategies and even chance have been evoked to explain observed patterns. A typical pattern in tropical ecosystems, with their high species richness, involves a few plant species constituting about half of the individuals, with the rest of them being rare or even present singly. The role of inter-specific interactions in determining community structures have been studied with respect to interactions between plant species; in our study, we expand that to include interactions between plants and their insect herbivores. The high pressure of insects in the tropics causes plants to invest heavily in chemical defenses, particularly in secondary metabolites. Plants trade off resources in growth and chemical defenses with an expected inverse relation between growth rates and chemical investment. If resistance to herbivores is favoured, then greater chemical investment results in higher abundance; if tolerance is more important, then species with higher growth rates pre-dominate. Here, chemical investment is an indicator of resistance while leaf loss is of tolerance. In this preliminary study in the central Western Ghats, we investigate how the relative abundances of species are related to the leaf areas lost to herbivory and investment in leaf chemical defenses. Species-level chemical investment was quantified by methanol-based extraction of secondary metabolites, followed by untargeted metabolomics and the calculation of chemical diversity. Chemical diversity is a metric which combines the number of compounds and their quantities. Analysis of species with mid- to high-level occurrences do not show any significant trends; chemical diversity does not differ among species either. This indicates that tolerance may be the deciding factor, with herbivore richness on each species being a better indicator of that.

**Keywords:** community structure, insect herbivory, leaf secondary metabolites, plant relative abundances

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Sarbari Dasgupta - sarbarid@ncbs.res.in  
National Centre for Biological Sciences – Tata Institute of Fundamental Research
- Rishiddh Jhaveri - jrishiddh@ncbs.res.in  
CSIR - Centre for Cellular and Molecular Biology , National Centre for Biological Sciences – Tata Institute of Fundamental Research
- Rohit Sasidharan - rohitsasidharan@ncbs.res.in  
National Centre for Biological Sciences – Tata Institute of Fundamental Research
- Devi Tejaswini - devi.tejaswini@umconnect.umt.edu | University of Montana
- María-José Endara - maria.endara.burbano@udla.edu.ec | Universidad de las Américas
- Meghna Krishnadas - [meghna@ncbs.res.in](mailto:meghna@ncbs.res.in) National Centre for Biological Sciences – Tata Institute of Fundamental Research, CSIR - Centre for Cellular and Molecular Biology

Abstract ID: 116

sunil.deshmukh1958@gmail.com | India

**Title of the Abstract:**

Fungal Conservation in India: Bridging Ecological Significance, Policy Gaps, and Strategic Priorities

**ABSTRACTS**

---

Fungi are indispensable yet underrecognized components of India's biodiversity, contributing significantly to nutrient cycling, plant symbiosis, soil health, and ecosystem resilience. India's diverse biogeographic regions—including the Western Ghats, Himalaya, Indo-Gangetic Plains, Sundarbans, mangroves, Thar Desert, and Ladakh cold desert—harbor rich but insufficiently documented fungal diversity. Marine and mangrove ecosystems support diverse ascomycetes and mitosporic fungi, while desert and cold-desert habitats contain specialized fungal groups adapted to extreme environments.

Despite their ecological importance, fungi remain poorly represented in biodiversity assessments, conservation policies, and environmental planning. Limited taxonomic expertise, inadequate exploration, and insufficient documentation have resulted in major knowledge gaps, with many species remaining undescribed or lacking ecological and distributional data. Anthropogenic pressures such as habitat loss, land-use change, pollution, climate change, and unsustainable harvesting further threaten fungal diversity and associated ecosystem functions.

India's conservation framework, including protected areas, biosphere reserves, and the Biological Diversity Act, 2002, offers opportunities to integrate fungal conservation through in-situ and ex-situ approaches. Strengthening national repositories such as NFCCI, CSIR-MTCC, ICAR-ITCC, and ICAR-NBAIM is essential for long-term preservation and research. Conserved fungi also possess significant biotechnological potential, including bioactive compounds, industrial enzymes, biofertilizers, biocontrol agents, and applications in environmental remediation.

Advancing fungal conservation in India requires coordinated efforts in research, policy integration, taxonomic training, biodiversity assessments, and public engagement. Citizen science, digital databases, and collaborative research networks can further enhance fungal documentation, monitoring, and conservation outcomes at national and global levels.

**Keywords:** Fungi Biodiversity Indian Subcontinent, Applications,

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Snil Kumar Deshmukh - sunil.deshmukh1958@gmail.com  
Association of Fungal Biologists

Abstract ID: 1

kashifbhat858@gmail.com | India

**Title of the Abstract:**Climate change and anthropogenic impacts on Asiatic black bear (*Ursus thibetanus*) behaviour**ABSTRACTS**

---

Climate change is rapidly altering ecological processes across the Himalayan landscape, with profound impacts on the behaviour and seasonal ecology of large mammals. The Asiatic black bear (*Ursus thibetanus*), traditionally exhibiting well-defined hibernation patterns linked to winter severity and food availability, is increasingly showing behavioural shifts in response to changing climatic conditions. This presentation examines emerging changes in hibernation ecology, including delayed den entry, reduced hibernation duration, mid-winter arousals, and in some cases complete disruption of hibernation cycles. Warmer winters, erratic snowfall, and altered phenology of food resources are influencing energy budgets, movement patterns, and habitat use of the species. These changes are also intensifying human–bear interactions, as prolonged activity periods increase encounters in human-dominated landscapes, leading to conflict, crop depredation, and safety concerns. Drawing from field observations, community interactions, and landscape-level ecological insights from the western Himalaya, this presentation highlights climate change as a critical driver of behavioural plasticity in the Asiatic black bear. Understanding these shifts is essential for developing adaptive conservation strategies, conflict mitigation frameworks, and climate-resilient wildlife management policies in fragile mountain ecosystems

**Keywords:** Bear, Climate change, Hibernation**Mode:** Poster Presentation**AUTHORS**

---

- **Presenter:** Kashif Farooq - kashifbhat858@gmail.com

Abstract ID: 18

gangulyneeldeep.1999@gmail.com | India

**Title of the Abstract:**

Assessment of highly invasive armoured sailfin catfish (*Pterygoplichthys* Sp.) in the water bodies of Eastern Ghats, India using eDNA approach

**ABSTRACTS**

---

Early detection of invasive species is crucial for effective control of the potential damage they can inflict on ecosystems. In contrast to the many limitations that traditional detection methods like visual surveys and netting hold, the use of environmental DNA assays can provide a powerful alternative. This non-invasive, highly sensitive, and user-friendly technique offers the advantage of detecting invasive species even in areas where direct observation is challenging, thus addressing the shortcomings of traditional techniques and enhancing overall accuracy in estimating distribution. The spread of invasive *Pterygoplichthys* sp. has become a cause for concern in biodiversity-rich countries like India. Despite this, comprehensive studies on the distribution of these invasive species are limited. The Eastern Ghats of India remain underexplored with a high potential for supporting diverse lifeforms. Studying the extent of biological invasions in the Eastern Ghats is essential for effective conservation management to mitigate the ecological and socioeconomic impacts of invasive species. In this study, we have mapped the distribution of one such invasive fish genera namely South American armoured catfish (*Pterygoplichthys* sp.), in selected freshwater ecosystems of the Eastern Ghats using quantitative PCR based eDNA technique. Our findings revealed the presence of *Pterygoplichthys* sp. in 65% of the total sampled locations. This study can be further extended to larger geographical areas, which can contribute in formulating necessary measures by the authorities to manage invasion and conserve the diversity of the freshwater ecosystem.

