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One Lifetime Is Not Enough for the Himalaya- In Conversation with Dr. G. S. Rawat

Dr. Gopal Singh Rawat has Ph. D. and D. Sc. Degrees in Botany from Kumaon University, Nainital. He has over 45 years of research experience on floristic surveys and ecology of alpine meadows (*Bugyals*) in the Himalayan region. He has guided more than 35 Ph. D. and over 20 M. Sc. students at WII. He is recipient of prestigious T.N. Khoshoo Memorial Award for his work on orchids of Gori Valley (2019) and Tod Stuessy Award (2024) for his floristic work in the Himalaya. He is the author of several books and more than 300 papers in national and international journals.

'' विद्या ददाति विनयं, विनयाद् याति पात्रताम् ।
पात्रत्वात् धनमाप्नोति, धनात् धर्म ततः सुखम्'' ॥

Vidya dadāti vinayam, vinayād yāti pātratām;
Pātratvāt dhanam āpnoti, dhanāt dharmam tatah sukham.

(Knowledge gives humility; humility leads to worthiness; worthiness brings prosperity; prosperity enables righteous living, and from that comes true happiness)

1. Looking back at your journey at the Wildlife Institute of India (WII), from joining as a scientist to later serving as Dean and Director, how have research priorities and approaches evolved over the years?

I joined the Wildlife Institute of India in October 1986 in the erstwhile Faculty of Wildlife Biology. At that time, there were only three faculty divisions at WII: Wildlife Biology, Wildlife Management, and Wildlife Extension and Education. Given my area of interest in field botany, I was placed in the biology faculty headed by Dr. A. J. T. Johnsingh, who was a hardcore mammal ecologist, along with other passionate colleagues.

I was really fortunate to have mentors like Dr. Johnsingh, the then Director Shri H. S. Panwar who inspired and helped me advance my career at WII. Dr. Alan Rogers, who was then a UNDP expert at WII then and Shri V. B. Sawarkar, were other role models. Having joined WII purely from a botany background at that time I had no clear idea of what the future held, but gradually I realized that the role of WII faculty was not only to be specialists but also to have broad vision with interdisciplinary knowledge critical for teaching and training purposes.

This realization allowed me to broaden my horizons, and I was encouraged to take up projects mostly in the Himalayan region. I feel privileged that I was allowed to develop proposals on wildlife ecology, habitat ecology, and plant ecology in the alpine regions, which helped me grow holistically while working alongside some of the best biologists and wildlife managers in the country.

Soon after I joined WII, the Institute's e Training and Research Advisory Committee (TRAC) which comprised highly acclaimed professionals, encouraged us to develop a research priority matrix. The final matrix listed high-altitude ecology and threatened mammals on high priority as ecological knowledge from these areas was extremely limited. Therefore, many of us were encouraged to take up projects in the Himalayan region.

Soon after I joined, Director Shri Panwar gave me the role of co-investigator of the project on ecology of Snow Leopard and associated prey species in Hemis High Altitude National Park, Ladakh. I spent several months in Ladakh with Dr. Raghu Chandawat, who later completed his PhD on Snow Leopards, and that experience deepened my interest in mountain ecology.

After a few years, I along with Shri V.K. Uniyal, IFS from Kerala Cadre, who as on deputation to WII developed and completed a project on ecology of montane grasslands in Western Himalaya and Western Ghats. We had two study sites, the Valley of Flowers National Park, Garhwal and Eravikulam National Park, Kerala. The project generated a considerable ecological knowledge on both the sites and came up with several valuable management recommendations. Most importantly, both of us thoroughly enjoyed field work in these areas.

Subsequently, we completed several research projects in the Himalayan region including Habitat ecology of ungulates in Kedarnath WS, Ecology of Himalayan ibex in Pin Valley National Park, Himachal Pradesh, Ecology of hornbills in Arunachal Pradesh, Impacts of developmental projects in Bhagirathi Valley, Uttarakhand, Multidisciplinary project in Great Himalayan National Park, Impacts of climate change around timberline in Western Himalaya to name a few.

In recent years WII has undertaken more ambitious projects covering impacts of climate change on different faunal groups including micro-flora and fauna, invertebrates, fishes, amphibians, avi-fauna and threatened mammals, climate change adaptation by the rural communities, etc and it is heartening to see that a number of modern tools and techniques are being used to increase the efficiency and reliability of data. This is indeed heartening to see.

2. Having served in several leadership roles, what do you believe is the "soul" of WII that sets it apart from other conservation institutions?

The soul of WII lies in its conservation-oriented research driven by practical problems emerging from the field. One major strength of WII is that in our TRAC, we have both well-known ecologists and experienced field managers who collectively review ongoing projects as well as set research priorities from time to time which ensures that research remains practical and applicable on the ground.

Once such priorities are identified, faculty members get opportunities to undertake projects that require close interaction with grassroots stakeholders and field managers, and projects developed through participatory and consultative processes naturally have better conservation outcomes. The experts involved also ensure that research projects are relevant and not unnecessarily duplicated, making WII's work grounded in practical conservation needs.

3. Among your many field experiences in the Himalaya, is there an expedition or moment that remains especially vivid?

Of course, there are so many memories and it is difficult to choose from. Every field visit brings new learning, and generally the longer the expedition and the tougher the terrain, the more memorable the experiences become.

Some of my best memories are from my early days walking in the Shivaliks i.e., Rajaji-Corbett Landscape with Late Dr. Johnsingh, and often accompanying officer trainees and students on long walks, most of which were immensely enriching. Similarly, my travels across the Trans-Himalaya with Dr. B. S. Adhikari while conducting rangeland surveys were extremely thrilling, and working with colleagues like Dr. S. Sathyakumar in mountain landscapes also left strong impressions.

However, perhaps the most unforgettable experience was my six-month expedition across the alpine regions of the western Himalaya in 2004, walking nearly 3,000 kilometres from eastern Uttarakhand near the Indo-Nepal border all the way to Amarnath with Dr. Gajendra Singh, Scientist at Uttarakhand Space Application Centre remains one of the most thrilling experiences of my life.

4. You were part of the Panchachuli expedition. Could you share that experience, and why such expeditions remain important for conservation research?

The Panchachuli expedition in 1988 was organized by the Indian Army in the northern fringes of Askot Wildlife Sanctuary especially around the beautiful Panchachuli peaks. It was a multidisciplinary expedition with participants from institutions like BSI, ZSI, Wadia Institute, G. B. Pant Institute, and WII, while the Army engineers managed logistics.

It was a remarkable learning experience because people from diverse backgrounds walked and worked together, and we were also given basic mountaineering training. The colleagues from the army taught us group cohesion and coordination, physical endurance, techniques of high-altitude survival which gave me tremendous confidence working in the mountains.

This experience later helped me undertake the alpine expedition in 2004, I mentioned earlier. This expedition was supported logistically by the Army, ITBP, and the Uttarakhand and Himachal Pradesh forest departments.

Such expeditions remain important because many biogeographic regions are still poorly documented, and multidisciplinary teams can collect valuable information on flora, fauna, landscapes, and ecological issues. These expeditions also provide opportunities to interact with and learn from local communities about conservation challenges in these remote areas.

5. How do you see rapid infrastructure development interacting with ecological processes in the Himalaya?

Infrastructure development in remote areas is inevitable because defence personnel as well as local communities need connectivity and facilities, but problems arise when such development is carried out irresponsibly by agencies that do not adequately consider environmental sensitivities.

Before opening new areas for roads or infrastructure, the development agencies must ensure that sensitive habitats and threatened species are not damaged, and wherever possible alignments should be adjusted or mitigation measures implemented. It is indeed depressing to see remote valleys being rapidly altered, but I hope future development agencies increasingly engage environmentally sensitive engineers. We need 'green roads' and 'green engineers' in the mountains and minimise environmental impacts.

6. How has Himalayan field research changed since you began your career, and how have modern tools influenced conservation research?

When I began research in the early 1980s at Kumaon University, my fieldwork involved exploring remote valleys, studying plants and ethnobotany, collecting specimens, pressing plants, and preparing herbarium sheets without sophisticated tools. It was just my field guide, notebook, a very simple camera and a rucksack, and I was ready to go!

Present-day field botany has developed and grown. Today, researchers have access to high-resolution cameras, GPS devices, molecular techniques, and advanced ecological tools. They can magnify a flower in the field, collect specimens and undertake molecular studies, and do many other things. This is similar to other wildlife studies which benefit from camera traps and modern monitoring technologies, significantly improving research quality.

However, earlier fieldwork had its own charm because I often travelled alone, camped in remote areas, often stayed with shepherds without tents or assistants. Sometimes I took shelter in caves, more like a sadhu wandering from place to place. It was a thrilling experience—long treks, camping in remote areas, and discovering plants. Today, I think if I had the opportunity of carrying present-day gadgets, things would have been different. But those times were special too, as before starting fieldwork I would make a checklist of the plants I expected to see in an area, and when I actually encountered those species, it gave me immense satisfaction and motivation to continue my journey. Even now, when I think of those remote localities, I often feel that spending one extra day in such areas might have revealed even more discoveries.

7. Some feel there is a growing gap between academic research and conservation practice. How can this gap be bridged?

The gap usually arises due to lack of communication and lack of participatory planning between scientists and field managers. For instance, a problem conceived by scientists without communicating with the field managers and without conveying the purpose of the research can cause a communication gap. Such gaps also occur when research findings are not communicated to stakeholders on timely basis.

Field managers are also transferred frequently, and a new manager may or may not be aware of ongoing study. Therefore, scientists starting work in an area should communicate findings as early as possible, remain in touch with field staff, and try to balance pure academic research with practical conservation research. Academic research can be long-term, where ideas are pursued patiently, while conservation-oriented projects should be of shorter duration and time-bound so that results reach managers in time. While it is tricky, the scientists working on problems of wildlife ecology and conservation need learn to strike this balance between academic and conservation-oriented research without compromising scientific rigor.

8. What advice would you offer young researchers struggling to develop meaningful research ideas?

I would say that young biologists hoping to start careers in wildlife ecology or field botany must first decide their true area of interest. Sometimes researchers begin work only when funding is available and do not pursue their inner interests. If they are genuinely interested in a topic, they should consult experts in the field and join peer groups where research discussions take place.

Good theoretical grounding combined with solid fieldwork is essential. Many researchers first work as field assistants for one or two years, allowing their ideas to mature before beginning independent research. One should not rush into completing a substandard PhD that ultimately offers limited scientific outputs or conservation significance.

Good research requires patience, good mentorship, and perseverance. Some people are more fortunate than others, but gradual learning always helps. If one does not find opportunities to pursue dream project, it is better to take any modest work to begin with and build experience over time. Young researchers must understand that learning by doing is important, and sometimes they must also be bold enough to change topics, institutions, or mentors if necessary.

9. For someone beginning to study plants and taxonomy, where should they start?

Today, a vast amount of literature and online resources are available, and beginners should first understand regional floras and connect with experienced field botanists, spending time in different seasons to observe plant phenology and habitats. Detailed photo-documentation of diagnostic characters, unique morphological features of plants and making field notes and sketches help in honing the plant identification skills. Eflora of India, world flora online etc are very useful learning resources.

10. After more than four decades in Himalayan ecology, what continues to motivate you, and what message would you give young ecologists?

I have a strong network of students and friends in the field who often invite me to accompany them to different areas. I continue to see new facets of the mountains, and I remain interested in studying phytogeography and distribution patterns of plant groups in different habitats. I also aspire to revisit places which I visited 20 to 25 years ago and explore new regions. These things continue to motivate me.

Although I have spent much of my life in the mountains, there is still so much left to see, and one lifetime is not enough. Sometimes simple and modest goals also motivate us to do a lot. For instance, last year Uttarakhand Forest Department had requested me to help in mapping the alpine meadows of Uttarakhand. To begin with I started delineating the meadows using Google Earth. In the process, I could identify some of the interesting landscapes where I personally want to visit for ground truthing. That is one source of motivation.

11. Your students often speak about your humility. How important are empathy and respect in scientific work?

Thanks for the compliment! Every person is different; some people may be more polite and some less, but what matters is scientific growth. Some teachers are strict and tough but that does not mean they have bad intention. In my case, I enjoy learning from younger colleagues as well as from local communities. Shepherds and local elders often possess deep ecological knowledge, and I like to sit with them and learn. If we behave as if we are superior beings, people will never share their knowledge with us. Whatever I have learned from local communities, juniors, and young colleagues, I respect deeply.

I also remember a Sanskrit saying from childhood: *Vidya dadāti vinayam* —knowledge gives humility. Truly knowledgeable people, like Dr. Salim Ali, were known for their politeness and humility, and his way of interacting with colleagues was always respectful.

12. Finally, what message would you like to share with the WII community and young readers?

The younger generation today has a number of advantages. They have access to all the learning resources, tools and techniques. The are in many ways highly skilled. If they organize themselves to achieve focussed outcomes and work hard, they can achieve scientific goals rather easily. Hence, I encourage them to build strong theoretical knowledge, quantitative and communication skills, and combine these with a lot of natural history observations, understanding real life problems which will require spending a lot of time in the field. Even those who aspire to do a lot of laboratory and experimental work, knowledge of field (especially in the Wildlife Conservation) is a must. Balancing these elements will help them achieve their career goals and success in their chosen field.

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Editorial Note

Dr. G. S. Rawat's reflections remind us that conservation science is ultimately a journey shaped as much by curiosity, sound theoretical knowledge, and field explorations as by humility and human connections. From early exploratory walks in remote Himalayan valleys to shaping the careers of many students, and later leading WII as Dean and Director, his career reflects an exquisite balance of scholarship, field immersion, mentorship, and administrative leadership.

At a time when the Himalaya face unprecedented ecological pressures, his message is both cautionary and hopeful: knowledge must remain grounded in field realities, and science must continue to learn from landscapes and local communities alike. For young researchers entering conservation today, perhaps his most enduring lesson is simple - engage with experts and walk with them. Walk slowly, observe deeply, remain humble, and use your time wisely, for one lifetime is too short to learn and explore all that lies within the natural world.

Is ANOVA relevant?

- Shivam Shrotriya

At a job interview, I was once asked whether I could teach One-way ANOVA to undergraduate and post-graduate students. I replied that I could teach regression analyses. The panellist insisted that the question was specifically about One-way ANOVA. Therefore, I tried to elaborate my response that I was comfortable teaching generalized linear modelling, which includes One-way ANOVA, Two-way ANOVA, and MANOVA. To which the interviewer gave a startled look, as though I were uttering what rubbish. Another ANOVA moment happened a couple of years ago, when I was scheduled for a class on basic statistics alongside another tutor. My co-tutor requested me if I could teach ANOVA, because they'll take the class on correlation and would be more comfortable teaching regression as a "continuation". I obliged to this amusing request, teaching ANOVA as a particular configuration of the regression model. But the episode made me ponder how and why introductory statistics curricula, particularly in life sciences, forestry, wildlife biology, and environmental sciences, continue to treat ANOVA as conceptually distinct from regression, following the archaic dichotomy of *tests of difference vs tests of relationship*.

As a student, several books that I came across on statistics used this dichotomy to structure their content. Some of the known examples include Zar's *Biostatistical Analyses* (1984), Dytham's *Choosing and Using Statistics*: *A Biologist's Guide* (2003), and Hawkins' *Biomeasurement: A Student's Guide to Biological Statistics* (2009). Naturally, teachers also tend to follow this inherited structure, where statistical methods are divided into two broad categories: *Tests of Difference* (e.g., t-tests and ANOVA) and *Tests of Relationship* (e.g., correlation and regression).

In this categorising framework, *tests of difference* are presented as tools to determine whether two or more groups are "different," usually by comparing their means. For example, suppose a researcher wants to know whether the application of a pesticide increases apple yield. They select 10 trees without pesticide and 10 trees with pesticide application. The yields from these two groups are then compared using a t-test to assess whether the average yield differs significantly between treatments. ANOVA comes into play if there are more than two such groups, let's say trees without pesticide, trees with pesticide A, and trees with pesticide B. ANOVA evaluates whether the means of three or more groups differ by testing the null hypothesis that all group means are equal.

In contrast, *tests of relationship* are introduced as methods to evaluate whether two variables are associated. For instance, instead of comparing two or three discrete groups, a researcher may measure pesticide dosage continuously across trees and examine whether yield increases with increasing dosage. In that case, correlation or regression would be used to test whether a relationship exists between pesticide concentration and crop yield. This pedagogical separation creates an impression that "difference" and "relationship" are fundamentally distinct statistical problems, creating a false separation.

In ANOVA, the procedure is to calculate F-statistics, which basically compares the variance within each dataset to the variance between the datasets:

$$F = \frac{Variance\ Between\ Groups}{Variance\ Within\ Groups} \quad \text{..... Eq.1}$$

If between-group variability is significantly larger than within-group variability, we conclude that at least one group mean differs significantly from the others. The *variance* itself is calculated using the *mean squares* method. For within-group variation, we compute the squared difference between each observation and its group mean. For between-group variation, we compute the squared difference between each group mean and the overall mean. Squaring differences primarily prevents positive and negative differences from cancelling each other out.

