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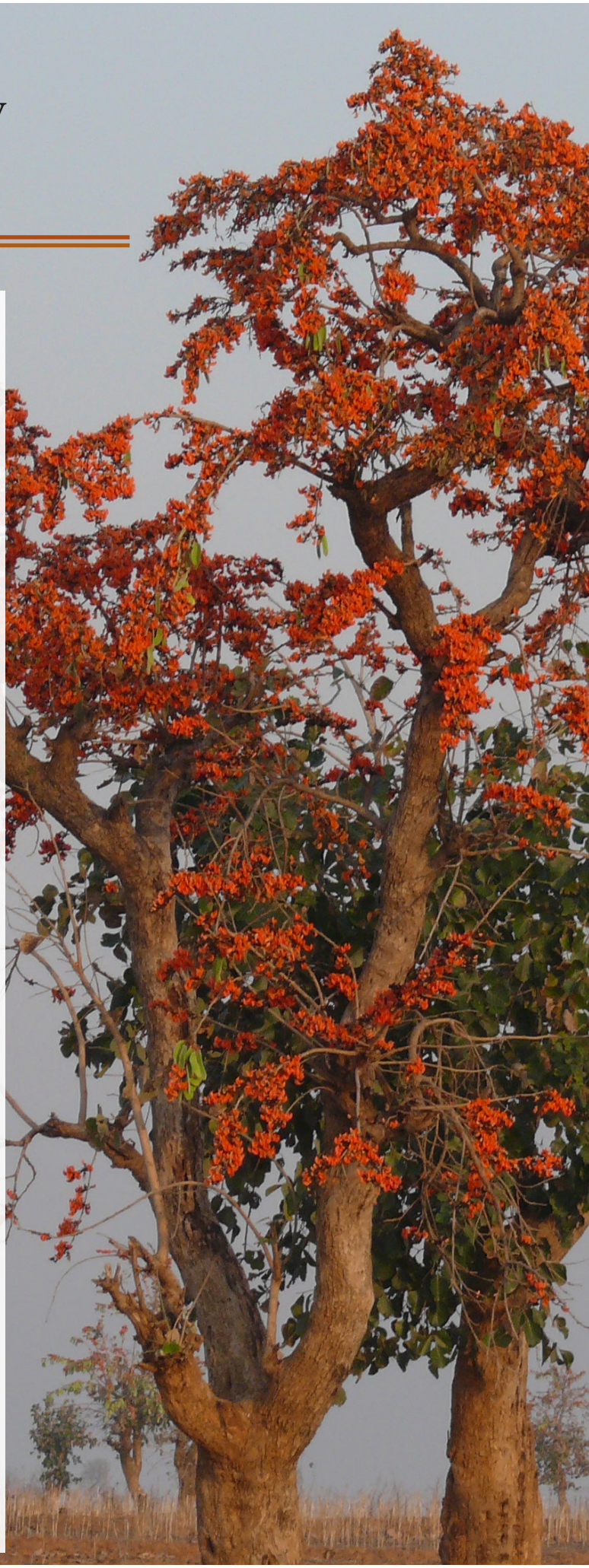
Baghdarah: A Forgotten Wildlife Sanctuary

- Asad Rahmani



During my tenure on various wildlife committees of the Ministry of Environment and Forests (MoEF) (later renamed the Ministry of Environment, Forest & Climate Change), I earned the nickname "father of neglected species and habitats." The reason? I persistently urged MoEF officials and state forest officers to focus on species and ecosystems that are often overlooked. While discussions frequently revolved around tigers, elephants, rhinos, snow leopards, and well-known sanctuaries like Corbett, Kanha, and Keoladeo, countless species, habitats, and even entire protected areas remain in dire need of conservation efforts. One such overlooked sanctuary is Baghdarah, a rugged expanse of around 478 sq. km in the Sidhi district of Madhya Pradesh.

I had the opportunity to visit Baghdarah Wildlife Sanctuary on March 27–28, 2011, while inspecting the Son River at the request of the Standing Committee of the National Board for Wildlife. A dam was being planned on the Son River—one of the last remaining strongholds of the endangered gharial—raising serious conservation concerns.