**Keywords:** Biodiversity conservation, Eastern Ghats, Environmental DNA, Invasive species, *Pterygoplichthys* sp.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Neeldeep Ganguly - [neeldeep@ccmb.res.in](mailto:neeldeep@ccmb.res.in) PhD scholar
- Govindhaswamy Umapathy - [guma.ccmb@csir.res.in](mailto:guma.ccmb@csir.res.in) Chief Scientist

Abstract ID: 68

marinagdelrio@mncn.csic.es | Spain

**Title of the Abstract:**Nest reuse mediates host–parasite interactions in Blue tits (*Cyanistes caeruleus*)**ABSTRACTS**

---

Breeding success in cavity-nesting passerines is often limited by the availability of suitable nesting sites. In this context, cavities containing material from previous breeding seasons may affect fitness through increased ectoparasite exposure or, alternatively, may reduce the time devoted to nest building, eventually influencing breeding decisions. To investigate whether birds show a preference for nestboxes with old material versus empty nestboxes and how this affects parasitism and reproductive success, we conducted an experiment with Eurasian Blue Tits (*Cyanistes caeruleus*) during two consecutive breeding seasons in Valsaín, Spain. We offered birds two types of nestboxes: those containing old nesting material (“old nests”) and empty nestboxes (“new nests”).

At the end of the breeding season in 2022, old nests had a significantly higher abundance of ectoparasites than new nests, particularly blowflies (*Protocalliphora azurea*) and fleas (*Ceratophyllus gallinae*). Interestingly, this pattern was absent in 2023, a year characterised by an earlier breeding season, higher spring temperatures, and increased addition of nesting material by birds. Across both years, older females breeding earlier in the season preferentially selected old nests. Despite these differences in nest choice and parasite loads, reproductive success was unaffected.

Our findings suggest that old nest material provides experienced females with an opportunity to breed earlier, potentially optimising offspring development, while incurring higher ectoparasite exposure. Crucially, this does not appear to compromise fitness. This study highlights how nest-site selection interacts with breeding phenology and parasite dynamics, providing insights that contribute to our understanding of the ecological and behavioural mechanisms shaping cavity-nesting strategies.

**Keywords:** bird behaviour, breeding phenology, ectoparasites, host-parasite interaction, nest-site selection.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Marina García del Río - marinagdelrio@mncn.csic.es  
Department of Evolutionary Ecology, National Museum of Natural Sciences, CSIC, Madrid, Spain
- Alejandro Cantarero - alejcant@ucm.es  
Department of Physiology, Veterinary School, Complutense University of Madrid, Madrid, Spain
- Javier García Velasco - jgarci38@ucm.es  
Department of Physiology, Veterinary School, Complutense University of Madrid, Madrid, Spain
- Yago Merino - yago.m.n2002@gmail.com  
Department of Evolutionary Ecology, National Museum of Natural Sciences, CSIC, Madrid, Spain
- Francisco Castaño-Vázquez - franevolut@hotmail.es  
Department of Evolutionary Ecology, National Museum of Natural Sciences, CSIC, Madrid, Spain
- Santiago Merino - santiagom@mncn.csic.es  
Department of Evolutionary Ecology, National Museum of Natural Sciences, CSIC, Madrid, Spain

Abstract ID: 12

ag21rs009@iiserkol.ac.in | India

**Title of the Abstract:**Macronutrient Landscapes Influence Immunity and Redox Balance in *Plutella xylostella***ABSTRACTS**

---

Understanding the variation in immune function poses a fundamental challenge in the field of ecological physiology, particularly in the Anthropocene, where organisms increasingly face nutritionally imbalanced resources. The diamondback moth (*Plutella xylostella*) frequently encounters altered nutrient environments due to intensive agricultural practices. In this study, we utilized chemically defined artificial diets to investigate the effects of varying dietary protein: carbohydrate (P: C) ratios on immune response, physiological performance, and the regulation of oxidative stress through the Geometric Framework of Nutrition (GFN). Across different P: C regimes, we assessed immune responses alongside key antioxidant enzymes to evaluate redox balance. Our findings indicate that dietary stoichiometry significantly influences both immune function and oxidative physiology, revealing mechanistic links between macronutrient balance and defensive strategies. By decoupling nutrient effects from plant-specific chemistry, our results underscore macronutrient imbalance as a critical factor driving insect physiological states, with significant implications for pest performance and host-pathogen interactions in anthropogenically altered nutritional landscapes.

**Keywords:** dietary carbohydrate, dietary protein, geometric framework, immune function, nutritional ecology

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Anwesha Ghosh - [ag21rs009@iiserkol.ac.in](mailto:ag21rs009@iiserkol.ac.in) PhD student
- Dr. Radhika Venkatesan - [rv@iiserkol.ac.in](mailto:rv@iiserkol.ac.in) Associate Professor

Abstract ID: 76

sg919@snu.edu.in | India

**Title of the Abstract:**

Eocene origin and Miocene diversification in hillstream loach genus *Indoreonectes* coincide with major shifts in Indian monsoon

**ABSTRACTS**

---

Hill stream loaches of the genus *Indoreonectes* is endemic to the peninsular India where it occupies hill streams of the Western Ghats, the Eastern Ghats, and the Satpura hills. Originally known only by two species, *I. keralensis*, restricted to hill streams of Kerala, and *I. evezardi*, with a wide distribution in the central peninsular India, recent molecular systematic studies have identified multiple distinct lineages within the central peninsular Indian clade. We use mitochondrial and nuclear markers to understand the origin and diversification of evolutionary distinct lineages within *Indoreonectes*. Species delimitation using barcode gap analysis and Poisson Tree Process suggest that there are at least five distinct lineages in the *I. keralensis* complex, while there are at least 20 distinct lineages in the *I. evezardi* complex. Molecular clock analysis based on 6 fossil calibrations suggest that *Indoreonectes* probably originated in the late Eocene and rapidly diversified in the late Miocene to create multiple lineages. The diversification of *Indoreonectes* in the late Miocene coincides with the shifts in the Indian monsoon, which showed intensification with the uplift of Tibetan plateau. The unique ecological niche of the genus, where the individuals reside in the foothills in dry season and show altitudinal migration to first order streams with initiation of monsoon rainfall, might be responsible for its rapid radiation. Our study provides the first evidence for how the evolution of Indian monsoon pattern and unique ecological niche of a hill stream loach could have led to its rapid adaptive radiation in these fishes.

**Keywords:** Adaptive radiation, Indian monsoon, *Indoreonectes*, Molecular phylogenetics, Species delimitation

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Sanjula Ghosh - sg919@snu.edu.in  
Laboratory of Molecular Ecology and Evolution, Department of Life Sciences, School of Natural Sciences, Shiv Nadar Institution of Eminence, Delhi-NCR, India
- Neelesh Dahanukar - neelesh.dahanukar@snu.edu.in  
Laboratory of Molecular Ecology and Evolution, Department of Life Sciences, School of Natural Sciences, Shiv Nadar Institution of Eminence, Delhi-NCR, India
- Tania Ann Varghese - tv392@snu.edu.in  
Laboratory of Molecular Ecology and Evolution, Department of Life Sciences, School of Natural Sciences, Shiv Nadar Institution of Eminence, Delhi-NCR, India
- Ashwini Keskar - ashwini.keskar@pkc.org.in  
The PuneKnowledge Cluster (PKC), Pune, India
- Rajeev Raghavan - rajeev@kufos.ac.in  
Department of Fisheries Resource Management, Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi, India

Abstract ID: 87

amlanaditya.g@gmail.com | India

**Title of the Abstract:**

Elephants Beyond Protected Areas: Disentangling Core and Flexible Drivers of Habitat Selection in Human-Dominated Landscapes