Mathematically, this is similar to fitting a regression line. Mean squares are calculated for a regression line, finding the difference between the observation and the regression line, also called residuals (Figure 1). The best-fit line is the one for which the squared sum of these differences is the least, or the least squares.

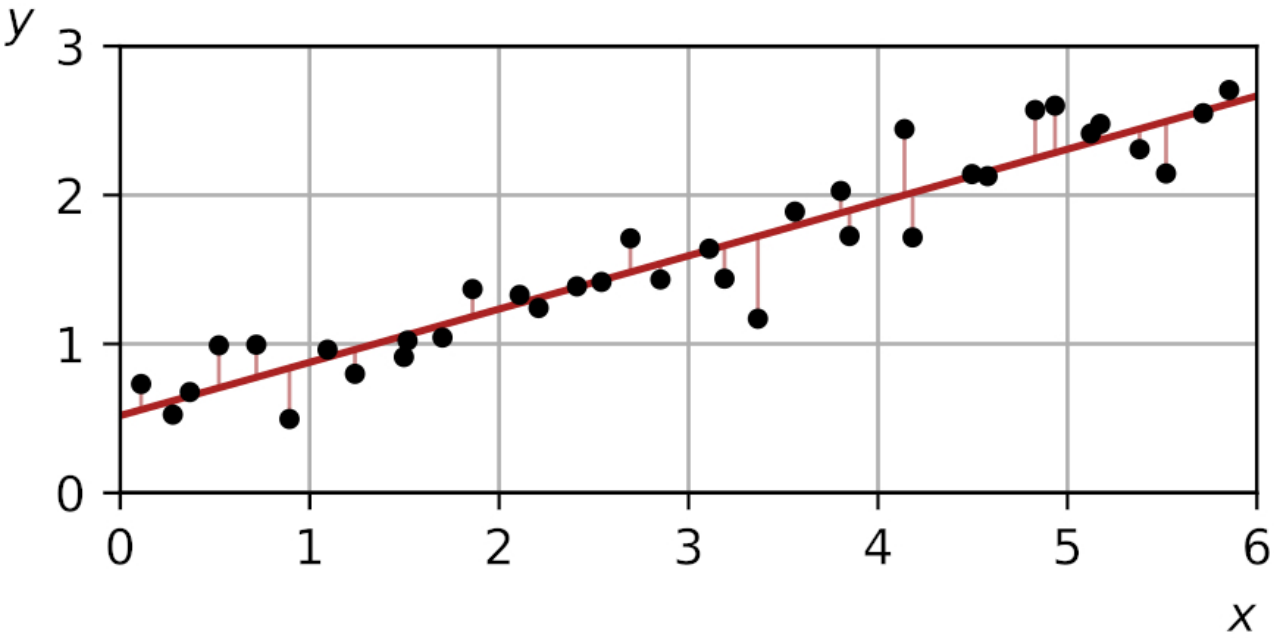

Figure 1. A best-fit regression line also has the least sum of squared residuals
(Source: Wikipedia, By Justinkunimune - Own work, CC0)

We are familiar with the mathematical expression for a simple linear regression, such as figure 1:

$$Y=\beta_0+\beta_1 X+\varepsilon \quad \text{..... Eq. 2}$$

where, Y is the response variable, X is the predictor variable, β_0 is the intercept (or where the line will begin on the y-axis), β_1 is the slope of the line, is the unaccounted effect that is causing the observations to deviate from the line.

Let's suppose X is not continuous but categorical. In the pesticide example with three treatment groups, we could present it as a regression where the response variable is yield across all samples and the predictors are the treatment groups as dummy variables, or each category turned into presence/absence (1,0) data (Figure 2).

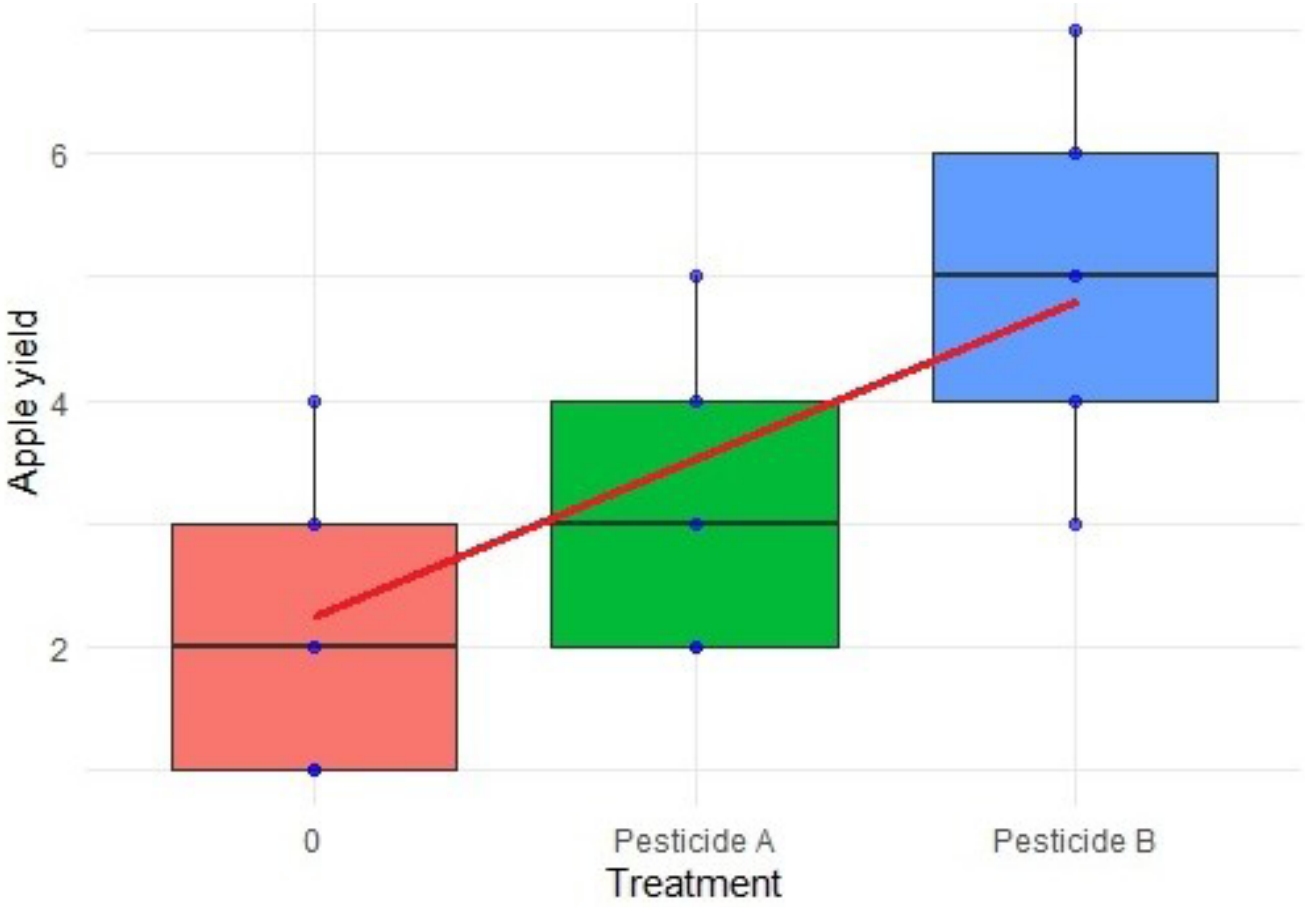

Figure 2. ANOVA can also be presented as a regression setup when the predictor variable is categorical.

The mathematical expression of this linear regression would be:

$$Y=\beta_0+\beta_1 X_1+\beta_2 X_2+\varepsilon \quad \text{Eq. 3}$$

where, X_1 and X_2, both are pesticide treatments. This is simply one-way ANOVA written as a regression. The total sum of squares (SS) in ANOVA is partitioned exactly as in regression:

$$\textit{Total SS}=\textit{Model SS}+\textit{Residual SS} \quad \text{Eq. 4}$$

The F-statistic computed from the regression model is numerically identical to the ANOVA F-statistic. The p-value is the same. The phrasing of the statistical null hypothesis in ANOVA is that *"all group means are equal"*, which could be rephrased for regression as *"all group coefficients (except intercept) are zero."* In fact, in the words of Andy Field, "all statistical tests boil down to variants on regression", and "ANOVA is just a special case of regression" (Field *et al.* 2012). Cohen (1968) also demonstrated decades ago that most classical statistical procedures, including t-tests and ANOVA, are special cases of the general multiple regression model. F-statistic, as the variance-ratio, is simply a computational shortcut historically developed before matrix algebra and computing became accessible.

The unified framework here at work is the General Linear Model (GLM):

$$Y=X\beta+\varepsilon \quad \text{Eq. 5}$$

where, Y is the response vector, X is the design matrix, containing numeric and/or dummy (1,0) predictor variables, β is the coefficients, and ε is the residuals.

Now the question arises, if ANOVA is essentially a regression, how did the two get separated in textbooks and in practice? The roots of this separation can be traced to the long-standing disciplinary split between experimental and correlational sciences (Cronbach, 1957). Experimental research adopted ANOVA as a go-to analytical tool, while observational and correlation research leaned towards regression as the primary method. Methodological camps evolved in parallel rather than in integration, leading to a statistical split. Textbooks and curricula followed suit, and students began learning ANOVA and regression in entirely different contexts (Field *et al*. 2012).

Field *et al*. (2012) note that explaining ANOVA via variance ratios works for simple designs but becomes cumbersome for complex situations, such as ANCOVA, unequal sample sizes, and interactions between treatments. The regression framework extends naturally to these cases. One-way ANOVA is regression with one categorical predictor, Two-way ANOVA is regression with two categorical predictors and interaction, and MANOVA is a special case of the multivariate linear model:

$$Y=XB+E \quad \text{Eq. 6}$$

where, Y is a matrix of multiple dependent variables, X is a design matrix (usually of categorical group indicators), E is a matrix of residuals, and inference focuses on testing hypotheses about group mean vectors.

ANCOVA takes the shape of a regression with categorical treatments with continuous covariates:

$$Y= \beta_0+\beta_1\, Treatment+ \beta_2 Covariate+ \varepsilon \quad \text{Eq. 7}$$

Analysis of Molecular Variance (AMOVA) in population genetics partitions genetic variance across hierarchical levels. Conceptually, it can be presented as a hierarchical linear model:

$$Y= \mu +Population+Individual(Population)+ \varepsilon \quad \text{Eq. 8}$$

where, μ is the overall mean genetic distance, and the observed genetic distances (Y) are modelled as the deviation of each population mean from the overall mean and the deviation of individuals from their population means.

Further, carrying out ANOVA still remains work half done, as it can only tell that there is at least one group that differs from the others. But identifying the specific group-pairs with significant differences requires further post-hoc tests or running planned contrasts (see Field *et al*. 2012). In regression, each β represents the effect of a group relative to a reference category, confidence intervals indicate whether that effect differs from zero, and contrasts can be directly specified within the model. Regression treats group differences as estimated parameters rather than secondary discoveries.

The separation between *tests of difference* and *tests of relationships* persists not because of conceptual necessity, but because of historical inertia. Learning ANOVA within the regression framework provides conceptual continuity. Students who already understand regression slopes and residuals can extend that knowledge to categorical predictors. It also shifts focus from p-values to effect sizes. Regression emphasizes coefficients, magnitudes, and confidence intervals, which are biologically more meaningful. The understanding now expands from just whether something differs to by how much. Moreover, the regression framework scales logically to complexity. Interactions, covariates, unequal designs, and hierarchical structures are handled by expanding the design matrix, without introducing new "tests" for different setups. In fact, statistical programs like R handle ANOVA as post-processing of regression, rearranging the regression outputs in a way ANOVA users are familiar with. Most importantly, regression-based learning encourages model-based thinking. Instead of asking, "Which test should I use?" the researcher can focus on, "What biological/ecological process am I modelling? What variables influence my response? How do I structure the model?"

ANOVA, as an analytical framework, has played an important role in the history of ecology. For example, classical studies by Robert H. MacArthur on niche partitioning (MacArthur, 1958), Joseph H. Connell on competition (Connell, 1961), and Robert T. Paine on keystone species (Paine, 1966) used ANOVA-type study design and analysis to test experimental hypotheses, which gave clear inferences leading to significant theoretical advances in ecology. However, for these relatively simple and controlled designs, ANOVA was sufficient and powerful, but modern ecological data analysis increasingly relies on unified modelling frameworks (Quinn & Keough, 2002).

Since these early works, ecological research has grown more complex with multivariate systems becoming the norm. Our studies more often include multi-species communities, hierarchical processes, spatial autocorrelation, and non-normal data structures. Statistical ecology more frequently uses generalized linear models, mixed models, Bayesian approaches, and hierarchical modelling. The continued separation of *tests of difference* and *tests of relationship* in the introductory statistics classes, though pedagogically convenient, obscures their shared mathematical foundation. Therefore, we need a coherent understanding of how these statistical procedures function, especially in the context of modern ecology.

The problem is not merely technical and terminological, or 'what is in the name', if it is essentially the same. How statistics is taught shapes how students frame research questions. Viewing statistical analysis as choosing from a list through a selection system of distinct and disconnected tests leads to procedural matching. In understanding the unified modelling

framework, focus shifts to hypothesis structure, predictor variables, variance partitioning, and biological mechanism. We need to teach model construction instead of test selection and memorizing procedures. In doing so, students will not just learn statistics, they will grow a statistically aware mindset.

And perhaps the next time someone is asked whether they know ANOVA, it can be confidently replied with "Yes, as a regression model."

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The hidden 'sindoor' of nature on Indian white-eye from Saranda Forest Division, Jharkhand, India

- Saurav Chaudhary, Dipesh Kumar Jangir, Abhishek Gupta

Landscape view of Saranda Forest Division
Photo Credit: Dipesh Kumar Jangir

The Saranda Forest Division, located within the West Singhbhum district of Jharkhand, India, constitutes a critical biogeographical corridor facilitating biodiversity connectivity between the states of Jharkhand and Odisha. The term 'Saranda', etymologically signifying 'seven hundred hills', reflects the region's topography and holds a significant position in ecological history as reputedly the finest and largest contiguous Sal (*Shorea robusta*) forest (Fig 1) (Kumar, 2013). The division encompasses a geographical area of 820 square kilometers, situated between the coordinates 22°12′ North and 85°21′ East, and exhibits an elevational range from 250 meters to 927 meters asl. The soil of the Saranda tells a story of its own; rich in iron ore and scarred by the hands of mining, this rusty hue leaves an impression on the people who visit this landscape. While venturing and observing the birds during the early morning in the midst of this crimson and green landscape, a delicate and unique surprise awaited us. A flock of small omnivore—the Indian white-eye (*Zosterops palpebrosus*, Temminck, 1824), a resident bird distributed widely across the Indian subcontinent, exhibiting olive to green upperparts and white underparts with a discernible white ring surrounding the eyes. They exhibit social behavior, generally foraging in flocks and separating during the breeding season. Their behavior is predominantly arboreal, with individuals rarely descending to the ground (Oates, 1889). While the birds were going through their daily routine, we observed an anomaly in a few of the individuals and questioned whether it was a genetic mutation, an aberration, some temporary color, or something else.

As researchers, our first answer to the anomaly was the color aberration, a hot topic among ornithologists, ecologists, scientists, researchers, and nature enthusiasts (Hume & van Grouw, 2014). But here it was something different; it was the hidden sindoor of the forest—the badge of pollen stuck to the forehead of the white-eye, giving an orange-red rusty hue (Fig 2). Further research on the internet revealed the presence of similar 'sindoori' white-eyes and other birds from some other parts also. This beautiful natural occurrence is often confused with erythrism, an anomaly characterized as an abnormal increase of reddish or orange pigmentation in any part of an animal's body influenced by the metabolism of carotenoids, which is surprising as birds cannot synthesize carotenoid-based pigments and must acquire them from their diet (Hill, 1992). The species was found to be actively chirping and engaged in foraging, feeding on the nectar of the fire-flame bush, or Dhataki *(Woodfordia fruticosa)*, the shrub highly dominant in this region. This observation of the Indian white-eye and *Woodfordia fruticosa* prompted us to look into the shrub, as it is known to often give color to the species feeding on it.

This observation gives us an insight into how the diet-induced and plant pollen carried by birds as a medium for increasing their numbers lead to one of nature's hidden and rare sindoor. The Sindoor is a traditional vermilion red or orange-red powder used by married women in Hindu communities, symbolizing their marital status, often applied along the parting of hair just above the forehead. The crimson 'sindoor' dusted on the tiny Indian white-eye flitting through the forests serves as a living embodiment of the Saranda Forest. Along with the bird, the iron-rich red soil of the region also tells us a story of its own, revealing the numerous problems it has faced over time. It's a bird not stained by the soil, genetic mutation, or color aberration, but the bird is adorned by the flower of a small shrub—a wild reminder of the hidden sindoor of Saranda Forest.