**ABSTRACTS**

---

Advances in telemetry and remote sensing have enhanced wildlife monitoring, providing valuable insights for conservation and conflict mitigation. This is crucial for the management and protection of key species residing in highly fragmented and disturbed landscapes. We conducted long-term monitoring of Asian elephants using GPS telemetry at the eastern extent of the Kaziranga–Karbi Anglong Elephant Reserve, a region dominated by tea gardens, agriculture, and human settlements, supporting around 100 elephants. Using GPS telemetry in combination with environmental covariates, we devised a response-based analytical framework, which helped us identify core and contextually flexible determinants of habitat selection in this modified landscape. We estimated home ranges using autocorrelated kernel density estimates and mapped land-use/land-cover (LULC) through supervised classification of Landsat imagery following SNIC-based segmentation. GPS locations were attributed with LULC classes, tempPoster and seasonal metrics (using the suncalc R package and MODIS products), and covariates including vegetation and hydrological indices, terrain, weather, and distances to natural and anthropogenic features. We fitted 21 third-order Bayesian resource selection models at individual, seasonal and diel scales. The role of covariates in habitat selection was quantified using standardised response curves, from which we derived consistency (pairwise divergence), response strength (mean absolute response), and direction (sign of effect). Across all scales, elephants consistently selected areas closer to human-modified features, particularly abandoned tea gardens and exposed sand areas, indicating their role as core drivers of habitat use. Whereas vegetation and hydrological variables showed substantial variability, while weather variables had minimal influence. These findings suggest that in human-dominated landscapes, elephants exhibit an opportunistic, risk-sensitive foraging strategy, where they consistently exploit low-disturbance anthropogenic features that provide predictable resources while minimising human risk. By quantifying the stability of behavioural responses, this approach provides evidence of behavioural flexibility across contexts and informs conservation planning and conflict mitigation in rapidly changing landscapes.

**Keywords:** Asian elephant, habitat selection, remote sensing, resource-selection function, telemetry

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Amlanaditya Goswami - [amlanaditya.g@gmail.com](mailto:amlanaditya.g@gmail.com) Cotton University, Guwahati
- Dr. Narayan Sharma - [narayansharma77@gmail.com](mailto:narayansharma77@gmail.com) Cotton University, Guwahati
- Prof. Raman Sukumar - [rsuku@iisc.ac.in](mailto:rsuku@iisc.ac.in) Indian Institute of Science, Bangalore
- Mr. Sanjay Ajanikar - [sanjay.va@gmail.com](mailto:sanjay.va@gmail.com) Asian Nature Conservation Foundation

Abstract ID: 86

amlanaditya.g@gmail.com | India

**Title of the Abstract:**

Elephants Beyond Protected Areas: Disentangling Core and Flexible Drivers of Habitat Selection in Human-Dominated Landscapes

**ABSTRACTS**

---

Advances in telemetry and remote sensing have enhanced wildlife monitoring, providing valuable insights for conservation and conflict mitigation. This is crucial for the management and protection of key species residing in highly fragmented and disturbed landscapes. We conducted long-term monitoring of Asian elephants using GPS telemetry at the eastern extent of the Kaziranga–Karbi Anglong Elephant Reserve, a region dominated by tea gardens, agriculture, and human settlements, supporting around 100 elephants. Using GPS telemetry in combination with environmental covariates, we devised a response-based analytical framework, which helped us identify core and contextually flexible determinants of habitat selection in this modified landscape.

We estimated home ranges using autocorrelated kernel density estimates and mapped land-use/land-cover (LULC) through supervised classification of Landsat imagery following SNIC-based segmentation. GPS locations were attributed with LULC classes, tempPoster and seasonal metrics (using the `suncalc` R package and MODIS products), and covariates including vegetation and hydrological indices, terrain, weather, and distances to natural and anthropogenic features. We fitted 21 third-order Bayesian resource selection models at individual, seasonal and diel scales. The role of covariates in habitat selection was quantified using standardised response curves, from which we derived consistency (pairwise divergence), response strength (mean absolute response), and direction (sign of effect).

Across all scales, elephants consistently selected areas closer to human-modified features, particularly abandoned tea gardens and exposed sand areas, indicating their role as core drivers of habitat use. Whereas vegetation and hydrological variables showed substantial variability, while weather variables had minimal influence. These findings suggest that in human-dominated landscapes, elephants exhibit an opportunistic, risk-sensitive foraging strategy, where they consistently exploit low-disturbance anthropogenic features that provide predictable resources while minimising human risk.

By quantifying the stability of behavioural responses, this approach provides evidence of behavioural flexibility across contexts and informs conservation planning and conflict mitigation in rapidly changing landscapes.

**Keywords:** Asian elephant, habitat selection, remote sensing, resource-selection function, telemetry

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Amlanaditya Goswami - [amlanaditya.g@gmail.com](mailto:amlanaditya.g@gmail.com) Cotton University, Guwahati
- Dr. Narayan Sharma - [narayansharma77@gmail.com](mailto:narayansharma77@gmail.com) Cotton University, Guwahati
- Prof. Raman Sukumar - [rsuku@iisc.ac.in](mailto:rsuku@iisc.ac.in) Indian Institute of Science, Bangalore
- Mr. Sanjay Ajanikar - [sanjay.va@gmail.com](mailto:sanjay.va@gmail.com) Asian Nature Conservation Foundation

Abstract ID: 65

vishakha0911@gmail.com | Hungary

**Title of the Abstract:**

Genomic Insights of into the Migratory Divide: Investigating Population Structure in the Red-necked Phalarope. Unveiling Population Structure in Icelandic and Norwegian Red-necked Phalarope.

**ABSTRACTS**

---

Red-necked phalaropes (*Phalaropus lobatus*) are polyandrous shorebirds with a circumpolar breeding range. Recent research has shown that two geographically close breeding populations show highly distinct migration routes and wintering areas: Icelandic phalaropes migrate ca. 10,000 km over sea to the tropical eastern Pacific Ocean, whilst phalaropes breeding in Fennoscandia and Russia migrate ca. 6,000 km — largely over land — to the Arabian Sea (van Bemmelen RSA, et al, 2019). Here we test whether this migratory divide reflects population structure, through PCA, STRUCTURE, and Fst-based analysis of whole-genome-sequencing data.

**Keywords:** Population structure, Migration, *Phalaropus lobatus*, fst, Genomics

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Vishakha Gupta - [vishakha119@gmail.com](mailto:vishakha119@gmail.com) DoctPoster School of Biology, Institute of Biology, ELTE Eötvös Loránd University, Budapest, Hungary
- Kees Wanders - [kwa@snm.ku.dk](mailto:kwa@snm.ku.dk) Natural History Museum of Denmark, University of Copenhagen, Denmark.
- Tamás Székely - [bssts@bath.ac.uk](mailto:bssts@bath.ac.uk) Milner Centre for Evolution, Dept of Life Sciences, University of Bath, Bath BA2 7AY, UK

Abstract ID: 13

shahzada90@yahoo.com | India

**Title of the Abstract:**

Improving Compensation Governance through Procedural Reform: A Randomised Controlled Trial in Human-Wolf Coexistence Landscapes of the Chotanagpur Plateau, India

**ABSTRACTS**

---

Human–wildlife conflict remains a significant conservation challenge in rural landscapes, where livestock depredation by large carnivores negatively affects livelihoods and local tolerance. Monetary compensation schemes are widely implemented to mitigate such conflicts; however, their effectiveness is often constrained by limited awareness, procedural complexity, and administrative delays. This study employed a Randomised Controlled Trial to evaluate the impact of a low-cost informational intervention on household satisfaction and participation in the government livestock compensation programme around Mahuadanr Wolf Sanctuary, Jharkhand, India.

The intervention consisted of a simple, locally designed leaflet explaining compensation procedures, eligibility criteria, and expected timelines, along with optional support for claim filing and follow-up. A total of 110 households were surveyed using a baseline–endline design over a six-month period, capturing changes in cognitive, psychological, behavioural, and administrative dimensions.

Results indicated that households in the intervention group reported significantly higher satisfaction levels ( $3.78 \pm 0.55$ ) compared to control households ( $3.32 \pm 0.60$ ). Analysis of covariance revealed a strong and statistically significant treatment effect ( $\beta = 0.50$ ,  $p < 0.001$ ). Furthermore, administrative efficiency improved substantially, with median compensation payment delays reduced to 45 days in the intervention group compared to 105 days in the control group ( $p < 0.001$ ).

These findings demonstrate that simple informational interventions can enhance procedural transparency, improve administrative efficiency, and build trust in compensation governance, thereby strengthening human–carnivore coexistence in conflict-prone landscapes.

**Keywords:** compensation governance, human-wolf conflict, livestock depredation, randomised controlled trial, transparency, Mahuadanr Wolf Sanctuary

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Shahzada Iqbal - [shahzada90@yahoo.com](mailto:shahzada90@yahoo.com) Department of Wildlife Sciences, Aligarh Muslim University, India
- Orus Ilyas - [orus16@gmail.com](mailto:orus16@gmail.com) Department of Wildlife Sciences, Aligarh Muslim University, India

Abstract ID: 29

vaishnavkarichery@gmail.com | India

**Title of the Abstract:**

Effect of landscape structure on activity and mortality of bats in the wind farms of Tamil Nadu

**ABSTRACTS**

---

Studies on bats in India are very few, and even fewer address the threats they face from emerging anthropogenic problems. Although wind energy is classified as “green energy”, it is well known that birds and bats collide with rotating blades and die. Despite a growing wind energy sector, studies investigating the level of mortality of native fauna due to wind turbines are lacking in India. Specifically, this study investigates how the habitat influences the activity (proxy for collision risk) and mortality of echolocating bats in wind farms in Tamil Nadu.

At Muppandal Wind Farm, we characterised habitat heterogeneity using satellite imagery and selected 5 grids from each of the high, medium, and low habitat heterogeneity classes for bat acoustic monitoring and carcass surveys. Bat calls were recorded for 300 hours and analysed using advanced cluster analysis in Kaleidoscope Pro software. Twelve species were detected, of which *Pipistrellus tenuis* was the most common. Data analysis is ongoing. Preliminary patterns suggest activity was highest in high heterogeneity. Additionally, two bat carcasses were recorded during surveys, one each of *Scotophilus kuhlii* and *Rousettus leschenaultii*. Our study intends to shed light on how habitat influences bat mortality to guide better turbine siting practices in the future.

**Keywords:** acoustic monitoring, bats, landscape heterogeneity, mortality, wind energy

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** VAISHNAV K. - vaishnavkarichery@gmail.com  
Central University of Kerala, Kasaragod, Kerala
- Sreejith Jayakumar - sreejith@ncf-india.org  
Nature Conservation Foundation, Mysore, India
- Rohit Chakravarty - rohit@ncf-india.org  
1. Nature Conservation Foundation, Mysore, India, 2. Bat Conservation International, Austin, Texas, United States, 3. Centre for Wildlife Studies, Bengaluru, India

Abstract ID: 20

manjot@ncf-india.org | India

**Title of the Abstract:**

Harmony at heights? Spatio-temporal interactions between mesocarnivores across a stress gradient in the High-Himalaya

**ABSTRACTS**

---

Species interactions are complex and dynamic. A nuanced understanding of species interactions can help understand factors shaping species assemblages and communities while also providing baseline ecological information for conservation. Our study contributes to this emerging knowledge by focusing on spatio-temporal

interactions among mesocarnivores under varying ecological stress. High mountain ecosystems are often characterised by low productivity, where resource limitations play a crucial role in shaping community dynamics. In such environments, the stress

gradient hypothesis predicts that species interactions become more facilitative (or neutral) under increasing environmental stress. This framework provides a useful lens to examine how mesocarnivore interactions may shift under varying stress levels. We analysed the patterns of interaction between *Vulpes vulpes* (red fox) and *Martes foina* (stone marten), under varying stress levels across 14 sites covering c.31,000 sq.km.

We predicted red fox and stone marten to have more negative interactions leading to low spatio-temporal overlap in sites with lower stress (High NDVI and low snow leopard density). The species interaction factor (SIF) ranged from 0.98 to 1.14 across the 14 sites indicating neutral to positive or non-significant negative spatial association. Activity pattern also highly overlapped regardless of stress levels. Our findings don't

provide support for the stress gradient hypothesis. Given the low variation in stress across sites, our result suggest that the stress gradient hypothesis is only relevant

when the stress gradient is stark enough. The largely neutral patterns observed highlight the need for further research into ecological and behavioural processes that

may underlie mesocarnivore co-occurrence in resource-stressed landscape.

**Keywords:** Mesocarnivores, Himalaya, Species Interaction, Stress Gradient Hypothesis

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Manjot Kaur - [manjot@ncf-india.org](mailto:manjot@ncf-india.org) Nature Conservation Foundation
- Munib Khanyari - [munib@ncf-india.org](mailto:munib@ncf-india.org) Nature Conservation Foundation, Institut de Ciència i Tecnologia Ambientals de la Universitat Autònoma de Barcelona

Abstract ID: 46

mannaoindrila7@gmail.com | India

**Title of the Abstract:**

SPATIO - TEMPORAL PATTERNS AND BEHAVIORAL ECOLOGY OF GOLDEN JACKAL ( CANIS AUREUS ) IN FRAGMENTED AGRARIAN LANDSCAPES OF WEST BENGAL, INDIA

**ABSTRACTS**

---

The golden jackal (*Canis aureus*), a highly adaptable mesocarnivore, plays a vital ecological role in human-dominated landscapes. This study examines the spatio-temporal patterns and behavioral ecology of golden jackals in fragmented agrarian regions of West Bengal, India. Data were collected using direct sightings, indirect evidence (pugmarks, dens), and opportunistic observations, supplemented by ecological variables.

Jackals occupy a mosaic of habitats including agricultural fields, scrublands, wetlands, and peri-urban areas, showing strong ecological plasticity. Their activity is primarily crepuscular, with peak movement during early morning and dusk, likely to avoid anthropogenic disturbance. Behavioral observations confirm their role as opportunistic omnivores and scavengers, contributing to nutrient recycling and pest regulation. Spatial variation in encounter rates indicates a preference for resource-rich yet moderately disturbed habitats. However, increasing habitat fragmentation, human encroachment, and landscape alteration are influencing their distribution and elevating human–jackal conflict risks.

Results reveal distinct seasonal variations in encounter rates across districts. In Howrah, the highest activity was recorded during the monsoon season, followed by post-monsoon, indicating favorable foraging conditions. Hooghly showed relatively stable encounter rates, with moderate peaks during post-winter and winter. In Purba Bardhaman, encounter rates were comparatively lower but increased during post-winter, suggesting seasonal shifts in habitat use.

Overall, jackal activity was predominantly crepuscular, with peak movement during early morning and dusk.

Behavioral observations further confirm their ecological importance, although increasing habitat fragmentation and human pressure continue to influence their distribution and raise potential human–jackal conflict zones.