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An Indian white-eye foraging on the *Woodfordia fruticosa* plant, adorned with wild and hidden sindoor 'pollens' on its forehead.
Photo Credit: Saurav Chaudhary

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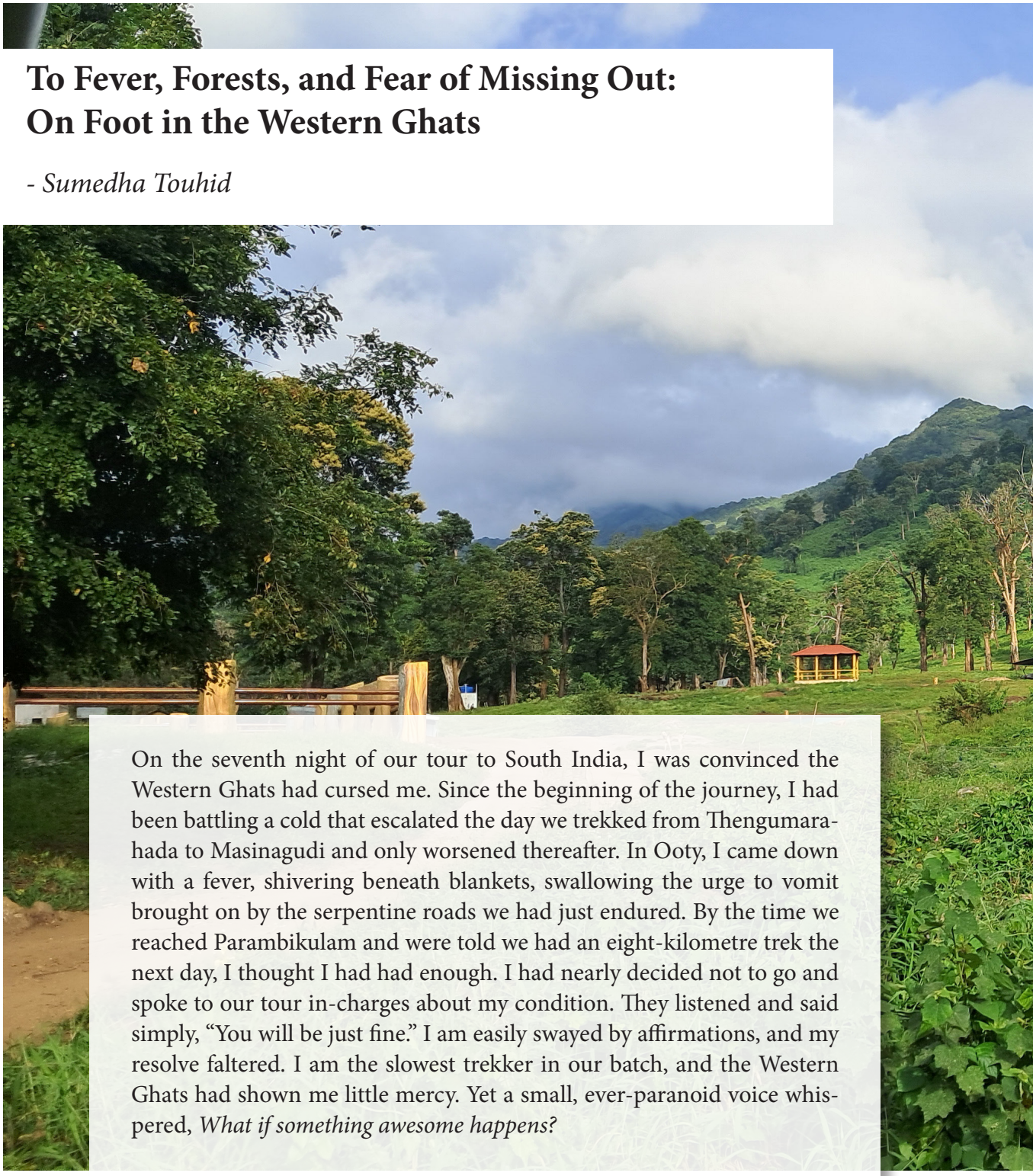
To Fever, Forests, and Fear of Missing Out: On Foot in the Western Ghats

- Sumedha Touhid



On the seventh night of our tour to South India, I was convinced the Western Ghats had cursed me. Since the beginning of the journey, I had been battling a cold that escalated the day we trekked from Thengumarahada to Masinagudi and only worsened thereafter. In Ooty, I came down with a fever, shivering beneath blankets, swallowing the urge to vomit brought on by the serpentine roads we had just endured. By the time we reached Parambikulam and were told we had an eight-kilometre trek the next day, I thought I had had enough. I had nearly decided not to go and spoke to our tour in-charges about my condition. They listened and said simply, "You will be just fine." I am easily swayed by affirmations, and my resolve faltered. I am the slowest trekker in our batch, and the Western Ghats had shown me little mercy. Yet a small, ever-paranoid voice whispered, *What if something awesome happens?*

My fear of missing out won, and so on the eighth day of our South India tour, I decided to go and held onto that decision on the ninth as well. I packed lightly, dressed in field clothes, and set out with the rest of the batch to Topslip on 2nd October, 2025. As we boarded, our tour in-charge noticed me and announced with cheerful gusto that he was glad to see me up and about. Feeling reassured, I climbed onto the bus.

At Topslip, we soon began our walk. Initially, we moved through open grassland, following a clear trail. Gradually, the trail dissolved into forest, and with that shift came a familiar feeling—the quiet, grounding certainty that had once made me choose wildlife as a career.

Kozhikamutthi Elephant Camp

But the day had only started.

As I moved forward, I fell behind the group ahead—unsurprising, given my pace—and sat on a log to wait for those behind me. It gave me time to greet, meet, and unceremoniously yeet the leeches climbing my legs. One had landed on my hand, having dropped from the canopy, and what amazed me was that I hadn't noticed it—the forest guard had, from at least twenty meters away.

Once the rest of the group arrived, we moved ahead—only to stop abruptly where the front group stood, binoculars raised. A Malabar grey hornbill had been spotted. I saw it too, but only after it betrayed its presence by shifting within the foliage, revealing flashes of grey against green.

A little farther on, we followed a Malabar trogon, so perfectly concealed within the canopy that all we could see was its exquisite tail. It remained motionless for as long as we watched, an artwork suspended in leaves while we took photographs of nothing but its tail feathers.

In case anybody was keeping count, it's FOMO: 2, sickness: 0.

Not much farther down the trail, we stopped beside a stream for breakfast. As we were about to leave, someone noticed movement—a leaf insect, sitting on a leaf, magnificent in its camouflage, its sudden motions (to our touches) the only clue to life.

FOMO: 3, Sickness: 0; at this point, it wasn't even a contest.

We continued, with about two kilometers still to go. Not far from the end, the forest staff alerted us to elephants in the vicinity. The guard leading us slowed our pace, stopping often to listen. We began descending gently when he halted suddenly. He paused, turned around, and ordered us to run back.
And run we did.

Adrenaline erased exhaustion. I bolted uphill, not realizing how breathless I was until we reached the top and the world tilted slightly. It was exhilarating—and terrifying. From where we stood, we heard the elephants: a deep, rolling rumble, uncannily like a motorcycle engine idling in the forest. One guard walked ahead. He was soon out of sight, and we heard him strike a tree trunk thrice with his dao, and the others responded in kind. Slowly, the rumbles faded. We continued, shaken but unharmed.

The day was nowhere close to over.

Feeling exhausted, I decided to rest before having lunch. A few of us waited at a gazebo for the dining area to clear when one batchmate screamed and sprinted toward our traveller. Calling for the keys, he pointed, and there it was—a bonnet macaque climbing triumphantly out of a window, smug and victorious. The next twenty minutes were spent assessing losses and identifying the guilty open window. Even after securing the vehicle, the macaques returned repeatedly, opportunistically, and persistently.

We headed for the Kozhikamuthi Elephant Camp. At the entrance, an elephant stood sentinel, its trunk lifted and gently swaying as our traveller rolled in, a quiet, almost ceremonial greeting. We settled in to watch as the carers guided the elephants back into camp, our eyes drifting beyond them to the layered horizon of the Western Ghats, fading into blue and green.

Most of us had left our binoculars behind in the traveler, convinced that elephants would be all we needed. We were wrong. The regret came

Leaf insect

swiftly and unanimously when one of my batchmates announced that she spotted a Great Indian hornbill. It was the second-to-last day of our trip, and I had been nursing a quiet disappointment at not having seen either a GIH or a Nilgiri tahr. And then, suddenly, one of those absences resolved itself.

The bird sat impossibly far away, a dark, unmistakable silhouette against the canopy. It took time and begging for binoculars before I finally found it. But I did. I saw the magnificent bird in its entirety, perched on a distant branch, improbably real. We watched as it lifted itself into the air and vanished into the forest.

We headed back to our hotel in Anamalai as dusk fell quickly. The driver showed no inclination to slow down at the turns. I gripped my seat, fighting nausea, while the headlights carved tunnels through darkness. He seemed to relish the speed.

It nearly cost us.

We came alarmingly close to crashing into a massive gaur. The animal froze, confused, as the vehicle screeched to a halt, throwing us forward. Then, with a startled snort, it vanished into the forest. Not long after, we nearly collided with a herd of elephants preparing to cross the road. The brakes slammed again, but this time we poured out of our seats to look. Many of us heard the trumpet before we saw the matriarch's head emerge. As we passed, I could swear she was furious.

It was my first time hearing an elephant trumpet in the wild. Even though it was provoked by us, I was elated.

And so ended one of my most resplendent days of our South India tour—made possible because, this once, I let my fear of missing out take over.

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Tragic Tale of the Trinket

- Ms. Nonita Rana, Mr. Prajjwal Ray

The smaller, male Common Trinket Snake *(Coelognathus helena helena)*.

This year, the monsoon in southern Madhya Pradesh arrived with a boom of showers. We were excited to begin our nightly surveys for herpetofauna, which are known to be abundant in the monsoon. 23rd June 2025 marked the first day of such heavy downpours when it rained throughout the day (and night). Saddeningly enough, this was also the date the lives of a mother and her unborn children ceased to exist.

Just as usual, we were out on the routine nightly road-cruising to encounter snakes. While passing through an agricultural land, we came across a large yellowish-white mass on the road. Even in the shallow darkness, the entangled bodies of two large snakes were made out. With sheer excitement surged through our minds, we rushed to the spot to have a better look. A large, gravid female of Common Trinket Snake (*Coelognathus helena helena*) lay road-killed in front of us (Image 1), while a smaller male (alive), probably attracted by the female's pheromones, was inspecting it at that time. The male was very quickly photographed (Image 2) and released thereafter, so that the female could be examined thoroughly. The carcass of the female appeared fresh as rigor mortis had not set in yet. One ruptured egg was found beside the carcass, while another egg, damaged by rainwater, was discovered ~2 ft away from it (Image 3). One infertile egg (slug) was found across the road (Image 4), and the shell of one additional egg was found ~10 ft away from the female (Image 5). The latter was most likely predated upon by rodents.

Image 1: The road-killed female Common Trinket Snake *(Coelognathus helena helena)* with a ruptured egg right beside its body.

Image 3: The rainwater-filled egg (damaged), found ~ 2 ft away from the carcass.

Image 4: The 'slug' egg, found across the road.

Species such as the Common Trinket Snake (*Coelognathus helena helena*) and the Indian Rat Snake (*Ptyas mucosa*) are known to lay eggs when stressed. There are several cases where gravid females of these species had laid eggs right after they were put inside a bag/container for relocation. Perhaps the female, while crossing the road, got injured by a passing vehicle, which initiated stress-driven oviposition. The female likely attempted to move away as it continued laying eggs, which explains why several eggs were scattered across the area. Possibly, another vehicle delivered the mortal blow when the snake finally died, and the last egg it laid was found right beside its body. In the present era of urbanization, the expansion of road networks cannot simply be halted. However, any road that experiences regular traffic and bisects a previously continuous stretch of habitat poses danger to the local fauna (especially reptiles, amphibians, etc.). While in the case of protected habitats (e. g., national parks) such crises are avoided by means of policy-making and/or direct intervention, unprotected rural and urban habitats, despite housing diverse urban fauna, are often not considered for conservation/mitigation measures. This mother snake tragically meeting her unnatural (and unexpected) demise points toward the neglect that a 'common' species and a rural habitat generally face.

Image 5: Shell of possibly predated egg, found ~ 10 ft away from the carcass.

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Photo Credit– Prajjwal Ray

Ganga: Paddling down the river

- Saurav Gawan

Photo Credit: Ganesh Chaudhary

More than seven years ago, I took my first step exploring the rivers of India to understand the ecology of freshwater species. It is then that I truly understood the meaning of the saying - "*The journey of a Thousand Miles Begins with a single step*". The journey began in 2013 in Chambal. Thereafter, I set out to study other major river systems such as the *Yamuna*, *Ghaghara*, *Saryu*, *Sone*, *Koshi* and Brahmaputra. Learning the ecology of these rivers, their aquatic life and communities dependent on them, my path finally led me to India's longest river- the Ganga. Not only is it the home to many vertebrate groups, but it is a lifeline to more than 450 million people directly or indirectly for sustaining their lives.

Ganga has various references to it; for some, it's *Moksh Dayini* (Salvation provider), for some, the natural sources of minerals and nutrients, and still others, it's the living legend that has witnessed history. A natural source of groundwater recharge, it supports the existence human and wildlife alike. I have been fortunate enough to travel more than 2500 kms, a stretch of the main stem of the Ganga River from Bhimgoda Barrage in Uttarakhand to Ganga Sagar in West Bengal. Here I recorded endangered turtles, crocodilians, other reptiles, amphibians, birds and mammals. I closely observed the dependency of local communities on the river, which included daily wagers, commercial fishermen, farmers, etc.

My journey on the Ganga River began on an inflatable boat. Starting from Haridwar in Uttarakhand- the land of Gods, I followed the course of the river and paddled down till Nurpur in West Bengal, where the river meets the sea.

In the upper reaches where the river flows fast and swift, Ganga is a symbol of holiness, a sacred entity; to be touched only for salvation. There, littering, dredging and unsustainable resource extraction are considered sins. Here it is home to fish species like Common snowtrout (*Schizothorax richardsonii*), and the endangered Golden Mahsheer (*Tor putitora*), smooth coated Otters (*Lutrogale perspicillata*) and birds like the Crested Kingfisher (*Megaceryle lugubris*) and a flock of migratory birds like Ruddy Shelduck (*Tadorna ferruginea*), Common Merganser (*Mergus merganser*), etc. While the locals protect the Ganga here, threats persist, including excessive tourism, unplanned infrastructure, and poor waste management.

As the Ganga enters the mighty plains, its swift flow changes, forming deep pools at regular intervals, depositing rich mineral soil and creating fertile plains. At Varanasi, the river is associated with the cultural and religious values of Hinduism. In this region, people utilize its waters for domestic chores like washing, bathing, navigation, transport, and so on, signifying an unimaginable life without the waters of the Ganga. People here can be seen practicing riverbed farming, ploughing big farmlands and water-intensive industries such as tie-and-dye and tannery. Communities, due to their high dependency on the Ganga, often encounter the aquatic biodiversity.

To the marginal communities, the banks of the Ganga are also the burial grounds, for people who can't afford to buy firewood for cremation. At times when the river water cuts the banks, these bodies often wash away and become food for scavenger turtle species. Despite such intense pressure, rich biodiversity exists here, with several bird species both resident and migratory like the Common Crane (*Grus grus*), Indian Skimmer (*Rynchops albicollis*), state bird of Uttar Pradesh - the Sarus Crane (*Grus antigone*), threatened species of freshwater turtles such as Three stripped roofed turtle (*Batagur dhongoka*), Indian Narrow headed Softshell Turtle (*Chitra indica*), Indian Softshell

Turtle (*Nilssonia gangetica*), Crowned River Turtle (*Hardella thurjii*) and Spotted pond turtle (*Geoclemys hamiltonii*) along with two species of crocodilian; the Mugger (*Crocodylus palustris*) and the rarest crocodilian of the world the Gharial (*Gavialis gangeticus*); basking on the sandy banks, river islands and at places on the wooden log besides the farmlands on the banks of Ganga. During winter, migratory birds use these areas for wintering grounds. Greater Flamingo (*Phoenicopterus roseus*) was one such sighting by our team at Narora upstream near Rajghat of Bulandshahr, Uttar Pradesh. The surfing of Gangetic River Dolphins along with calves is a treat to the eyes. This national aquatic animal is locally called Susu and is an indicator of the health of the freshwater ecosystem.

Further down, the river becomes sluggish and meanders, giving rise to several ox-bow lakes. The ox-bow lakes, with time, result in the formation of wetlands. After crossing over a 60 km stretch of the Vikramshila Gangetic Dolphin Sanctuary in Bhagalpur district, Bihar, I observed cargo ships carrying goods, local ferries transporting vehicles, cycles, grocery items and other household items. Despite these anthropogenic activities, this stretch of the Ganga supports highly specialized flora and fauna. One can frequently sight dolphins surfing here. The lower stretch harbours the Hilsa (*Tenualosa ilisha*) fish, a delicacy in the state of West Bengal, the Northern river terrapin (*Batagur baska*), one of the rarest species of the Batagur family, the largest and the most aggressive crocodilian species - the Saltwater Crocodile (*Crocodylus porosus*) in the estuarian area of Sunderbans. The presence of human carcasses at the shoreline attracts Greater Adjutant Stork (*Leptoptilos dubius*) and Lesser Adjutant Storks (*Leptoptilos javanicus*).