**Keywords:** Keywords: Seasonal variation, encounter rate, behavioral ecology, habitat fragmentation, human–wildlife interaction.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Oindrila Manna - mannaoindrila7@gmail.com  
Department of Zoology, UG and PG Studies, Serampore College, Serampore, Hooghly, West Bengal – 712201, India.
- Dr. Soumyajit Banerjee - soumyajitb@gmail.com  
Department of Zoology, UG and PG Studies, Serampore College, Serampore, Hooghly, West Bengal – 712201, India.

- Dr. Tapajit Bhattacharya -  
Department of Conservation Biology, Durgapur Government College, Jawahar Lal Nehru Road,  
Amarabati Colony, Durgapur, West Bengal – 713214, India

Abstract ID: 64

santiagom@mncn.csic.es | Spain

**Title of the Abstract:**

Nestling recruitment is not related to ectoparasite abundances in a population of Blue tits (*Cyanistes caeruleus*).

**ABSTRACTS**

---

Nest-dwelling ectoparasites affect nestlings of many bird species during their developing period at nests. The potential long-term consequences of parasitism during this developmental phase are poorly studied. Here we explored the relationship between the abundance of two common nest-dwelling ectoparasites, the blowfly *Protocalliphora azurea* and Dermanyssid mites, on recruitment into the adult population of blue tits (*Cyanistes caeruleus*) over a period of 23 years. All nestlings were ringed with individually numbered rings at the age of 13 days and once the nestlings fledged, nest material was collected to quantify ectoparasites. The abundance of ectoparasites in nests producing recruitments did not differ significantly from the abundance in nests not producing recruitments. Laying date appears to be the only significant nest variable influencing recruitment across years.

**Keywords:** Aves, Blowfly, Dermanyssid mites, laying date, forest birds.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Santiago Merino - santiagom@mncn.csic.es  
Departamento de Ecología Evolutiva, Museo Nacional de Ciencias Naturales, CSIC, C/José Gutierrez Abascal 2, 28006 Madrid, Spain.
- Maritxu Merino - maritxu004@gmail.com  
Departamento de Ecología Evolutiva, Museo Nacional de Ciencias Naturales, CSIC, C/José Gutierrez Abascal 2, 28006 Madrid, Spain.
- Marina García-del Río - marinagdelrio@mncn.csic.es  
Departamento de Ecología Evolutiva, Museo Nacional de Ciencias Naturales, CSIC, C/José Gutierrez Abascal 2, 28006 Madrid, Spain.

Abstract ID: 37

mueenqari111@gmail.com | Malaysia

**Title of the Abstract:**

Who glides where? Investigating drivers of flying squirrel distributions in Borneo

**ABSTRACTS**

---

Present-day Borneo represents a mosaic of environmental conditions spanning across a forest integrity gradient – from untouched primary forests, landscapes fragmented by palm oil forests and logging forests to heavily disturbed spaces. Flying squirrels represent an understudied and underrepresented guild inhabiting this continuum. This study aims to investigate factors that affect the distribution of *Aeromys tephromelas*, *Aeromys thomasi* and *Petaurista petaurista* across the island, focusing on the climatic and environmental correlates that shape this local distribution.

Occurrence data was compiled from primary fieldwork using night transects and camera traps, published literature, museum collections and citizen science repositories. Relevant climatic, environmental and topographic variables were used in conjunction with the occurrence data to model species distribution across the island using a MaxEnt framework. Relevant model statistics such as AUC and TSS were used to assess the model performance, along with other variable-importance metrics such as the Boyce Index.

Preliminary results reveal the extent of potential distribution of each species on the island, with temperature seasonality, annual precipitation and canopy cover among the most influential factors influencing distribution. *Petaurista petaurista* favors lowland areas and a mosaic of potential habitats, including but not limited to cultivated areas, forest edges, and shows more tolerance to anthropogenic landscapes. *Aeromys tephromelas*, while preferring lowlands, is predicted to be distributed more in primary and undisturbed forests. The two species show sympatric and allopatric distributions in different regions of the island, suggesting potential inter-specific influences. *Aeromys thomasi*, a local endemic, prefers more forested, montane regions, with very little tolerance to human disturbance.

Significant portions of the predicted distribution occur outside protected areas, suggesting a lack of extensive conservation coverage. The results underscore the need to delineate priority habitat and conservation zones, as well as the importance of ecologically relevant land-use management policies in Borneo.

**Keywords:** Borneo, Distribution, Flying Squirrels, SDMs

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Qazi Hammad Mueen - hammad\_mueen\_mx25@iluv.ums.edu.my  
Institute for Tropical Biology and Conservation, University of Malaysia Sabah
- Noor Haliza Hasan - hhaliza@ums.edu.my  
Institute for Tropical Biology and Conservation, University of Malaysia Sabah
- Nandini Rajamani - nandini@labs.iisertirupati.ac.in | IISER Tirupati, India
- Priscillia Miard - priscillia.miard@ums.edu.my  
Institute for Tropical Biology and Conservation, University of Malaysia Sabah

Abstract ID: 36

muhsincmok@gmail.com | India

**Title of the Abstract:**

Marine Processes and Coastal Vulnerability: Understanding Flood Risk in Kerala, India

**ABSTRACTS**

---

Recurring flooding in Kerala, India, especially during the extreme events of 2018 and 2019, shows a strong connection between climate factors and coastal–marine processes. While unusually heavy monsoon rainfall is often seen as the main cause, this study argues that ocean-related and geomorphological processes along the Arabian Sea also play a major role in increasing flood risk. In particular, sea-surface warming, strong wave activity, and disturbances in sediment movement contribute to coastal instability and allow seawater to move inland. Using a case-study approach, this research focuses on Chellanam, where severe coastal erosion—caused by both natural factors and human activities such as port expansion and hard coastal structures—has resulted in repeated flooding and displacement of local people. The study shows that these impacts are not equal, with small-scale fishing communities being affected the most, raising important concerns about environmental justice and climate vulnerability. In addition to environmental factors, the paper examines governance challenges, including weak coastal regulation, poor sediment management, and a lack of coordination between disaster management and marine conservation policies. To address these issues, the study proposes an integrated approach that includes nature-based coastal protection, better sediment management, use of modern monitoring technologies, and stronger community involvement in decision-making. The paper concludes that reducing flood risk in Kerala requires moving from reactive disaster response to proactive, science-based marine conservation combined with fair and effective policy planning. This approach can also serve as a useful model for improving resilience in other climate-sensitive coastal regions around the world

**Keywords:** coastal erosion, climate change, flood risk, marine conservation, vulnerability**Mode:** Poster Presentation**AUTHORS**

---

- **Presenter:** muhammed muhsin c - [muhsincmok@gmail.com](mailto:muhsincmok@gmail.com) darulhuda islamic univerisity
- basith hudawi - [cpabasith@gmail.com](mailto:cpabasith@gmail.com) darul huda islamic university

Abstract ID: 23

georgemadodamungure@gmail.com |

Tanzania

**Title of the Abstract:**

what has science provided in terms of conservation policies in the sub saharan africa

**ABSTRACTS**

---

Science has played a transformative role in shaping conservation policies in Sub-Saharan Africa by generating evidence, guiding decision-making, and promoting sustainable resource management. Scientific research has provided critical data on biodiversity loss, ecosystem dynamics, and climate change impacts, enabling policymakers to design informed strategies for protecting natural resources. For instance, ecological and environmental studies have demonstrated the importance of biodiversity for soil conservation, watershed protection, and ecosystem productivity, thereby justifying the establishment of protected areas and conservation frameworks across the region .

Furthermore, science has contributed to the expansion and management of protected areas, which now cover a significant portion of land and coastal ecosystems in Sub-Saharan Africa. Scientific mapping, species monitoring, and spatial analysis have helped identify biodiversity hotspots and priority conservation zones, improving policy targeting and resource allocation . In addition, advances in technologies such as remote sensing, geographic information systems (GIS), and data analytics have strengthened environmental governance by enabling real-time monitoring of deforestation, wildlife movements, and land-use changes.

Importantly, scientific input has shifted conservation policies from exclusionary approaches toward more inclusive, community-based models. Research highlighting the socio-economic impacts of conservation has led to the development of Community-Based Conservation Areas (CBCAs), which integrate local knowledge and livelihoods into policy frameworks while promoting biodiversity protection . This reflects a broader recognition that effective conservation must align with local development needs.

Science has also enhanced policy coherence by linking conservation with agriculture, climate change, and sustainable development goals. Interdisciplinary research has identified trade-offs and synergies between environmental protection and economic activities, guiding integrated policy design .

Overall, science has provided the empirical foundation, technological tools, and participatory frameworks necessary for evolving conservation policies in Sub-Saharan Africa, although challenges such as limited research capacity and unequal knowledge production remain.

**Keywords:** Conservation, Environment, Human development, Policy, Science

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** George Christopher Madoda Mungure - georgemadodamungure@gmail.com  
Kenneth School

Abstract ID: 6

subhasistaxonomy@gmail.com | India

**Title of the Abstract:**

Ground-Level Conservation and Monitoring of 'Local Biodiversity Hotspots' in Anthropocene and Need to Strengthen Their Future Survival

**ABSTRACTS**

---

'Local Biodiversity Hotspots' (LBHs) are the discrete relic patches of past primary forest, very small area, mostly within 5 to 10 sq ft, appearing as dense bushes, and mostly located in the outskirts of a remote village along roadside, at wastelands and often noticed in and around cultivated fields. LBHs do not qualify the criteria of Myers's Biodiversity Hotspots, but these are the treasure troves in local areas in respect to the only habitat of all threatened biotas viz., wild medicinal plants, wild cultivated plants, wild ornamental garden plants, ecologically significant plants, insect pollinators, butterflies, earthworms, platyhelminth, mollusks, reptiles, birds, mammals, fungi and unidentified microbes, and may be some unidentified keystone species. This work frames six strict criteria to qualify LBHs. Unfortunately, these biotas are under tremendous threat to their existence only due to anthropogenic causes. Local elderly and knowledgeable people believe that these LBHs are controlling their cultivation, monitoring rainfall, and providing shelter to the pollinators since time immemorial. However, these biotas are facing their habitat degradation day by day by the human being mainly for the purpose of road extension, illegal house construction and extension of cultivated fields. For the purpose of effective conservation of these LBHs, present work monitors 8 such LBHs in Chapra Block of Nadia District in West Bengal, India for the first time since 5th June 2022 and recently monitoring 2 LBHs in Singur Block of Hooghly district. With the technical support of West Bengal Biodiversity Board, NSS unit of Government General Degree College Chapra and first author (SP) are monitoring these LBHs one day per week. Present work also includes local people, local school students and local farmers for LBHs conservation by conducting regular awareness programme. Fortunately, of these 8 LBHs, 5 have extended their areas and threatened biotas are conserved peacefully.

**Keywords:** Local Biodiversity Hotspots (LBHs), conservation, monitoring, threatened biotas, Chapra, India.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Subhasis Panda - subhasistaxonomy@gmail.com  
Government General Degree College Singur, affiliated to University of Burdwan, at Jalaghata, PO. Singur, Dist Hooghly, West Bengal
- Anirban Roy - aroy.wbbb@gmail.com  
West Bengal Biodiversity Board, (Department of Environment, Govt. of West Bengal), Prani Sampad Bhawan (5th floor), LB - 2, Sector - III, Salt Lake City, Kolkata- 700106, West Bengal, India

Abstract ID: 17

vraj.official27@gmail.com | India

**Title of the Abstract:**

Topological Signatures of Speciation: A Network-Based Meta-Analysis of Genetic Incompatibilities

**ABSTRACTS**

---

The Bateson-Dobzhansky-Muller (BDM) model successfully attributes reproductive isolation to epistatic incompatibilities, yet the systemic factors determining why specific loci function as "speciation genes" remain a subject of active inquiry. This study explores a network-based meta-analysis of known Bateson-Dobzhansky-Muller Incompatibility (BDMI) genes in *Drosophila melanogaster* to identify potential topological signatures within the cellular interactome. By integrating protein-protein interaction (PPI) data from STRING v12.0 with evolutionary metrics, the research characterizes the network niche of 12 candidate BDMI genes using metrics such as Betweenness Centrality and Burt's Network Constraint. Preliminary analyses suggest that BDMI genes may occupy a statistically distinct topological space, exhibiting lower Network Constraint relative to the genomic baseline. This pattern points toward a "Regulatory Bridge" model, where speciation factors potentially span structural holes between unconnected functional modules. Sensitivity analysis across varying interaction confidence thresholds further indicates a "Dual Topology": while these genes appear physically anchored in stable complexes, their contribution to hybrid incompatibility may be mediated through more transient, medium-confidence functional links. Such an architecture suggests a mechanism where regulatory rewiring can drive reproductive isolation without necessarily disrupting core protein functions. These observed trends, evaluated against Monte Carlo permutations ( $n=10,000$ ), offer a suggestive framework for how network position may influence the evolvability of genes involved in speciation.

**Keywords:** Bateson-Dobzhansky-Muller Incompatibility (BDMI), *Drosophila melanogaster*, Systems Biology, Network Topology

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Vraj Jignesh Patel - [vraj.official27@gmail.com](mailto:vraj.official27@gmail.com) Student, The Maharaja Sayajirao University of Baroda

Abstract ID: 88

sp437@snu.edu.in | India

**Title of the Abstract:**

Genetic barcoding of cartilaginous fishes from fish landing sites along the coast of Kerala

**ABSTRACTS**

---

Cartilaginous fishes, or Chondrichthyes, are among the most threatened vertebrates due to their commercial exploitation. Despite presence of multiple regulatory mechanisms including their inclusion in the Indian Wildlife Protection act, Chondrichthyes continues to be overexploited. Understanding the diversity of Chondrichthyes in commercial exploitation is a major concern to design and implement sustainability and conservation; however, this information is still limited. We collected tissue samples from five landing sites along the coast of Kerala and performed genetic barcoding using mitochondrial cytochrome oxidase subunit I gene. Sequencing of 256 samples revealed the presence of 81 species belonging to 10 of the 13 Chondrichthyes orders (77 %), 34 of 73 families (45 %), and 52 of 195 genera (27 %). Out of total 81 species, identity of 6 species could not be ascertained, suggesting that there are still knowledge gaps with respect to the taxonomy of Chondrichthyes. Out of 75 species identified at the species level, 43 (57%) were threatened with extinction by either being Critically Endangered (11, 15%), Endangered (13, 17%) or Vulnerable (19, 25%), while another 10 (13%) were Near Threatened. Only 11 (15%) species were identified as Least Concern, while 7 (9%) and 4 (5%) were Data Deficient and Not Evaluated, respectively. The samples also included individuals belonging to species under the Wildlife Protection Act, such as *Rhincodon typus*, *Rhynchobatus annandalei*, *R. australiae*, and *Mobula birostris*. Our analysis suggests that there is an immediate need for both research, for understanding the species diversity, and conservation, for sustainable fisheries, of exploited Chondrichthyes of Indian coast.