In this entire journey, biodiversity occurs alongside humans. I vividly remember the sight of basking animals near the farmers on the banks, whereas, whenever the animals sensed strangers, they would either move or dive into the waters. This display of an exclusive connection between the ecosystem and humans was unique for me. This highlights the importance of involving local communities in the conservation of river Ganga. The threats both for the biodiversity of Ganga and marginal farmers are extreme summers, open drains and massive flush of water released from the barrages during the monsoon. All these experiences encouraged me to learn more about the river and understand how it continues to survive despite increasing pressures. It left me with a deeper appreciation of the delicate balance between nature and human life along its banks, along with a constant reminder on importance of collective efforts to protect and sustain this vital ecosystem.

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Yarkand Expedition (1870-1879): When Ladakh First Entered the Scientific Imagination

- Niazul Hassan Khan

Today, Ladakh is celebrated for its stark beauty, vast cold deserts, high mountain passes, and wildlife that somehow manages to survive in one of Earth's toughest climates. Yet long before satellites, camera traps, or ecological models, this region first assumed a place in the global scientific gaze through a set of remarkable 19th century expeditions. From 1870 to 1879, the Yarkand missions laid the groundwork for recording Ladakh's wildlife, plants, and geologic history. Their observations still shape how we understand the Trans-Himalayan ecosystem.

The first Yarkand Expedition of 1870, later published as L*ahore to Yarkand: Incidents of the Route and Natural History of the Countries Traversed* (1873) wasn't designed as a wildlife survey. Its stated aims were diplomatic and commercial, meant to strengthen ties with Central Asia. Yet the scientific members on board quickly realized that Ladakh stood as one of Asia's least-studied regions. Crossing from Kashmir into Ladakh via the Zoji La and the Drass Valley, they began recording everything they encountered—terrain, climate, plants, birds, and signs of animal life. This crossing marked a sharp ecological turn: Kashmir's forested slopes gave way to an arid, treeless plateau where survival depended on precise ecological limits. The accounts repeatedly highlight scarcity, not as an absence of life, but as a defining feature of Ladakh's ecology. Wildlife existed but was sparse and highly specialized.

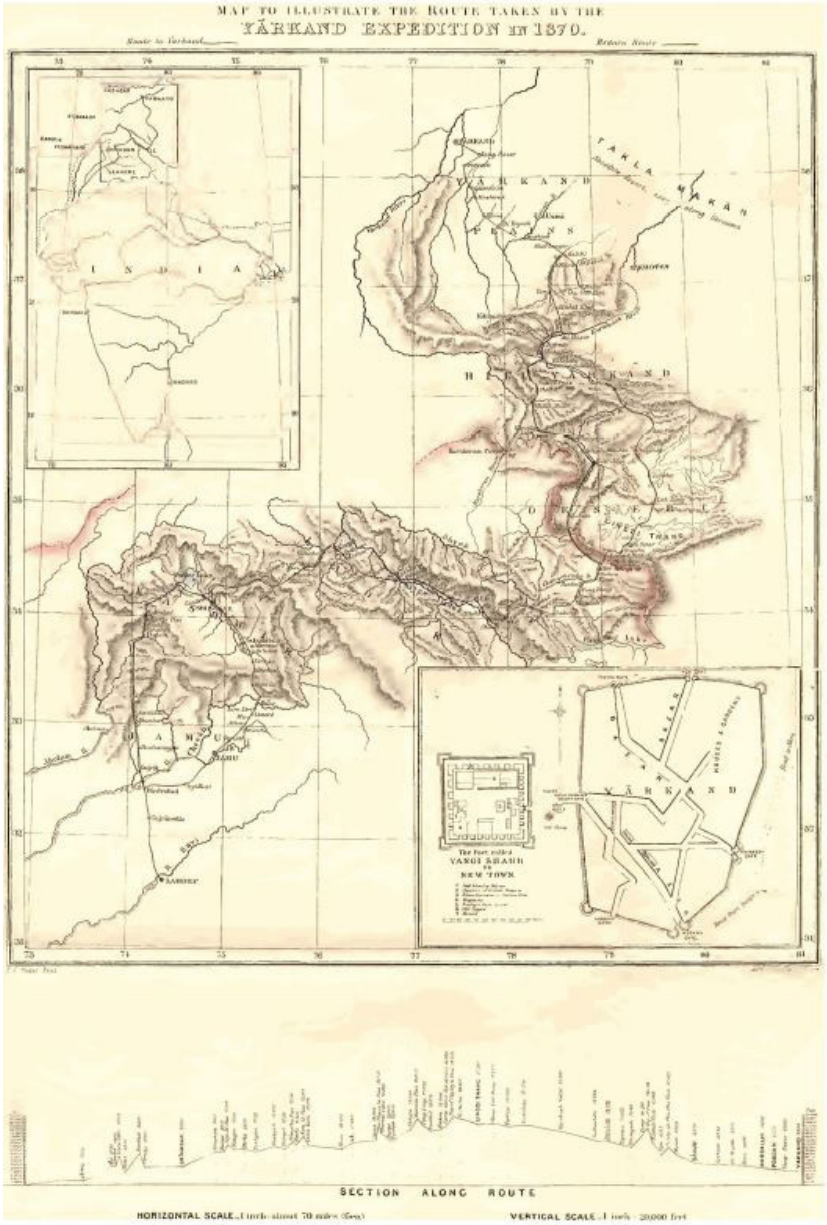

Figure 1: Yarkand Map (1873 Lahore to Yarkand-Incidents of the Route and Natural History of Countries Traversed under TD Forsyth by Hendersons). *(Source: Lahore to Yarkand)*

Figure 2: *Xema brunneicephala (now Chroicocephalus brunnicephalus* Jerdon, 1840). The brown-headed gull recorded in abundance in July, at an elevation of about 15,000 feet, in a small stream running down from Chagra into the Pangong Lake.
(Source: Lahore to Yarkand)

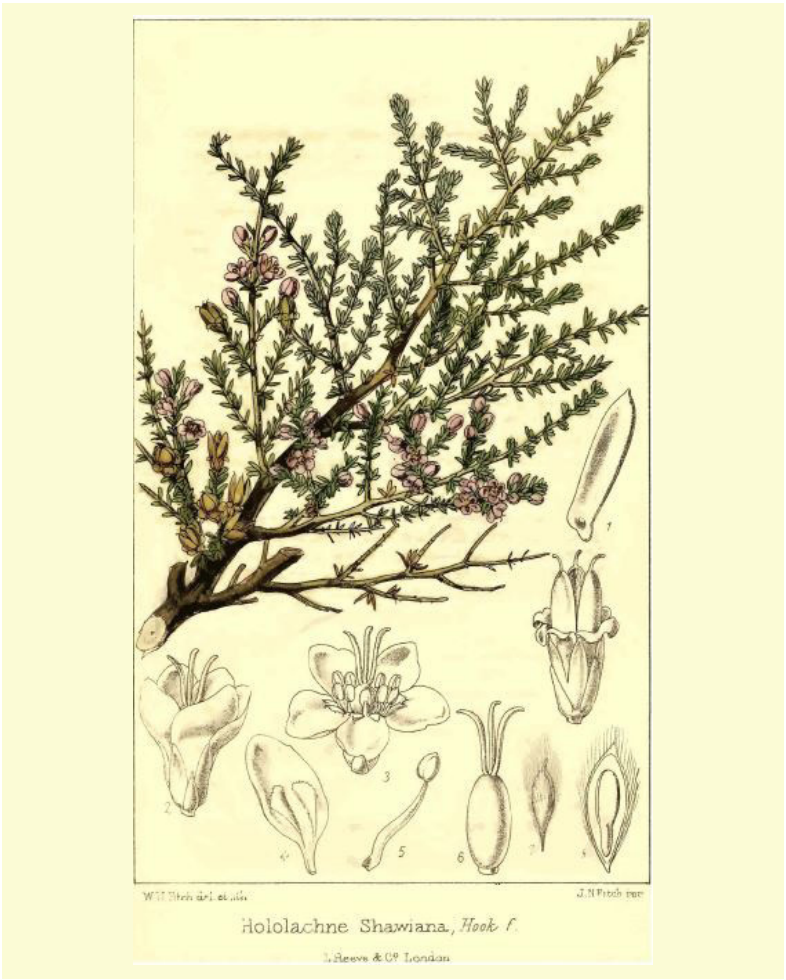

Figure 3: *Xiololachne Shawiana,* Hook. f. (sp. nou.). Foliis lineari-oblongis obtuse apiculatis, petalis spathulato-oblongis, staminibus 10, ovario subsessile, stylis 3. One of the commonest plants at elevations of 5000 to 12,000 feet.
(Source: Lahore to Yarkand)

Birds represented the most apparent and best-documented part of Ladakh's fauna during the 1870 expedition. Raptors and scavengers, particularly the lammergeier, or bearded vulture, were often seen soaring along cliffs and high passes, sometimes above 15,000 feet. Smaller birds—larks, accentors, wagtails, and finches—were noted mainly in the valleys where water and vegetation persisted. These observations contributed early ecological insights into cold-desert systems, with species distributions tightly tracking altitude, temperature, and moisture.

Sightings of large mammals were rare, which the authors recognized with welcome candor. Such rarity was to be expected across such a huge terrain, at low animal densities, and with extremely wary wildlife in such open habitats. However, indirect evidence from local knowledge, skins seen in trade, and occasional signs indicated wild ungulates and large carnivores across the plateau. These early notes were made almost a century before the first systematic studies of mammals in Ladakh.

The botanical work of 1870 to 1873 represents one of the most significant scientific contributions of the expedition. Plant collections were carried out on the river valleys, around Pangong Lake, and at the limits of cultivation. The party realized that Ladakh's flora flowers in the short summer driven by snowmelt; there was a predominance of alpine grasses, hardy shrubs, and scattered flowering plants, sharply declining with altitude and aridity. Specimens were later verified at the Kew Herbarium in London, forming the first reliable botanical record of the Trans-Himalaya.

Insects were strikingly rare—a pattern that the explorers regarded as ecologically telling. High-altitude butterflies such as the *Parnassius* species did show that Ladakh had a small but specialized biodiversity. That Ladakh's ecosystems are determined more by limits than abundance is a perspective that remains critical in modern Trans-Himalayan ecology. Of importance was attention to people and pastoralism from the expedition: grazing routes, seasonal camps, and settlements reflected the same environmental constraints shaping wildlife. While not framed as conservation work, these observations captured an early sense of coupled human-natural systems where pastoral livelihoods and wildlife coexist within narrow ecological margins.

The Second Yarkand Expedition, carried out in the early 1870s and published scientifically in 1879 as Scientific Results of the Second Yarkand Mission, pushed the natural history of Ladakh in a completely new direction. Among the most important of these was Ferdinand Stoliczka, whose discoveries opened up for the first time Ladakh's profound geological and biological antiquity. While crossing the Karakoram-Ladakh high plateau, Stoliczka picked up strange spherical limestone objects, known today as "Karakoram stones." They were subsequently identified as the fossils of a previously unknown order of marine organisms, which were named Syringosphaeridae. Their discovery demonstrated that Ladakh's current cold desert had been inundated beneath ancient seas during the Triassic era. It recast scientific understandings of the region: Ladakh's apparent biological paucity was no eternal condition but the outcome of tremendous geological uplift and climatic change over millions of years. Via these fossils, Ladakh's modern wildlife became connected with a far deeper evolutionary narrative; life here has always been moulded by extremes and transformation. The Yarkand expeditions, by grounding their observations in specific years, such as 1870 for the first systematic records of wildlife and plants, and 1873-1879 for geological and fossil discoveries, provided modern researchers with a framework to track ecological change over a period of more than 150 years. These early records are part of the few historical baselines in a region that is currently experiencing rapid warming, infrastructure growth, and increasing human impacts. The Ladakh expeditions' legacy goes beyond lists of species or fossil descriptions. They brought forth one way of seeing the Trans-Himalaya as a fragile, finely balanced system bound by limits set by environmental variables. This perspective remains strikingly relevant today, as scientists and conservationists work tirelessly to safeguard wildlife in a landscape where its survival is constantly in jeopardy. The pioneers of Ladakh's wild recorded a world few outsiders had seen, suffering altitude sickness, isolation, and brutal weather. This work reminds us that scientific understanding often starts not with technology but with careful observation and reverence for the land. With Ladakh facing accelerating environmental change, to revisit these journeys of the nineteenth century is not an exercise in history; it reminds us that the region's ecosystems have long been shaped by extremes, and protecting them today requires both modern science and deep appreciation of their past.

Among the most influential figures associated with the Ladakh-Yarkand expeditions was the talented naturalist of the Geological Survey of India, Ferdinand Stoliczka, whose work bridged living nature and deep geological time. On the Second Yarkand Mission of 1873-74, Stoliczka collected and documented a wide range of geological and fossil material from the high-altitude Karakoram-Ladakh region, often under conditions of great physical duress. His most durable contribution came from his painstaking study of the mysterious "Karakoram stones," which he correctly identified as biological in origin rather than simple mineral formations. Stoliczka did not live to complete their full analysis, but his field observations and stratigraphic notes laid the foundation for their later identification in 1879 as a new order of fossil marine organisms, the Syringosphaeridae.

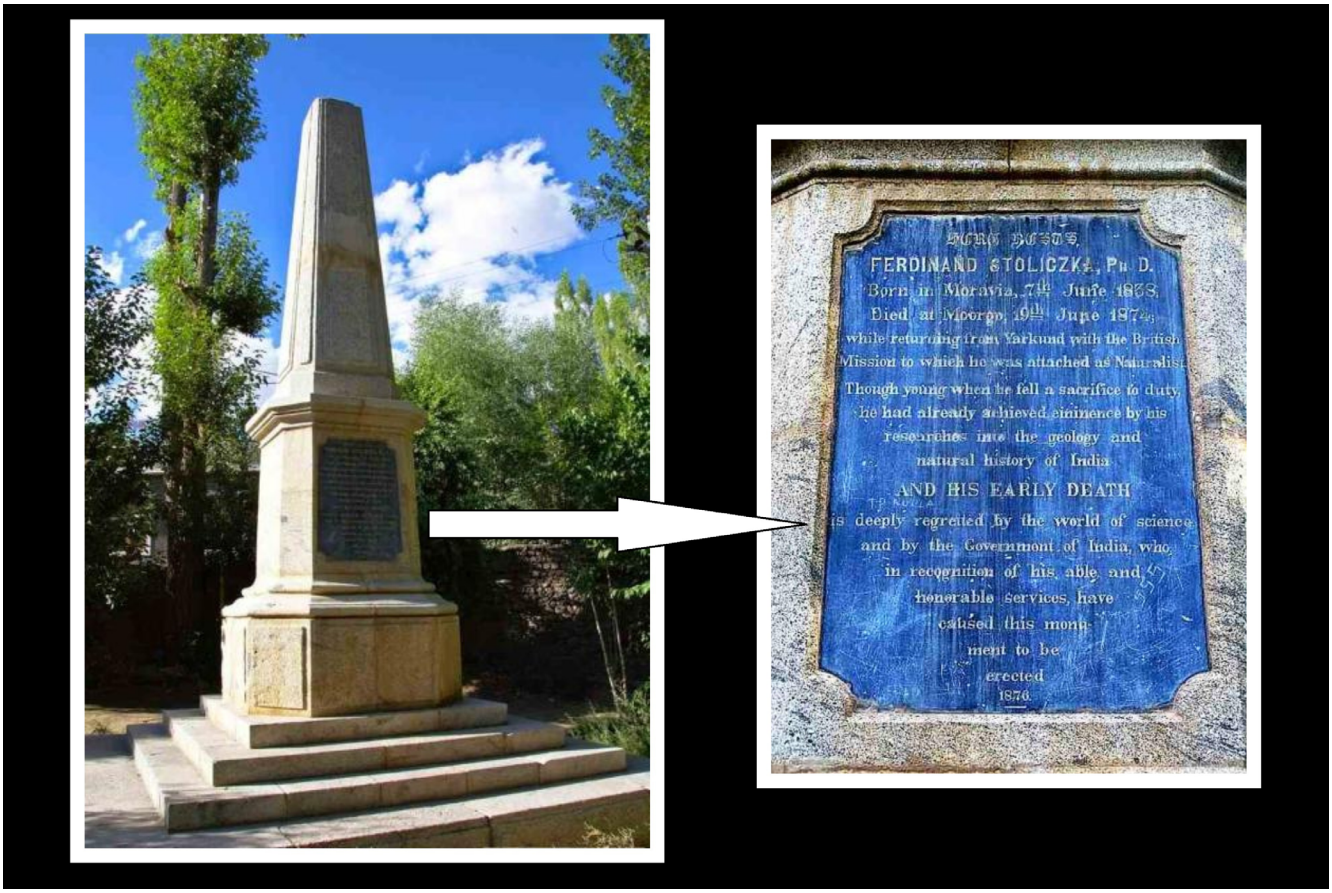

Figure 4: A grand memorial was erected at the Moravian Cemetery in Leh in the Union Territory of Ladakh as a mark of respect for the service he rendered to India
(Source: The Embassy of the Czech Republic in New Delhi)

His work showed that Ladakh's present cold desert had been part of an ancient marine environment, and it fundamentally recast scientific understanding of the region. Stoliczka's legacy lives on not only in the fossils that bear his name but also in the way he showed that the harsh modern ecosystems of Ladakh are the product of profound geological transformation rather than ecological emptiness.

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Is our city warming up? Mapping the Urban Heat Islands in Dehradun

- Sneha Pandey and Gautam Talukdar

Have you ever wondered about the warm rush of air while driving through city-scapes in Dehradun, and felt a much cooler wind blowing through while entering from the Chandrabani chowk or driving around Forest Research Institute? If you've lived in Dehradun for more than a decade, you've likely felt the shift in this temperature. The conversations often sound the same: "Fan se kaam nahi chalta ab" (A fan isn't enough anymore), or remembering the days when light woolens were needed in the evenings, even in April. It's not just nostalgia and it's not just global climate change. There is a highly localized phenomenon happening right now that is altering Dehradun's microclimate (Mishra & Garg, 2023).

This phenomenon where an urban area is significantly warmer than its surrounding rural or natural areas is a micro-climatic condition known as the **Urban Heat Island (UHI)** effect (Sethi & Vinoj, 2024). This temperature difference occurs because the materials and structures used in cities (concrete, asphalt, steel) absorb and retain heat much more effectively than natural landscapes (Sharifi & Lehmann, 2014). Many of us might have experienced it, but can we map this cool and warm pockets within the city?

Our research focuses on this very issue: the rise of Urban Heat Islands in Dehradun. Working with surface temperatures can be tricky but Landsat series of satellite offers thermal band, using which the Land Surface Temperature (LST) can be calculated at a resolution of 30 m. We have used more than 350 cloud free images from Landsat 5,7, and 8 datasets to calculate LST variations in Dehradun for 35 years (from 1990 to 2025). Our findings indicate that despite over half of the city's area (51.4%) is under green cover, Dehradun still experiences pronounced UHI effects with localized surface temperature hotspots which can be as high as 4–6°C than those of surrounding rural or forested areas. For instance, high-density wards (like Ghantaghar and surrounding areas) lacking adequate vegetation consistently exhibited the highest surface temperatures.

Notably, UHI intensity has escalated since 2000—when Dehradun was designated as Uttarakhand's state capital and underwent rapid urban expansion. These findings underscore the vital role of Urban Green Spaces (UGS) in mitigating urban heat and providing ecosystem services such as temperature regulation in addition to other valuable services (Kumar *et al.*, 2025). Dehradun is increasingly facing pressures from unregulated tourism, severe rise in vehicles and unplanned construction. Preserving and enhancing UGS in this tropical mountain city is critcial in improving thermal comfort, and strengthen urban ecological resilience.

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Figure: Visualization of annual temperature variations for Dehradun between 1990 and 2025 using warming stripes. Each stripe corresponds to a single year, with blue shades indicating temperatures below the historical average and red shades indicating above-average temperatures. The dominance of red hues in recent years reflects an ongoing warming trend.

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Squeezing Blood out of Stone: Funding Struggles in Ecology & Conservation Research during a PhD

- Anukul Nath

Trying to secure ecology & conservation funding as a PhD student often feels like drawing blood from a stone. Often, it's a slow, exhausting struggle against systems that undervalue the ecological science which is the backbone of conservation science. Ecological studies rarely produce immediate economic returns, and funding agencies tend to prioritise fields where outputs are quick, measurable, and profitable. The outcome of ecological science, however, unfold over years, sometimes decades, and their success is often intangible. For a PhD student, this mismatch between scientific urgency and funding priorities can be deeply disheartening.

My own experience reflects this reality. Securing funding for ecological research, particularly on lesser-known or non-charismatic taxa, can often be a challenging process. Studies that focus on foundational ecological questions or understudied species frequently receive lower priority simply because they do not align with high-visibility themes or headline conservation narratives. Even when such work has strong scientific relevance and long-term value for ecosystem understanding and management, it can be difficult to communicate its importance within funding frameworks that tend to emphasise more immediately recognisable issues. This creates a subtle but persistent gap and critical ecological research that could strengthen our knowledge base and inform proactive conservation often struggles to find support.

Those experiences offered an important lesson in how structural gatekeeping operates within ecological research. Funding systems often tend to favour charismatic species, crisis-centred themes, or research areas that are already embedded within long-established project frameworks. As a result, researchers working on foundational or less visible ecological questions frequently find themselves having to justify not only the scientific merit of their work, but also its perceived relevance within administrative and funding narratives. Instead of being able to devote full attention to fieldwork, data collection, and analysis, a significant amount of effort is spent explaining why such studies matter, why anticipatory ecological science is necessary, and why support should not be contingent on problems escalating to the point of crisis. Field-based research comes with costs that are often invisible to funding structures travel to remote locations, equipment, sample processing, permits, community engagement, safety logistics, and the emotional labour of working in unpredictable environments. Grants frequently cover tuition and stipends but treat field expenses as optional add-ons rather than integral components of research. Students end up financing projects through personal savings, family support, or unstable part-funding, stretching themselves thin just to keep their work moving. The culture of scarcity forces students to become grant-writers, administrators, negotiators, and logisticians long before they are allowed the space simply to be researchers.

Furthermore, this situation is made worse by structural inequality. Students working in biodiversity-rich but resource-limited regions face fewer funding opportunities, institutional barriers, and eligibility restrictions for international grants. Meanwhile, institutions with stronger donor networks naturally attract more support, perpetuating a cycle where funding follows prestige rather than ecological urgency. The emotional weight of repeated rejections, delayed field seasons, uncertain timelines, and stalled progress accumulates quietly, manifesting as

fatigue, self-doubt, and burnout, often disguised as resilience. Yet, despite these challenges, PhD students continue to push forward. They innovate out of necessity, share resources, adapt methodologies, collaborate informally, and build knowledge under immense constraints. But this culture of survival comes at a cost: important research questions remain unexplored simply because they do not fit funding templates. The price is ultimately paid not by researchers alone, but by ecosystems and species whose warning signs are overlooked until it is too late.

My experience working with lesser-known taxa made one thing clear that conservation cannot afford to wait for crisis labels before supporting research. Funding systems must recognise early-decline signals, common-species monitoring, and urban biodiversity studies as legitimate conservation priorities. For meaningful progress, we need sustained student-led research grants, flexible budgets that reflect real field conditions, and funding models that value long-term ecological insight over short-term outputs. To pursue a PhD in ecology and conservation is an act of persistence, conviction, and quiet hope. Students continue despite obstacles because they believe science must serve the future. Not only when species enter extinction thresholds, but long before that point. The struggle for funding should not be another barrier to protecting the natural world. Drawing blood from a stone should not be the price of asking urgent scientific questions about life on Earth.

And yet, within this difficult PhD days, perseverance becomes a quiet form of strength. Every grant written, every proposal revised, and every rejection overcome represents a continued commitment to the ecosystems and species that need scientific attention. At present, there are also a few funding programmes and fellowships that meaningfully support students working in ecology and conservation, and these opportunities, though limited, serve as reminders that such work is valued and worth pursuing. For a PhD researcher, continuing to apply, refine ideas, and persist through setbacks is not an easy path, but it keeps possibilities alive and gradually opens doors that once seemed closed. In the end, the struggle to secure support becomes a testament to determination, resilience, and an enduring belief that dedicated effort can help shape a more enabling and equitable research landscape in the future.

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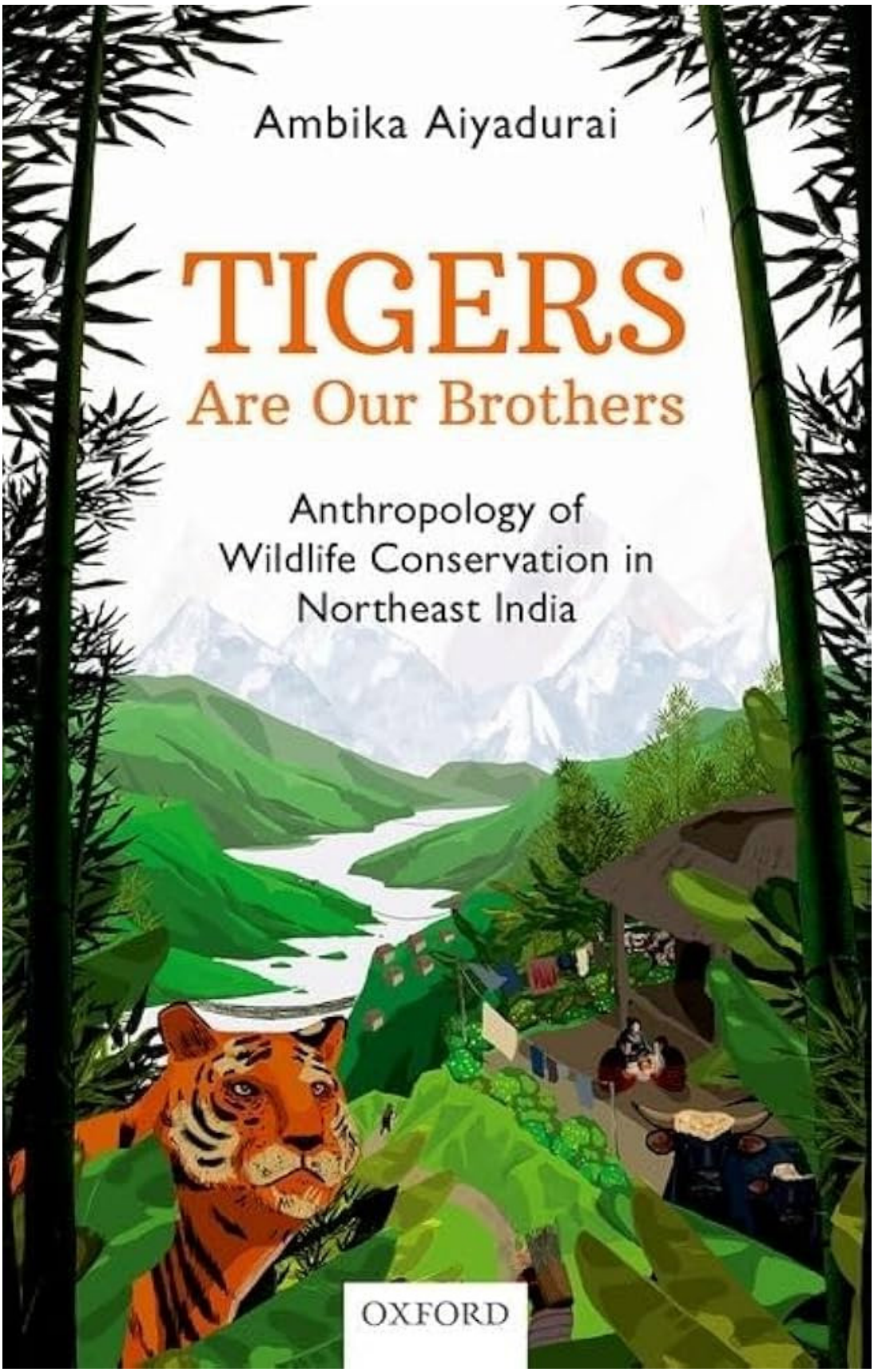
Anukul Nath *is working as a Scientist at WII. He is an ecologist with a keen interest in addressing conservation challenges through the integration of interdisciplinary approaches. For more than a decade, he has engaged in interdisciplinary research across the Terai Region and North-eastern States of India, leveraging his expertise in wildlife biology and geoinformatics. Broadly, his research focuses on population, quantitative, restoration, and landscape ecology.*

Human, Non-Human, and the Spaces Between: Reading Tigers Are Our Brothers

- Ashwati Biju



Ambika Aiyadurai's Tigers Are Our Brothers is an ethnography that offers far more than it initially promises. Centered on the Idu Mishmi people of the Dibang Valley in Arunachal Pradesh, the book explores a community that considers tigers their elder brothers, making it a strict taboo to kill them. Through this lens, Aiyadurai examines broader questions of nature, conservation, and development, juxtaposing the perspectives of policymakers and local communities. At its core lies the contrast between two conservation paradigms: preservation versus sustainable use. The book delves deeply into the cultural, economic, and political tensions that shape human–non-human relationships.

In the introduction, Aiyadurai cites anthropologist Verrier Elwin, who lived and worked among Indian tribal communities in the mid-20th century. His statement, "Our laws are of such a kind that every villager breaks one forest law every day of his life", captures the persistent mismatch between state-led conservation efforts and the realities of local resource use.

Aiyadurai also discusses ongoing plans to convert the existing Dibang Wildlife Sanctuary into the Dibang Tiger Reserve, plans often pursued without meaningful consultation with the Idu Mishmi. Past experiences, such as the establishment of the sanctuary without prior notice, have created deep mistrust toward the forest department and research teams. This mistrust has led to mild resistance among the Mishmi in participating in research activities. While some oppose the idea of a tiger reserve for fear of losing sovereignty, others welcome it for its potential to generate employment opportunities for youth, as forest guards or tourist guides.

The author traces the roots of modern conservation thinking to England and the United States, noting how it resonates with Marx's (1979) notion of primitive accumulation, the separation of workers from the means of production. This ideology posits that natural resources can only be protected through privatization, an idea linked to the concept of the "tragedy of the commons." Such thinking led to the fencing of national parks, excluding communities that had long managed these resources through customary practices.

Aiyadurai also discusses 'fortress conservation' (Brockington 2001), where forest lands are expropriated and people are compelled to adopt wage labor to create "undisturbed" wildlife spaces for flora, fauna, and tourists. Similarly, Neumann's (1998) idea of imposing wilderness critiques the forced removal of subsistence communities to construct a myth of "pristine nature." Conservation, she argues, has also faced criticism for its ideological underpinnings, the "civilizing mission" of converting people into "green and responsible" citizens, echoing colonial control over both "nature" and the "native" (Argyrou 2005).

In India, wildlife conservation poses a unique challenge due to the vast number of communities directly dependent on natural resources for survival. Aiyadurai highlights the tension between social scientists and wildlife biologists through the example of Ramachandra Guha, who argues that conservation often benefits professionals at the expense of local communities (Guha 1997). His view was dismissed by the conservation lobby as "biologically illiterate" (Gartlan 1998). She also notes the influence of American thinkers like John Muir and Henry David Thoreau, whose writings inspired the wilderness movement and the establishment of Yellowstone National Park, the global prototype for protected areas.

Throughout the book, Aiyadurai recounts her personal experiences living among the Mishmi, learning about their culture, traditions, and relationship with nature. She challenges common stereotypes about indigenous peoples, that they must appear

"primitive," live deep in forests, and wear traditional attire. Her observations reveal a far more complex and adaptive society. She also reflects on how the Mishmi perceive researchers, often as "form-carrying people" who ask endless questions, rather than as individuals. At one point, she was mistaken for a TV journalist simply because she was filming a ceremony.

Aiyadurai candidly shares the challenges she faced in gaining the community's trust, particularly given the history of exploitative research. She recalls an incident involving a scientific paper about the Apatani community, whose members publicly challenged the stereotypes and methodology used. Their response, she notes, exemplifies how indigenous groups are increasingly refusing to be treated merely as "study subjects."

In earlier times, protected areas were often declared without informing local inhabitants, but this dynamic is changing with increased access to technology and social media, which have created a more equal platform for dialogue. For the Mishmi, there is no rigid separation between human and non-human worlds; all of nature is perceived as one interconnected whole, including spirits, which are as real as people.

Aiyadurai vividly portrays the diversity within Mishmi life, between those in Roing and Anini, between hill-dwellers and urban elites, and between men and women, showing how culture continuously evolves. She explores their human–non-human relationships, hunting practices, rituals, taboos, women's roles in hunting, the symbolic importance of Mithun cattle, and even the geopolitics of living along the Sino-Indian border.

She recounts stories of individuals whose lives intertwine with conservation, hunting, and geopolitics. Interestingly, Mishmi hunters sometimes justify their hunting expeditions as ways to monitor Chinese intrusions across the border, linking their traditional practice to national security. They also claim to protect wildlife from Chinese hunters, who, unlike them, do not follow taboos. The proposed tiger reserve, therefore, threatens not only their hunting traditions but also their mobility near the border, raising concerns about increased military surveillance and loss of autonomy.

Aiyadurai also critiques India's Wildlife Protection Act of 1972, which banned hunting without considering the dependence of indigenous peoples on forest resources. This lack of cultural sensitivity effectively turned respected tribal hunters into "criminals" and "poachers" overnight. What state officials deem illegal, she notes, may be legitimate within local moral frameworks (Van Schendel and Abraham, 2005).