**Keywords:** Genetic barcoding, Cox1 gene, conservation genetics, Chondrichthyes, threatened species

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Sreedhar Prabhu - sp437@snu.edu.in  
Laboratory of Molecular Ecology and Evolution, Department of Life Sciences, School of Natural Sciences, Shiv Nadar Institution of Eminence, Delhi-NCR, India
- Chintamani Abisha - abisha003elf@gmail.com  
Department of Fisheries Resource Management, Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi, India
- Rajeev Raghavan - rajeev@kufos.ac.in  
Department of Fisheries Resource Management, Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi, India
- Neelesh Dahanukar - neelesh.dahanukar@snu.edu.in  
Laboratory of Molecular Ecology and Evolution, Department of Life Sciences, School of Natural Sciences, Shiv Nadar Institution of Eminence, Delhi-NCR, India

Abstract ID: 78

nisha.prakash22ug@apu.edu.in | India

**Title of the Abstract:**BABBLER BLABBER: Behavioural and Acoustic Communication in a social bird species- *Argya malcolmi***ABSTRACTS**

---

Communication and Sociality are both widespread phenomena among members of the Kingdom Animalia. Aves in specific, present remarkably interesting behavior with its members possessing intricate social behavior and elaborate social hierarchy. Some species use complex vocalisations to convey information to each other regarding predators, to mobilise the entire flock to move to a different location, or for purposes of finding a mate.

In this study, we explore sociality and communication in a highly cooperative, social bird species, *Argya malcolmi*, commonly referred to as the 'Large Gray Babbler'. We performed repeated field observations of their behavior in both solitary and social contexts. Interactions of Babblers with members of their own species as well as other species were observed. An Ethogram based on field observations and previous literature was compiled. The proportion of time that Babblers allocate to different behaviours was explored by creating a time activity budget.

Communication in *Argya* was studied by recording vocalisations of the birds and noting down the contexts in which they were produced. Various parameters of these vocalisations such as Peak Frequency and Duration were obtained and analysed using the software "RavenPro", to see if calls cluster based on the behaviPoster context in which they were made.

It was observed that Babblers engage in social behaviors such as allo-preening, clumping, sentinel scanning and mobbing. Their communication system is primarily vocal, consisting of calls produced in the following different contexts: 1. Perching

2. Flight, 3. Mobbing, 4. Reuniting. They can exist in large flocks of 13-15 members, but also divide themselves into subgroups for purposes of foraging and taking shelter.

This study provides pilot data on sociality and communication in Large Grey Babblers. The findings of this study can be used to develop further hypotheses of social behaviour in this species.

**Keywords:** Bird vocalisations, Calls, Communication, Sociality

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Nisha Prakash - [nisha.prakash22ug@apu.edu.in](mailto:nisha.prakash22ug@apu.edu.in) ex-student from Azim Premji University

Abstract ID: 73

thejaswini.experimentor@bengaluru.sciencegallery.com | India

**Title of the Abstract:**

Living the Anthropocene - Gallery spaces and Climate conversations

**ABSTRACTS**

---

Museums, galleries, and science centres are more than repositories of objects. When artefacts, scientific material, artworks, and interactive exhibits coexist within the same space, they create a layered epistemic environment. As a mediator/experimentor at Science Gallery Bengaluru, I have been able to be in a space that has helped me partake in climate conversations.

When scientific facts are displayed alongside art, I've noticed visitors encountering them in two ways at once - through information and through emotion - which can make the message easier to receive than purely data-driven communication. Throughout my role as a mediator/ experimentor, visitor composition has fairly been multi-generational. This characteristic of public galleries amplifies communicative reach, as encounters with exhibits frequently extend into conversations within institutions, schools, and workplaces. The inherent interdisciplinary nature of these spaces allows scientific conversations around climate change to be approached from multiple angles simultaneously, enabling scientific research and artistic response to mutually render each other more legible to a general public.

While galleries cannot be positioned as direct producers of climate solutions, this presentation argues that they occupy a distinct and underutilised role in the climate communication ecosystem. In such gallery spaces, solution-oriented dialogues become feasible between experimenters/mediators and visitors—not as mere endpoints of knowledge display, but as initiating points for sustained public engagement with the Anthropocene.

Holistically, the presentation will be exploring how the physical and curatorial configuration of the space with dynamic exhibition seasons has established the ground for diverse climate conversations that differ meaningfully from conventional scientific messaging.

**Keywords:** Anthropocene, climate communication, interdisciplinarity, public engagement, science-art intersection.

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** S Thejaswini - thejaswini.experimentor@bengaluru.sciencegallery.com Science Gallery Bengaluru
- Vidya Padmakumar - vidyapkumar3@gmail.com EcoDiversity Research Centre, Canada

Abstract ID: 91

deepanjana.saha@atree.org | India

**Title of the Abstract:**

Hunted Allies: Vertebrate-Mediated Pest Regulation as an Underused Ecosystem Service in Indian Agroecosystems, A Multi-Taxa Review

**ABSTRACTS**

---

**Objective.** Modern agricultural intensification has displaced natural pest regulation with chemical inputs, eroding biodiversity-mediated ecosystem services. Within India's agroecosystems, three vertebrate groups, raptors, reptiles, and amphibians, remain conspicuously underrepresented in both biological pest control research and agricultural policy. This review evaluates the ecological and socio-economic contributions of these taxa to pest regulation and assesses the evidence base supporting their integration into agroecological design.

**Methods.** A targeted literature review covering peer-reviewed and grey literature (1990–2026) was conducted across Scopus, Web of Science, ScienceDirect, Google Scholar, and institutional repositories (ATREE, WII, FAO, ICAR), following a multi-stage screening process. From 356 records, 137 were retained: 56 on raptors, 42 on reptiles, and 39 on amphibians. Synthesis examined regulating, supporting, provisioning, and cultural services, and used the Driving forces–Pressure–State–Impact–Response (DPSIR) framework to interpret policy linkages.

**Results.** Quantitative evidence is concentrated in raptor systems and predominantly drawn from temperate and Mediterranean contexts; barn owls (*Tyto alba*) remove 2,000–6,000 rodents per breeding pair annually, with documented 50% reductions in ground-squirrel damage and approximately USD 7,400 per mile in rodenticide savings in California levee systems. Amphibian-mediated suppression of rice pests (around 60% reduction; 15–25% yield gains) is reported from South and Southeast Asia, but Indian field evidence is sparse and largely descriptive. Reptile evidence remains predominantly natural-historical, with no functional-response or valuation studies. Cross-cutting findings indicate a structural mismatch: taxa with the highest regulatory potential face the strongest cultural persecution, weakest policy recognition, and poorest empirical quantification.

**Conclusion.** Vertebrate-inclusive pest management is ecologically credible but evidentially uneven. Advancing it in India requires taxonomically balanced, longitudinal field studies, valuation of non-raptor services, and explicit recognition of regulating biodiversity within agricultural and biodiversity policy frameworks.