She touches on the strained relations between the Mishmi and the neighboring Adi community and discusses the central role of Mithuns as "living banks", a form of social security during emergencies. Mithuns, she explains, are essential to the socio-cultural fabric of many indigenous groups.

Aiyadurai also narrates the controversy surrounding the Mishmi Takin. When A. J. T. Johnsingh suggested renaming it the "Arunachal Takin," the Mishmi responded by placing the Takin, along with other "Mishmi-named" animals, on the logo of the IMCLS as an assertion of identity.

The author closes with a reflection on what a forest officer in Roing called the "racism" of wildlife conservation, the preferential treatment of charismatic species like tigers and elephants over smaller, less "appealing" animals. This raises a provocative question: if scientists can selectively decide which species deserve protection, why can't the Mishmi choose the Takin as a symbol of their cultural and natural heritage?

In conclusion, Tigers Are Our Brothers is an insightful and thought-provoking ethnography that challenges mainstream conservation narratives. It compels readers to rethink what conservation truly means in a multicultural, postcolonial context, especially in regions where people and wildlife have long

coexisted. Aiyadurai succeeds in bringing out the voices of those often unheard in global environmental discourse, showing how indigenous ethics of care and kinship with non-human beings offer powerful alternatives to top-down conservation models.

This book is not only a valuable contribution to environmental anthropology but also an essential case study for anyone interested in conservation, policy, and indigenous rights. It is engaging and deeply reflective. Everyone, students, researchers, and policymakers alike, should read Tigers Are Our Brothers to better understand the complex and intertwined lives of people, animals, and forests in contemporary India.

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Photo Credit: Vivek sarkar

जीवन की निरंतरता का प्रतीकः 'एक कवक'

- डा0 सीमा अधिकारी

यहाँ पर 'एक कवक' कविता के माध्यम से वर्णन किया जा रहा है जिसे हाल ही में वन्यजीव संस्थान, देहरादून में पहली बार देखा गया है। यह प्रजाति पारिस्थितिकी तंत्र के लिए महत्वपूर्ण है क्योंकि यह कार्बनिक पदार्थों को तोड़ती है, मिट्टी की उर्वरता को बढ़ाती है, पोषक तत्वों के चक्रण में सहायता करती है और जैव विविधता को बढ़ाती है।

इसे इसकी लिंगाकार आकृति और घूंघट जैसी उपस्थिति से पहचाना जा सकता है। यह सामान्यतः भारी बारिश के बाद उभरता है और गीले, अंधेरे क्षेत्रों में, जैसे कि सड़ी-गली खूंट और बांस के झुरमुट में उगता है। इस कवक की लंबी, सिंग जैसी टेड़ी और दुर्गंधित श्लेबा कीटों को आकर्षित करती है, जो इसके बीजाणुओं को फैलाने में सहायता करते हैं।

बांसों की झुरमुट की छांव में
इक कवक का वास,
सभी गंधों की बुराई स्वयं में समाहित कर,
वृक्ष का वह अस्पृश्य, गलित एवं विकृत खूंट
वक्ष से लगाए,
जीवन की उत्पत्ति एवं सृजन का प्रतीक,
वर्षा ऋतु की गीली मिट्टी में,
घूंघट की ओट में वह नवविवाहिता,
मृत्योन्मुख पर्णों के बिछौने में भी
जीवन का संदेश देती वह मनमोहिनी,
सत्यम शिवम सुन्दरम को चरितार्थ करती
शिवलिंग को समर्पित वह सुंदरी,
अनायास ही क्या कुछ नहीं कह जाती है
रूत, स्थान, संसाधन, परिस्थिति में
परिवर्तन निरंतर, तथापि
सर्वोपरि है वह जीवन...जो है अनवरत, अविनाशी
सुंदर, अविरल एवं सर्वव्यापी।

Veiled Lady *(Phallus indusiatus)*

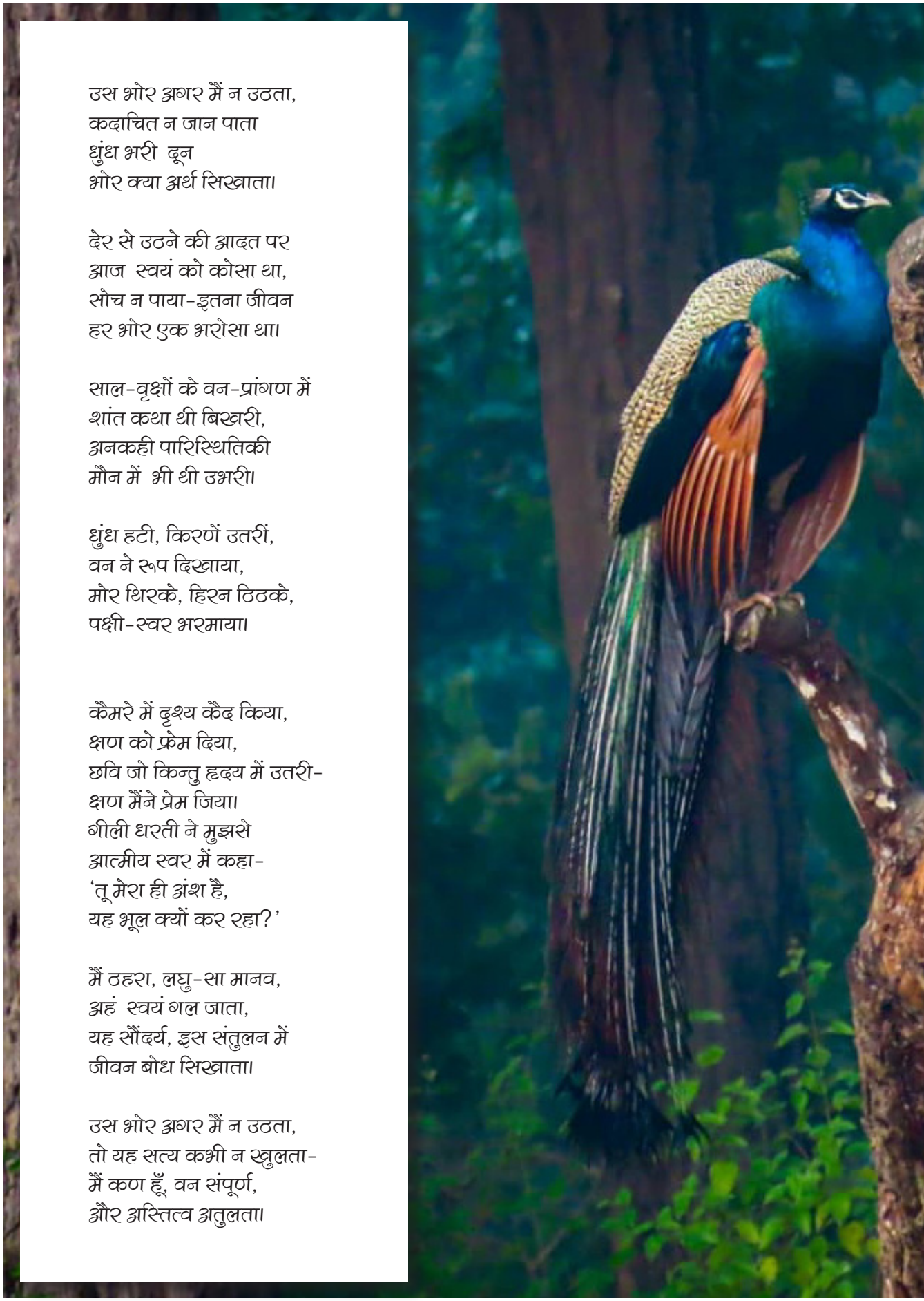
Photo Credit: B. S. Adhikari

AUTHOR:

Dr. Seema Adhikari *completed her Ph.D. in Plant Physiology (Botany) from Kumaun University, Nainital, and went on to serve as an Assistant Professor in several Government Colleges. Currently she devotes her time with her family while also observing, learning, and documenting the rich biodiversity around her such as this intriguing fungal species that thrive unnoticed in the wild.*

उस भोर: अगर मैं न उठता

- विजय 'विक्की' जोशी



उस भोर अगर मैं न उठता,
कदाचित न जान पाता
धुंध भरी दून
भोर क्या अर्थ सिखाता।

देर से उठने की आदत पर
आज स्वयं को कोसा था,
सोच न पाया-इतना जीवन
हर भोर एक भरोसा था।

साल-वृक्षों के वन-प्रांगण में
शांत कथा थी बिखरी,
अनकही पारिस्थितिकी
मौन में भी थी उभरी।

धुंध हटी, किरणें उतरीं,
वन ने रूप दिखाया,
मोर थिरके, हिरन ठिठके,
पक्षी-स्वर भरमाया।

कैमरे में दृश्य कैद किया,
क्षण को फ्रेम दिया,
छवि जो किन्तु हृदय में उतरी-
क्षण मैंने प्रेम जिया।
गीली धरती ने मुझसे
आत्मीय स्वर में कहा-
'तू मेरा ही अंश है,
यह भूल क्यों कर रहा?'

मैं ठहरा, लघु-सा मानव,
अहं स्वयं गल जाता,
यह सौंदर्य, इस संतुलन में
जीवन बोध सिखाता।

उस भोर अगर मैं न उठता,
तो यह सत्य कभी न खुलता-
मैं कण हूँ, वन संपूर्ण,
और अस्तित्व अतुलता।

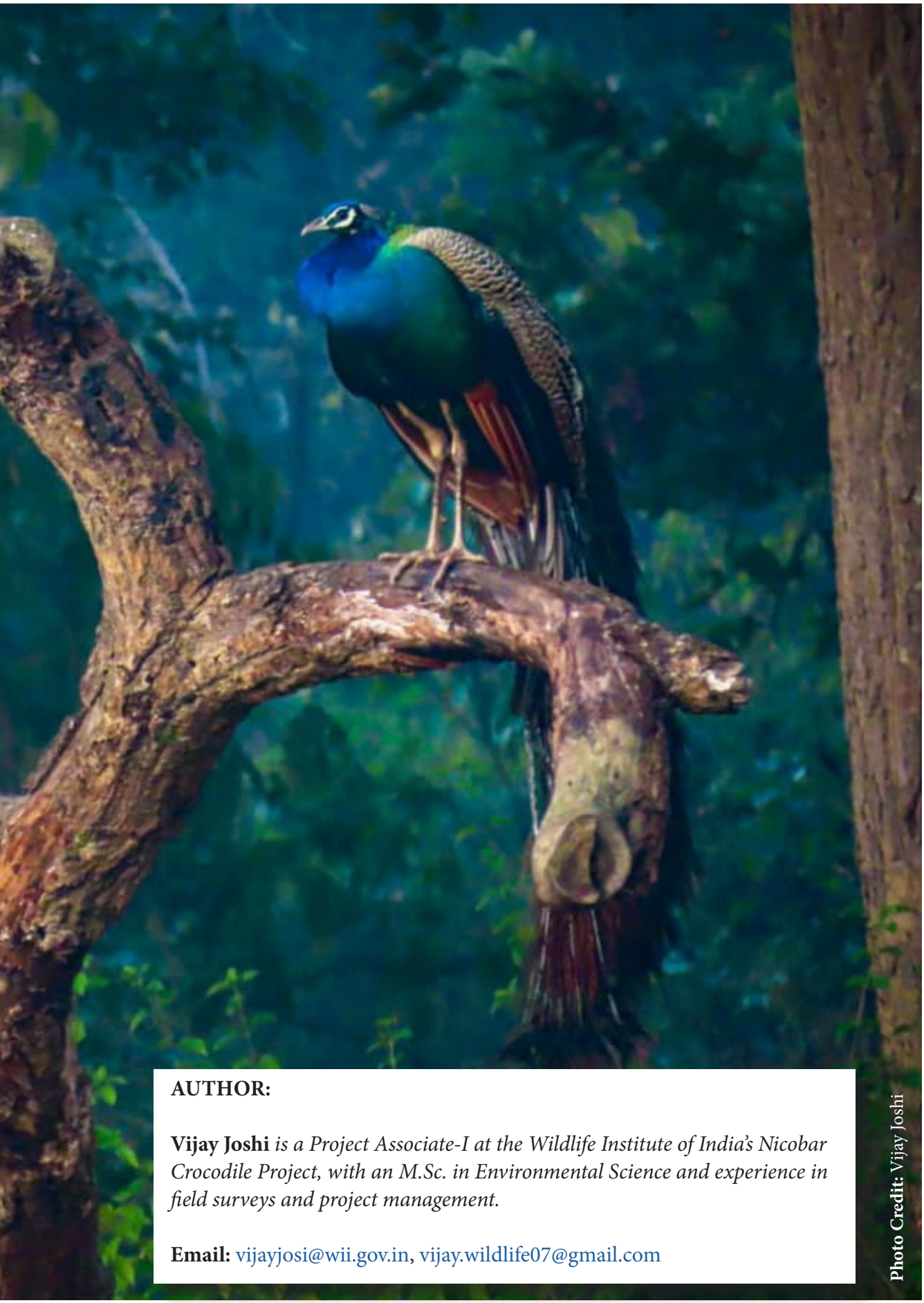


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Photo Credit: Vijay Joshi

Bearded Vulture

-Ashwati Biju

Abstract: The name 'lammergeier' (or 'quebrantahuesos' in Spanish, which means bone breaker) reveals it: people thought that the bird killed lambs and sometimes even small children.

Unlike the myth, Bearded Vultures do not hunt live prey. It is, in fact, the only vulture that has specialised in feeding primarily on the bones of dead animals, with about 85-90% of its diet consisting of bones.

The bird is even capable of swallowing and digesting bones the size of a sheep's vertebrae. If bones are too big to swallow, the bird gains great heights of up to 100 metres and drops bones onto rocky surfaces to shatter them into edible pieces, a practice that might take up to several years to master. This unique eating habit requires many adaptations, which distinguish the species from other vultures and make Bearded Vultures a vital part of the ecosystem.

Also, they bathe extensively in bodies of water containing iron oxide and slowly their feathers are dyed rusty orange. The reason behind this behaviour is still a bit of a mystery. Some speculate that it's just decorative, while others claim that iron oxide protects eggs from infection, but these claims are not confirmed.

Also, this is like the most punk-looking bird ever!

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(Bearded Vulture aka The Lammergeier)

Workshop on-
"Good Practices in Elephant Habitat Management, Corridor Management, and Human–Elephant Conflict Mitigation"

The Ministry of Environment, Forest and Climate Change (MoEF&CC), with technical assistance from Tamil Nadu Forest Department and Elephant Cell of Wildlife Institute of India, organized a two-day national workshop on "Good Practices in Elephant Habitat Management, Corridor Management, and Human–Elephant Conflict Mitigation" on 12–13 August 2025 at Coimbatore, Tamil Nadu. The workshop served as a national forum for elephant-range States to share successful case studies, innovative models, and best practices aimed to conserve India's National Heritage Animal, the Asian elephant, under the framework of Project Elephant.

The inaugural session was led by senior officials from MoEF&CC and the Tamil Nadu Forest Department, who highlighted the need for collective learning, adaptive management and integration of emerging technologies to enhance elephant conservation outcomes. Representatives from 14 elephant-range States shared diverse interventions related to habitat improvement, corridor restoration, human–elephant conflict (HEC) mitigation, and welfare of captive elephants.

- Tamil Nadu showcased initiatives such as the Elephant Death Audit Framework (EDAF), AI-powered railway track monitoring systems, and the community-based *Thadam* network for real-time conflict alerts.
- Karnataka presented its comprehensive conflict mitigation model featuring rail barricades, solar fencing, and the "E-Parihara" digital compensation platform, designed to ensure timely relief to affected communities.
- Chhattisgarh outlined its integrated strategy involving *Hathi Mitra Dal* community teams, AI-driven early warning applications like *Sajag* and *Gaj Sanket*, and drone surveillance for monitoring elephant movements.
- Assam highlighted its large-scale habitat restoration efforts, radio-telemetry tracking, and the *Gaja Mitra* initiative implemented in conflict-prone districts.

- Odisha shared the success of its *Anukampa* portal for rapid compensation and the *Gaja-sathi* volunteer network supporting human-elephant coexistence in rural areas.
- Other States such as Kerala, Madhya Pradesh, West Bengal, and Haryana showcased their State-specific interventions including AI-assisted railway safety systems, corridor identification and mapping, rapid response mechanisms, and rehabilitation measures for displaced elephants.

Experts from WII presented analytical findings on existing patterns of human–elephant conflict across Eastern and North-Eastern India, identifying key hotspots, drivers of mortality, and associated policy implications. Discussions also reviewed the progress in drafting the Regional Action Plans (RAPs) for Southern and North-Eastern India, which aim to integrate scientific research, community engagement, and landscape-level management for sustainable conservation and human-elephant coexistence.

The workshop concluded with a strong consensus among participating States and MoEF&CC to strengthen inter-State collaboration, implement uniform monitoring frameworks, and scale up successful models that effectively combine technology, science, and community participation. The collective outcomes reaffirmed India's commitment to safeguarding elephants and their habitats through evidence-based conservation practices, policy integration, and community stewardship.

World Elephant Day Celebration: 12th August, 2025

- Dr. Netri Datta Banerjee

World Elephant Day 2025 was celebrated on 12th August in Coimbatore, Tamil Nadu, by the Ministry of Environment, Forest and Climate Change (MoEF&CC) along with technical assistance from the Tamil Nadu Forest Department and the Elephant Cell of Wildlife Institute of India. Shri Kirti Vardhan Singh, Union Minister of State for Environment, Forest & Climate Change, inaugurated the event. The theme of the program was "Showcasing India's commitment to elephant conservation and promoting human–elephant co-existence."

The event underscored India's distinctive responsibility as the steward of nearly 60% of the world's total wild Asian elephant population. Discussions highlighted the need to adopt modern approaches, including artificial intelligence, geospatial mapping and remote sensing, alongside traditional knowledge and active community involvement to secure the long-term conservation of elephants. Addressing human-elephant conflict (HEC) while ensuring the safety and well-being of local communities emerged as a key focus area.

One of the major highlights of the program was the Gaj Gaurav Awards 2025, which recognised the efforts and contributions of frontline staff and mahouts in elephant conservation. The awardees were Shri Ganesh Tamang and Shri Sumit Gogoi from Arunachal Pradesh; Shri Kesu Singh Walke and Shri Sahadan Ram Lakada from Madhya Pradesh; Shri M. Murali and Shri S. Karthikeyan from Tamil Nadu; and Shri Irshad Ali from Uttar Pradesh. Their commitment and dedication to elephant protection and conflict mitigation are truly commendable.

The celebrations were further extended to 5,518 schools across South India through an Elephant Conservation Pledge, engaging more than 15 lakh students. A painting competition was held at Kikani Vidhya Mandhir, Coimbatore, on the theme of 'Human-Elephant Coexistence'. Ms. G. Jeyasudha secured first prize in the competition, followed by Ms. A. T. Harsitha Lakshmi and Mr. G. P. Sanjai.

Several important resources were released in the event, including the guide "Healthy Feet, Healthy Elephants" focusing on foot care of captive elephants, and a special edition of WII's newsletter Trumpet, titled "Elephant and Tribes of India". In addition, the Tamil Nadu Forest Department launched the HAWK App for AI-based crime and wildlife monitoring. They also released a publication- "An Ancient Bond: The Elephant Whisperers of Mudumalai" and a children's book, "The Lost Elephant and The Soul Tree".

The program also included an exhibition that brought together AI-enabled equipment, advanced wildlife monitoring tools, and creative artefacts made from invasive species of wood, showcasing innovative, cross-sector approaches to elephant conservation.

The event was enriched by the presence of senior officials from MoEF&CC, the Tamil Nadu Forest Department, and trainees from CASFOS (Dehradun) and TNFA (Tamil Nadu).

AUTHOR:

Dr. Netri Datta Banerjee *is a Project Scientist–I with the Elephant Cell at the Wildlife Institute of India (WII).*


STUDENT'S PERS


LiFE
2025

Learnings and Experience at Jalaj Awareness and Marketing (JAM) Centre

- Kumari Babli

The Jalaj Centre at Dilli Haat-INA provided me with valuable insights into marketing, communication, public relations, and customer–seller relationships. The collective effort of the team focused on creating awareness among visitors to Dilli Haat, which included school students, professionals, officials from the ministry, and Government employees. On average, around 200 people visited the centre daily, expressing appreciation for the initiatives undertaken to clean the River Ganga, as well as for the products created by the Ganga Praharis. Both school students and adults actively participated in interactive games such as Snakes and Ladders and puzzles. Through these games and activities, visitors learned how to understand and adopt conservation practices in engaging and effective ways. From learning about the origin of the River Ganga, "Ganga Avtaran," to understanding the Namami Gange programme, the board depicting the journey of the River Ganga greatly fascinated the public.

Educational materials, such as *Bachhon Ka Akhbaar*, were shared with students. The children liked this activity because the information was simple and easy to understand. The centre also displays models of important riverine species such as the Gharial, Gangetic Dolphin, and Otter. These models helped visitors distinguish between the species and learn their ecological importance in river systems. Visitors could clearly see how these animals depend on clean and healthy rivers, which helped them realize the need to protect freshwater life. For me, this visit was a deeply meaningful learning experience. I gained a better understanding of how interpretation centres function and how visitors respond to different forms of engagement, including interactive activities and visual displays. I also observed that effective communication and a welcoming approach play a crucial role in enhancing the learning experience. Witnessing people interact with the centre emphasised the importance of designing inclusive spaces that cater to diverse audiences. Overall, my experience at the Jalaj Centre, Dilli Haat, strengthened my belief that well-planned public awareness centres have the potential to transform simple awareness into a shared sense of responsibility for protecting rivers and water resources.

AUTHOR:

Kumari Babli *is a Project Assistant in the Nature Interpretation and Education Component under the National Mission for Clean Ganga (Phase 2). Her work involves designing educational materials, conducting field visits, and video editing to enhance nature interpretation and awareness. Passionate about creative endeavours, she is dedicated to making conservation education engaging and impactful.*

Activities of EIACP Centre Resource Partner '*Wildlife and Protected Area Management*', Wildlife Institute of India, Dehradun from October-December 2025

1. National Conference on Youth for Nature & Coexistence, 04 October 2025

As part of National Wildlife Week celebrations, the EIACP Centre at the Wildlife Institute of India, in collaboration with Dharti International Foundation, New Delhi, organized a one-day National Conference aimed at strengthening the link between people and conservation. The event served as a multidisciplinary platform, bringing together students, researchers, and professionals from fields such as environmental and agricultural sciences, wildlife management, medicinal sciences, allied sciences, and emerging technologies.

The conference began with registration, followed by the traditional lamp lighting and Saraswati Vandana. An overview of the conference was presented by Mr. Sujay Singh. The inaugural session featured distinguished speakers including Prof. P. K. Joshi (JNU, New Delhi), Dr. K. Ramesh (Scientist–F and EIACP Coordinator, WII), Prof. (Dr.) Rajeev Bhardwaj (Pro Vice Chancellor, DBS Global University, Dehradun) and Dr. C. Ramesh (Scientist–E and EIACP Co-Coordinator, WII). The session concluded with remarks by Shri Nishant Bhardwaj, Director, Dharti International Foundation, New Delhi.

The Youth for Nature & Coexistence National Conference (Y4NC 2025) featured expert talks and technical sessions addressing key issues such as climate change, community participation, sustainable development goals, nature-based solutions, artificial intelligence in wildlife conservation, and technology-enabled ecological restoration. A poster presentation session offered young researchers an opportunity to present innovative ideas and research findings to an expert panel.

The conference concluded with a valedictory session and award distribution. As a key outcome of the event, participants took the Mission LiFE pledge, reaffirming their commitment to mindful resource use, environmental stewardship, and long-term sustainability through individual and collective action.

2. National Hackathon on Human–Wildlife Coexistence: Engaging Youth for Innovative Solutions, 05 - 06 October 2025 (Semi-finale and Finale round)

As part of the National Wildlife Week Celebrations 2025, the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, organized the National Hackathon on Human–Wildlife Coexistence, with support from the Wildlife Institute of India (WII), Dehradun, and the EIACP Centre, WII. The initiative aimed to mobilize India's youth to develop innovative and sustainable solutions for mitigating human–wildlife conflict and promoting coexistence.

The hackathon provided a national platform for students, researchers, innovators, and startups to apply multidisciplinary, science-driven approaches integrating technology, community participation, and financial mechanisms. Participants proposed scalable solutions across four thematic areas: technology-enabled monitoring and mitigation, financial and incentive-based models, community-centric coexistence strategies, and species-specific interventions focusing on key conflict-affected wildlife.

Following a rigorous evaluation process, 12 finalist teams were shortlisted and invited to the Semi-Finale, where their solutions were assessed by an expert jury based on innovation, feasibility, scalability, and real-world applicability. The Grand Finale, held on 06 October 2025 at the Indira Gandhi National Forest Academy, Dehradun, featured presentations by six finalist teams before the Hon'ble Union Minister of Environment, Forest and Climate Change.

Kalpvaig, Ghaziabad, secured the first prize, followed by Kalinga Institute of Technology, Bhubaneswar, and Tamil Nadu Agricultural University, Coimbatore, as second and third prize winners, respectively. Cash awards, certificates, and field project grants were provided to support on-ground implementation, while all finalist teams received appreciation certificates for their contributions.

Overall, the hackathon highlighted the power of youth-led, interdisciplinary innovation in addressing human–wildlife conflict and reinforced the commitment of MoEFCC, WII, and the EIACP Centre to support actionable conservation solutions.

3. Celebration of National Wildlife Week, 06 October 2025

National Wildlife Week 2025 was observed from 2 to 8 October 2025 across India to promote awareness on wildlife conservation, biodiversity protection, and sustainable coexistence between humans and nature. In this context, the EIACP Centre at the Wildlife Institute of India, in collaboration with the Department of Biosciences, Graphic Era University, Dehradun Forest Division, and the Uttarakhand Biodiversity Board, organized a series of outreach activities on 06 October 2025 at Graphic Era University, Dehradun.

The programme began with the welcoming of dignitaries and a Saraswati Vandana. Prof. (Dr.) Manu Pant highlighted the relevance of Wildlife Week in fostering conservation ethics, while senior university officials emphasized the role of academic institutions in environmental sensitization. The Chief Guest, Shri M. S. Negi, IFS (Retd), stressed the urgency of wildlife protection and encouraged youth participation through awareness and responsible action.

Key technical inputs included a keynote on Project Cheetah by Dr. Sanath K. Muliya (NTCA, MoEFCC) and an expert talk by Dr. Ayan Sadhu (NTCA & WII) on the application of modern technologies in tiger conservation. Practical learning was strengthened through a live snake rescue demonstration by forest officials and an interactive wildlife and environment quiz organized by the EIACP Centre, WII.

The event effectively blended expert knowledge, hands-on demonstrations, and student engagement, strengthening conservation awareness and promoting responsible environmental stewardship among young participants.

4. Celebration of International Snow Leopard Day, 23 October 2025

In 2024, the United Nations General Assembly declared 23 October as the International Day of the Snow Leopard to promote strengthened global and regional collaboration for the protection of this rare species and to acknowledge its importance in sustaining healthy ecosystems. High-altitude landscapes are essential for supplying water and other critical ecosystem services to millions of people worldwide, and the conservation of emblematic mountain species is central to preserving these environments. Snow leopards, among the most secretive of the big cats, are seldom seen and are commonly known by local communities as the "ghosts of the mountains."

To commemorate the day, an awareness poster on snow leopard conservation was unveiled to disseminate key information among the public. The poster showcased the species' geographical spread and current status, noting that India is home to the world's third-largest snow leopard population. It also highlighted pressing challenges such as shrinking habitats and changing climatic conditions, while drawing attention to the species' role in maintaining the ecological integrity of the Himalayan region. The initiative aimed to encourage public participation in safeguarding this threatened species.

As part of the observance, the EIACP Centre at the Wildlife Institute of India also organized an online knowledge-based quiz on snow leopards. Participants achieving a score above 50 percent were issued e-certificates. The quiz explored topics including distribution patterns, prey base, conservation concerns, and the significance of snow leopards as indicator species of mountain ecosystems. This activity sought to deepen awareness of conservation issues and highlight the need to protect vulnerable alpine habitats.

5. Celebration of World Tiger Beetle Day, 11 November 2025

World Tiger Beetle Day, observed annually on 11 November, celebrates the ecological importance of tiger beetles (Family: Cicindelidae) and raises awareness about their conservation. The day also honors Dr. David L. Pearson, a renowned entomologist from Arizona State University, USA, for his lifelong contributions to the study and protection of tiger beetles. To mark the occasion, the EIACP Centre at the Wildlife Institute of India, in collaboration with the Department of Biosciences, Graphic Era University, and the Rufford Foundation, organized a one-day programme featuring expert lectures, practical sessions, and field activities.

Dr. V. P. Uniyal, Professor, Department of Biosciences, Graphic Era University, delivered a lecture on the role of tiger beetles as indicators for assessing ecosystem health in the Shivalik landscape, emphasizing their value in biodiversity monitoring and habitat management. Ms. Vinita Sangela, Research Scholar at the Wildlife Institute of India, provided a session on field techniques for observing, sampling, and identifying tiger beetle species, focusing on ethical and standardized research practices.

The programme also included a guided field visit along the nature trail at the Wildlife Institute of India campus, where participants gained hands-on experience in species identification, sampling methods, and observing forest habitats and associated fauna.

Complementing the field activities, a webinar titled "Journey with Indian Tiger Beetles: From Field Trails to Forgotten Species" was conducted by Dr. David Pearson, who shared insights from decades of field research, discussed lesser-known and understudied species, and highlighted the need for continued efforts to document and conserve India's diverse tiger beetle fauna. The interactive session encouraged meaningful discussions and knowledge exchange among participants.

Overall, the event successfully combined expert lectures, practical demonstrations, field engagement, and interactive online learning, providing participants with a comprehensive understanding of tiger beetle ecology and reinforcing the importance of conservation and ecological monitoring.

6. Celebration of International Mountain Day, 11 December 2025

International Mountain Day 2025 was observed on 11 December under the theme *"Glaciers matter for water, food and livelihoods in mountains and beyond."* The theme underscored the vital role of mountains as a major source of global freshwater and emphasized the urgent need to protect glaciers, which support nearly two billion people worldwide. It also drew attention to the growing risks of glacier-lake flooding affecting millions of people.

With 2025 declared by the United Nations as the International Year of Glaciers' Preservation, International Mountain Day served as a platform to highlight the importance of glaciers in climate regulation, water security, agriculture, and mountain livelihoods. To mark the occasion, the EIACP Centre at the Wildlife Institute of India released an informative e-poster showcasing the dependence of communities on glaciers and snowmelt for drinking water, irrigation, and livelihoods, and stressing the need for urgent glacier conservation.

In addition, the EIACP Centre, Wildlife Institute of India, organized a photography contest for participants aged 18 years and above under the themes "Changing Mountains," "Water in the Mountains," and "My Mountain Community." The contest encouraged visual storytelling on environmental change, water resources, and mountain cultures. The initiative aimed to raise awareness of the ecological and cultural value of mountain ecosystems and the impacts of climate change. The top three entries were awarded prizes, and certificates were issued to all participants.

Wildlife Institute of India- Category 2 Centre (WII-C2C)

- Meghna Ramesh

1. Natural Heritage: Practitioners' Workshop in Site Management (15-19 September 2025, Satara, Maharashtra)

As a part of the training programmes for forest officials, WII-C2C conducted a comprehensive one-week workshop from 15-19 September 2025, in Van Bhavan, Satara, Maharashtra. A total of 21 Forest Service officers representing nine different states, namely Chhattisgarh, Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Punjab, Rajasthan, Tripura, and Uttarakhand, participated in the workshop.

The workshop introduced participants to the principles, frameworks, and best practices in managing UNESCO Natural World Heritage Sites. It aimed to deepen understanding of the World Heritage Convention, site nomination processes, post-inscription reporting mechanisms, and management toolkits developed by the World Heritage Centre, etc., while facilitating expert engagement, peer-to-peer learning, and professional exchange of management strategies. The workshop combined classroom sessions with field visits to Kaas Plateau and Koyna Wildlife Sanctuary, two of Maharashtra's four sites within the 39-component Western Ghats Natural World Heritage property. The field visits enabled participants to experience the property's Outstanding Universal Value firsthand while gaining practical insights into on-ground management challenges.

Field visit to Kaas Plateau (A UNESCO Natural World Heritage site)

2. World Coastal Forum 2025
(23-25 September 2025 at Yancheng City, China)

The World Coastal Forum 2025 Conference was held from September 23 to 25 at Yancheng City, Jiangsu Province, China. This forum was co-hosted by Jiangsu Provincial People's Government, Ministry of Natural Resources (MNR), and National Forestry and Grassland Administration (NFGA), with the theme of *Beautiful Coasts: Ecological Priority and Green Development*. The key highlights of the forum were the Thematic Seminars and Workshop Meetings on the Conservation and Restoration of Coastal Ecosystems, Sustainable Development of Coastal Regions, and the Global Dialogue on Coastal World Natural Heritage. The host city of Yancheng is home to China's first coastal wetland World Heritage site, the Migratory Bird Sanctuaries along the Coast of Yellow Sea-Bohai Gulf (Phase I), highlighting the importance of the coastal habitats.

Dr. Madhumita Panigrahi, Programme Coordinator at WII-C2C, attended this forum and joined in panel discussions on: Building a Partnership of Sustainable Coastal Management, organized by the Asian Development Bank and Conserving Coastal Biodiversity in Western Africa - Opportunities for International Cooperation. During the Forum, the *State of World's Coastal Ecosystems: Overview, Yancheng Consensus, and International Applications of Ecosystem-based Disaster Risk Reduction in Coastal Areas* (Second) were released to raise awareness, promote best practices, and share conservation knowledge worldwide.