**Keywords:** agroecology, biological pest control, ecosystem services, functional biodiversity, vertebrate predators

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Deepanjana Saha - deepanjanasaha9@gmail.com  
SM Sehgal Foundation Centre for Biodiversity and Conservation, Ashoka Trust for Research in

Ecology and the Environment (ATREE), Bengaluru 560064, India; Manipal Academy of Higher Education (MAHE), Manipal, Karnataka 576104, India

- Kusum Jaswal - kusumjaswal20@gmail.com  
University School of Environment Management, Guru Gobind Singh Indraprastha University, Sector 16-C, Dwarka, New Delhi 110078, India
- Arjun C. K. - ckarjun19@gmail.com  
Kerala Forest Research Institute (KFRI), Peechi, Kerala, India
- Vaishnavi Singh - vcobhu1@gmail.com  
Maharaja Suheldev State University, Azamgarh, Uttar Pradesh, India
- Manisha Sinha - manisha@echonetwork.in  
The Echo Network, Nordic Centre in India (NCI), New Delhi, India; Danish Academy of Technical Sciences (ATV), Copenhagen, Denmark
- G. Ravikanth - gravikanth@atree.org  
SM Sehgal Foundation Centre for Biodiversity and Conservation, ATREE, Bengaluru 560064, India

Abstract ID: 30

muruganshanthakumar3986@gmail.com | Canada

**Title of the Abstract:**

Avian Sentinels in the Anthropocene: Integrating Ecotoxicology and Biodiversity Monitoring Across Scales

**ABSTRACTS**

---

The accelerating pace of environmental change in the Anthropocene necessitates integrative approaches to biodiversity monitoring that account for both ecological processes and chemical stressors. Birds are widely recognised as effective sentinel species due to their trophic diversity, ecological breadth, mobility, and sensitivity to environmental perturbations, enabling the integration of contaminant exposure signals across spatial and temporal scales. This study synthesises advances in avian-based biomonitoring within an ecotoxicological framework, with particular emphasis on persistent organic pollutants, trace metals, and emerging contaminants such as microplastics. Evidence from terrestrial and coastal systems demonstrates how bioaccumulation and biomagnification in avian taxa reflect underlying contaminant dynamics and translate into sublethal and population-level effects, including endocrine disruption, reproductive impairment, and behavioural alterations. Migratory species are highlighted as transboundary indicators that reveal linkages between regional contamination patterns and global-scale processes. Despite methodological progress, the incorporation of avian ecotoxicological data into large-scale biodiversity assessments remains limited, particularly in tropical and data-deficient regions. Key gaps persist in spatial coverage, standardisation, and long-term monitoring, constraining the integration of these data into global assessment frameworks. Addressing these limitations is essential for advancing ecologically meaningful risk assessment and for informing conservation strategies under conditions of escalating anthropogenic pressure. Positioning birds at the interface of ecological monitoring and environmental assessment provides a robust pathway for understanding contaminant-driven biodiversity change and strengthening evidence-based policy responses in the Anthropocene.

**Keywords:** Anthropocene, Avian biomonitoring, Bioaccumulation, Ecotoxicology, Microplastics**Mode:** Poster Presentation**AUTHORS**

---

- **Presenter:** Murugan Shanthakumar - muruganshanthakumar3986@gmail.com  
EcoDiversity Research Centre
- Vidya Padmakumar - EcoDiversity Research Centre, BC, Canada

Abstract ID: 71

yashsinghtbw@gmail.com | India

**Title of the Abstract:**

Influence of Tree Cover on Avian Acoustic Signalling: A Quantitative Assessment of Variation in Black Drongo Call Parameters

**ABSTRACTS**

---

Birds make a wide variety of vocalisations for a wide range of purposes like courtship, defending territories, alerting about predators, and identifying kin. However, the transmission of a bird's call over long distances is affected by its environment significantly; densely forested habitats degrade the transmission by scattering and reflecting the sound, and simultaneously reducing the signal intensity over distances due to absorption. Therefore, depending on the habitat, certain adjustments and adaptations are made by the birds to minimise the loss of information over long distances. This study investigates how the Black Drongo (*Dicirurus macrocercus*), a bird that inhabits habitats with varying degrees of tree cover, adapts its vocalisations depending on the tree cover. The spectrograms of calls from the bioacoustics database were analysed. The component of the calls was categorized as Slope, Oscillation, Arrow and Rod, based on the tempo progression of their dominant frequency. The tree cover of the call locations was quantified using a derived Tree Cover Index (TCI). It was observed that Tree Cover correlated positively with Slope bandwidth and negatively with low frequencies of Oscillation and Arrow categories, Arrow peak duration, peak frequency and centre frequency of Rods. This inverse correlation may arise because higher-frequency harmonics are attenuated more than middle-to-lower frequencies, enabling lower frequency calls with a greater number of harmonics to propagate further, thereby being favoured by the bird for better information preservation. The positive correlation with the average bandwidth of the arrow may aid to retain more of the message by allocating energy across a broader spectrum of frequencies. Variations in these call parameters may serve as preliminary indicators of tree cover depletion in a region, and more research might focus on establishing baseline parameter values for various tree cover indices to estimate unknown tree cover from audio recordings.

**Keywords:** Adaptability, bioacoustics, bird calls, forest cover, spectrogram

**Mode:** Poster Presentation

**AUTHORS**

---

- **Presenter:** Yash Singh - yashsinghtbw@gmail.com  
MES D.G. Ruparel College
- Nitin L. Wasnik - nitin.wasnik@ruparel.edu  
MES D.G. Ruparel College

Abstract ID: 81

bhagyaturakani49@gmail.com | India

**Title of the Abstract:**From Detection to Drug Resistance: Genomic Insights into *Theileria annulata* in Indian Dairy Cattle**ABSTRACTS**

---

The dairy sector plays a crucial role in India's agricultural economy by supporting rural livelihoods and contributing significantly to national milk production. However, the productivity and health of dairy cattle are often compromised by infectious diseases, particularly tick-borne haemoprotozoan infections such as theileriosis. This disease, caused by the apicomplexan parasite *Theileria annulata*, leads to severe economic losses through reduced productivity and increased mortality.

Accurate detection and continuous surveillance of *T. annulata* in dairy cattle are essential for effective disease management. Beyond detection, genotyping of this parasite is critical for understanding the genetic diversity and distribution of circulating strains, providing insights into regional variation and transmission dynamics. In India, treatment of theileriosis primarily relies on the antiprotozoal drug Buparvaquone; however, increasing reports of drug resistance from dairy farms are a growing concern. As buparvaquone specifically targets the mitochondrial cytochrome b (cytb) protein, mutations in the cytb gene have been associated with reduced drug sensitivity. Therefore, identification and monitoring of cytb mutations are essential for understanding and tracking emerging resistance.

Furthermore, the mitochondrial genome serves as a valuable genetic marker due to its maternal inheritance and relatively higher mutation rate, enabling robust tracing of parasite lineages and insights into their geographic distribution.

To address these aspects, we conducted molecular surveillance of *Theileria annulata* across multiple regions of India, including Maharashtra, Tamil Nadu, and Kerala, with a primary focus on identifying mutations in the mitochondrial cytb gene. Subsequent analysis revealed the presence of several novel variants in the cytb gene, along with previously reported mutations that have been associated with resistance to Buparvaquone.

**Keywords:** *Theileria annulata*; Dairy cattle; Drug Resistance**Mode:** Poster Presentation**AUTHORS**

---

- **Presenter:** Bhagya Turakani - [bhagyamt235@gmail.com](mailto:bhagyamt235@gmail.com) JRF
- Azhahianambi Palavesam - [nambibio@gmail.com](mailto:nambibio@gmail.com) Associate Professor, TANUVAS
- Anju varghese, KVASU - [anju@kvasu.ac.in](mailto:anju@kvasu.ac.in) Assistant Professor
- Pankaj Musale - [pankaj.musale@baif.org.in](mailto:pankaj.musale@baif.org.in) Senior Research Officer, BAIF
- Dhanasekaran Shanmugam - [d.shanmugam@ncl.res.in](mailto:d.shanmugam@ncl.res.in) Scientist, CSIR-NCL