3. Webinar: Sustainable Nature Tourism: Models and Best Practices in Protected Areas (26 September 2025)

To commemorate World Tourism Day, celebrated annually on 27 September, WII-C2C organized a webinar on *"Sustainable Nature Tourism: Models and Best Practices in Protected Areas"* on 26 September 2025 at 15:00 hrs IST via Zoom. The webinar received over 260 registrations from 40 countries, reflecting broad international participation.

The webinar featured six distinguished speakers who shared perspectives on Sustainable Nature Tourism. Ms. Carolina Mendoça, Community & Membership Manager, Sustainable Travel International, emphasized community-led tourism and regenerative financing. Mr. Dorji Dhradhul, former Director General of Tourism, Bhutan, presented insights from Bhutan's "High Value, Low Volume" model. Mr. M. G. C. Sooriyabandara, former Director General of Wildlife Conservation, Sri Lanka, discussed policy frameworks and partnerships. Mr. Mohit Aggarwal, Founder and CEO, Asian Adventures, highlighted conscious travel and community empowerment. Mr. Sivaram Babu M, DCF, Kudremukh National Park, shared visitor management strategies from this Natural World Heritage Site. Dr. Nehru Prabakaran, Associate Nodal Officer, WII-C2C, discussed UNESCO's sustainable tourism toolkit and the Centre's conservation role.

A key highlight of the webinar was the participation of Mr. Peter DeBrine, Programme Specialist for Sustainable Tourism at the UNESCO World Heritage Centre. He emphasized tourism as a powerful instrument for safeguarding both Natural and Cultural Heritage and underscored the critical role of local communities as co-stewards in the conservation and management of protected areas.

4. Webinar: Role of Youth in Achieving the 2030 Agenda: Climate, Biodiversity, Land, and Heritage Conservation (24 October 2025)

In observance of the United Nations' 80th anniversary, WII-C2C hosted a webinar on 24 October 2025 at 15:00 hrs IST via Zoom. The session explored the theme *"Role of Youth in Achieving the 2030 Agenda: Climate, Biodiversity, Land, and Heritage Conservation,"* with participation from youth-led organizations contributing to UN multilateral environmental agreements. The webinar received over 225 registrations from 15 countries.

The event featured presentations from representatives of three youth organizations. Mr. Harveet Singh Purewal presented YOUNGO, the official youth constituency of the UNFCCC, which empowers young people in climate action and policy decision-making. Mr. Mark Raquino discussed the Global Youth Biodiversity Network's (GYBN) role in biodiversity governance, including coordinating youth activities at COP and influencing policy decisions. Ms. Chehek Bilgi introduced the UNCCD Youth Caucus, the formal youth engagement mechanism of the UN Convention to Combat Desertification, highlighting its work in capacity building, campaigns, and collective action against land degradation.

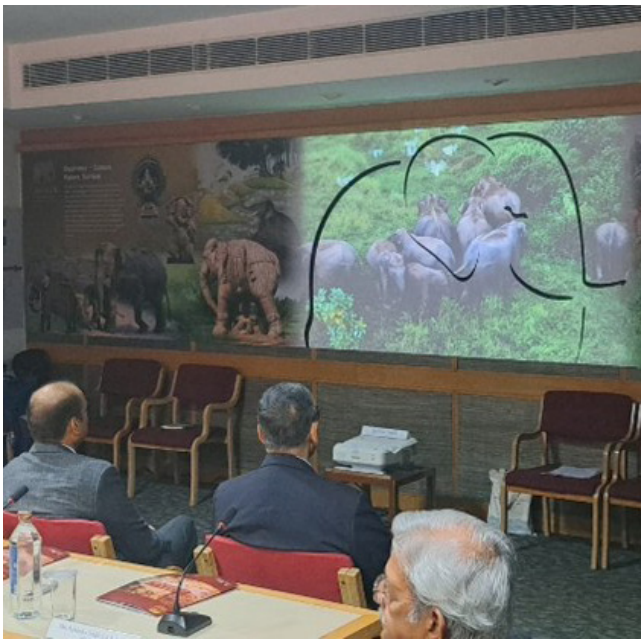
5. Workshop on the Project Mausam Thematic Study Framework: Islands at the Crossroads of Maritime Networks within the Indian Ocean Region
(18-19 November 2025, Humayun's Tomb Museum, New Delhi)

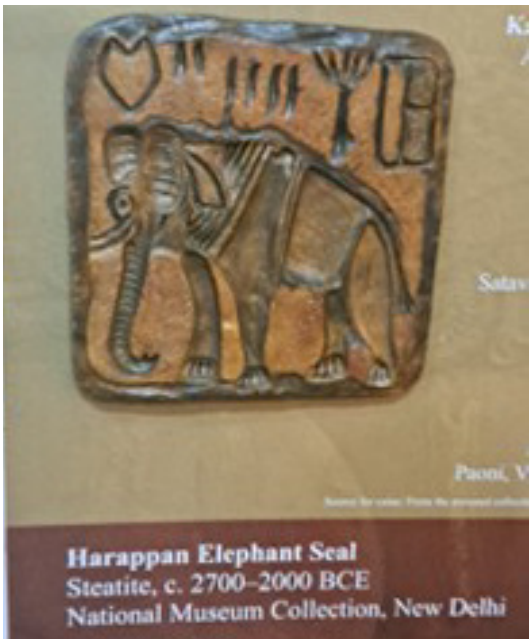
The 39-nation **Project Mausam**, envisioned by the Ministry of Culture, Government of India, aims to rekindle the long-lost ties between the countries of the Indian Ocean region (IOR). The project focuses on forging fresh avenues of inter-country economic cooperation, technological collaboration, academic and cultural exchanges, and identifying natural, cultural and intangible features for an eventual trans-national nomination in UNESCO's coveted World Heritage List. The workshop, hosted by the Archaeological Survey of India (ASI), discussed the Framework Document titled *"Islands at the Crossroads of Maritime Networks within the Indian Ocean Region"*, which presented Project Mausam's aims, objectives, scope, and activities, while also providing a roadmap for the future.

Dr. R Suresh Kumar, Nodal Officer, WII-C2C and Mr. Anuranjan Roy, Principal Project Associate, WII-C2C, participated in the workshop. In this interdisciplinary workshop, primarily focusing on cultural heritage, Dr. Suresh presented on the importance of incorporating Natural Heritage for a more coherent and impactful framing of the narrative. He highlighted how natural aspects, such as protected areas, provided traded materials and how ecological phenomena, including marine and avian fauna migrations, shaped historical trading patterns.

6. Roundtable Discussion on the Gaja-Lok Project (20 Nov 2025, INTACH Office, Lodhi Estate, New Delhi)

The inaugural 13-nation interdisciplinary initiative **'Gaja-Lok: The Elephant Lands and their Cultural Symbolism in Asia',** brought into focus connections between culture-nature-lived human experience across the Asian elephant's range. India has a key role in the programme and will collaborate with other Asian countries, highlighting climate resilience and ecology in the context of human-animal interactions, social and community practices, artistic, religious, and linguistic expressions, literary texts, and folk imaginations. The initiative will pitch for a potential joint (Transnational) UNESCO inscription and an international alliance which will organize capacity-building and conferences, curate exhibitions and festivals, publish research, and compile a dossier around this heritage theme. Dr. R Suresh Kumar, Nodal Officer, WII-C2C, and Mr. Anuranjan Roy, Principal Project Associate, WII-C2C, were invited to the meeting to provide perspectives on Natural Heritage and the World Heritage Convention protocols.





7. Natural Heritage Practitioner's Workshop Series: Strengthening Site Management Across the Western Ghats (26-28 November 2025 - Mangaluru,1-3 December 2025- Thiruvanathapuram, 4-6 December 2025- Tirunelveli)

In the series of workshops for Site managers in the Western Ghats WHS, three more consecutive workshops were conducted as a continuation of the workshop held in Satara, Maharashtra. This three-day workshop series specifically targeted site managers of the 39 component sites of the Western Ghats, India's only serial Natural World Heritage property. The comprehensive program was designed to strengthen practitioners' understanding of the World Heritage Convention, reporting mechanisms, and Natural Heritage management tools, while highlighting the Outstanding Universal Value (OUV) of the Western Ghats and their critical significance for conservation. Tailored specifically for site managers of different ranks, mainly Divisional Forest Officers (DFOs), Deputy Conservator of Forests (DCFs), Assistant Conservator of Forests (ACFs), and Range Forest Officers (RFOs), the curriculum combined in-depth classroom sessions, hands-on exercises, and field visits to designated UNESCO Natural World Heritage sites.

The workshop in Karnataka was held in Mangaluru, from 26–28 November 2025, with participation from fifteen site managers representing Karnataka's ten component sites of the Western Ghats UNESCO Natural World Heritage property. The workshop concluded at Kudremukh National Park, one of these component sites, where ACF Mr. Satheesh from the Kudremukh sub-division contributed valuable insights.

The workshop in Kerala was held in Thiruvananthapuram from 1–3 December 2025 and was inaugurated by Shri Rajesh Ravindran, IFS, Principal Chief Conservator of Forests and Head of Forest Force, Kerala Forest Department, along with Ms. Deepa K. S., IFS, Conservator of Forests (Special Afforestation & Additional Charge–IHRD). Eighteen site managers representing Kerala's nineteen component sites of the Western Ghats UNESCO Natural World Heritage property participated in the workshop. The workshop concluded at Neyyar Wildlife Sanctuary, one of these component sites, in the presence of Shri K. N. Syam Mohan Lal, IFS, Conservator of Forests, Agasthyamala Biological Park Circle.

The workshop in Tamil Nadu was held in Tirunelveli from 4–6 December 2025, with participation from six site managers representing Tamil Nadu's six component sites of the Western Ghats UNESCO Natural World Heritage property. The workshop concluded at Mundanthurai, Kalakad–Mundanthurai Tiger Reserve, one of these component sites, in the presence of Shri L. C. S. Srikanth, IFS, Deputy Director/Wildlife Warden, Ambasamudram Division.

The workshop helped improve understanding among site managers regarding the UNESCO Natural World Heritage status and additional tools available to manage the sites. Among the many suggestions shared by the participants, one key recommendation highlighted the need to strengthen management plans by incorporating the OUV of the respective component sites.

Mangaluru, Karnataka (26-28 Nov, 2025)

Thiruvananthapuram, Kerala (1-3 Dec, 2025)

AUTHOR:

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36th Annual Research Seminar (ARS), 14th–15th October 2025

The 36th Annual Research Seminar (ARS) of the Wildlife Institute of India (WII) was successfully held on 14th and 15th October 2025. The event was graced by Dr. Erach Bharucha, Chairman, ICSAP, and Shri Ramesh Pandey, Additional Director General (Wildlife), Ministry of Environment, Forest and Climate Change (MoEFCC), as Guests of Honour. Their presence significantly enriched the seminar, and their interactions with participants offered valuable perspectives on the evolving challenges and emerging opportunities in wildlife conservation and environmental governance in India.

The seminar served as a vital institutional platform for presenting research findings, fostering interdisciplinary dialogue, and strengthening the interface between science, policy, and practice in biodiversity conservation.

A key highlight of the seminar was the valedictory session, during which awards were presented for the Photography Competition, ARS presentations, and IARS presentations. The awardees were selected based on detailed evaluations and constructive feedback provided by designated evaluators and invited experts, who assessed the presentations on parameters such as scientific rigor, clarity of communication, originality, and relevance to contemporary conservation challenges. The recognition of outstanding contributions served to motivate young researchers and students to strive for excellence in both research and scientific communication.

In their concluding remarks, the evaluators and distinguished guests commended the overall quality and depth of the presentations and underscored the importance of translating scientific research into actionable conservation strategies and evidence-based policy inputs. The seminar successfully fostered academic collaboration, inspired emerging researchers, and reinforced the Institute's standing as a leading center of excellence in wildlife science and conservation in India.

Oral Presentation Award Winners, ARS and IARS

First Prize: Swapnali Gole

Second Prize: Mohibuddin

Third Prize: Mohit Mudliar

IARS AWARD WINNERS

First Prize: Meghna Limboo

Second Prize: Priyanka Kashyap

Third Prize: Shimontika Gupta

Commemoration of 150 years of Vande Mataram at WII, 7 November 2025.

The Wildlife Institute of India commemorated 150 years of *Vande Mataram* with a mass singing programme organised at its campus.

Around 400 members of the WII community, including Dean FWS, Registrar, faculty members, officers, researchers, staff, Officer Trainees of the PG Diploma and the Certificate Courses and MSc students, participated in the event. The collective rendition of *Vande Mataram* created an atmosphere of patriotism and unity across the Institute.

To mark the historic milestone, the Institute also prepared and displayed special publicity materials, including banners and standees highlighting the significance of *Vande Mataram*. One banner has been installed at the Main Entrance of the Institute, while another has been placed in the foyer and will remain on display throughout the year.

The programme concluded with participants reaffirming their commitment to national values and collective responsibility.

Physiotherapy Awareness Camp on 'Postural Ergonomics', 3 December 2025

A Physiotherapy Awareness Camp on "Postural Ergonomics" was organised on 3 December 2025 at the Institute with the objective of promoting health-related awareness among employees. Dr Etisha Sharma (PT), Physiotherapist from Welltrack Physio and Rehab Centre, conducted the session and interacted with the participants on issues related to posture and ergonomics at the workplace.

A total of 40 participants, including Dr B.S. Adhikari, Scientist-G, and Shri K.K. Shrivastava, Deputy Registrar, attended the camp and received guidance for their health concerns. The visiting physiotherapy team suggested specific exercises, postural corrections, and other remedial measures to address individual problems and improve overall musculoskeletal health.

Celebration of Constitution Day on 26th November, 2025

राजभाषा हिंदी कार्यशाला - 16 दिसम्बर 2025

संस्थान में दिनांक 16 दिसम्बर 2025 को संकल्प कॉन्फ्रेंस रूम में 'राजभाा हिंदी के प्रगामी प्रयोग एवं संवर्धन के समाचीन उपाय' विषय पर राजभाषा हिंदी कार्यषाला का सफल आयोजन हुआ। कार्यक्रम का शुभारंभ निदेषक महोदय एवं अधिष्ठाता (डीन) महोदय के सारगर्भित उद्बोधनों से हुआ, जिनमें उन्होंने प्रशासनिक कार्यो, शैक्षणिक परिवेश तथा राट्रीय एकता के संदर्भ में राजभाषा हिंदी के महत्व, उपयोगिता और संवैधानिक दायित्व पर विशेष प्रकाश डाला। इसके उपरांत मुख्य वक्ता प्रो. (डॉ.) एस. एन. पाण्डेय, निदेषक, विश्वविद्यालय केंद्रीय पुस्तकालय ने अपने विचारोत्तेजक संबोधन में राजभाषा नीतियों, प्रावधानों एवं व्यावहारिक प्रयोग पर उपयोगी मार्गदर्शन प्रदान किया।

इसी अवसर पर हिंदी पखवाड़ा 2025 के अंतर्गत आयोजित हिंदी कविता पाठ, निबंध लेखन, सुलेख तथा राजभाषा एवं सामान्य हिंदी ज्ञान प्रश्नोत्तरी प्रतियोगिताओं के विजेताओं को निदेषक महोदय के कर-कमलों द्वारा पुरस्कार प्रदान कर सम्मानित किया गया। अधिकारियों एवं कर्मचारियों की उत्साहपूर्ण सहभागिता और अभिव्यक्तियों ने कार्यक्रम को विशेष गरिमा प्रदान की तथा संस्थान में राजभाषा हिंदी के प्रोत्साहन एवं सशक्त प्रयोग के प्रति नवचेतना और प्रतिबद्धता का संचार किया।

Observance of Vigilance Awareness Week 2025

Vigilance: Our Shared Responsibility

Vigilance Awareness Week is observed every year during the week of birth anniversary of Sardar Vallabh-bhai Patel on 31 October.

This year, with the decision of the Commission decided to observe Vigilance Awareness Week from 27 October to 2 November 2025. The observance was decided to commence with the administration of the Integrity Pledge by public servants in Ministries, Departments, Central Public Sector Enterprises (CPSEs), Public Sector Banks (PSBs), and other organizations on 27 October 2025 at 11:00 hrs.

All organizations were advised to conduct activities aligned with the theme to ensure maximum public participation to sensitize the public about the need for transparency and integrity in public governance.

Two programs were organized by WII during the week: an Essay Competition and a Quiz Competition.

WINNERS OF THE ESSAY COMPETITION

First Prize: Anushka Uniyal

Second Prize: Sunil Sundriyal

Third Prize: Ompal Singh

WINNERS OF THE QUIZ COMPETITION

First Prize: Deepak Thapa

Second Prize: Ompal Singh

Third Prize: Muthu Veerappan and Kuldeep Chauhan

Legacy in Retirement:
Honouring Our Retired Personnel

Shri Devendra Prasad Kothari,
Lab Assistant

Date of joining: 18.03.1991

Date of farewell: 31.12.2025

Shri Anwar Ali, Staff Car Driver
(Special Grade)

Date of joining: 07.08.1991

Date of farewell: 31.12.2025

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