This vast sanctuary is characterized by dry deciduous and thorn forests covering its hillsides and escarpments. However, the large rocky plateau remains mostly barren, dotted with sparse trees, shrubs, and grasses. Numerous villages are scattered across the plateau, exerting significant pressure on the fragile ecosystem. Due to the nutrient-poor rocky soil, agricultural activity is limited, and the local population endures extreme poverty. Water scarcity further exacerbates their struggles, with deep wells serving as the primary source. Receiving only about 500 mm of annual rainfall, the sanctuary lies within a dry zone. Its borders extend to Mirzapur and Sonbhadra districts of Uttar Pradesh in the north and west, Sonbhadra in the east, and the Son River to the south.

A Historical Haven for Tigers

Baghdarah lies on the northern fringes of the Vindhya Range, a vast, broken chain of mountains stretching 1,000 km from Gujarat in the west to the Ganges River valley near Varanasi, Uttar Pradesh, in the east. Historically, Baghdarah was famous for tiger hunting, which is how it got its name—"Bagh" meaning tiger and "Dara" meaning dwelling place. In 1978, the area was declared a wildlife sanctuary to safeguard tigers.

Today, however, tigers are no longer found in Baghdarah. At best, a stray dispersing individual from Sanjay National Park might pass through, as suggested by Dr. Y. Jhala, retired Dean of the Wildlife Institute of India (WII). Yet, other wildlife species continue to thrive, thanks to the protective measures taken by the Forest Department. During my two-day visit, I observed spotted deer (cheetal), barking deer, nilgai, blackbuck, chinkara, mugger crocodiles, gharials, bar-headed geese, and Indian skimmers, among many other birds. As expected, cheetal and barking deer were confined to forested areas, while nilgai and blackbuck roamed the open plateau, their preferred habitat. Although sloth bears, leopards, and sambars are known to inhabit the sanctuary, they eluded us during our trip.

Baghdarah and the Cheetah Reintroduction Project

At one point, Baghdarah was even considered a potential site for the cheetah reintroduction project. However, in 2010, renowned conservationists Dr. M.K. Ranjitsinh and Dr. Y. Jhala, the key architects of the project, ruled it out. In their report, they noted:

"The Kaimur Wildlife Sanctuary in Uttar Pradesh and Baghdarah Wildlife Sanctuary in Madhya Pradesh form a continuous habitat. However, the potential cheetah habitat in this area is limited (less than 500 sq. km) due to extensive agricultural activity. Despite reasonably high prey densities, sustained through effective management and law enforcement, the site was deemed unsuitable due to its small size and the likelihood of human-cheetah conflict."

Untapped Potential for Ecotourism

Baghdarah has tremendous potential for sustainable tourism, yet visitor facilities remain inadequate. There is a Baghdarah Nature Park, but it primarily caters to picnickers rather than serious wildlife enthusiasts. The sanctuary is located 155 km from Rewa and 210 km from Satna. Interestingly, it is much closer to Mirzapur, just 40 km away. The Kaimur Wildlife Sanctuary in Mirzapur and Baghdarah together form part of the larger Vindhyan landscape, which extends across Uttar Pradesh, Madhya Pradesh, and Bihar.

This semi-dry deciduous forest supports a rich mix of grasslands, woodlands, and rivers, making it an ideal wildlife habitat. The Vindhyan Ecology and Natural History Foundation, an active NGO, has been working to protect the region's biodiversity, particularly on the Uttar Pradesh side. Their efforts have drawn some attention to this neglected ecosystem, but much remains to be done.

The local population continues to face extreme poverty, lack of basic amenities, and low literacy levels. In such circumstances, advocating for wildlife conservation presents a challenge. Employment opportunities are scarce, and large corporations operating in the area exploit resources without benefiting the local communities, who lack the skills and resources to engage in economic progress.

Gharial and Mugger in Son Gharial Sanctuary
Photo credit: Asad Rahmani

Adult Chinkara
Photo credit: Asad Rahmani

Deep pool in Son River
Photo credit: Asad Rahmani

However, wildlife-based tourism could bring positive economic change, creating job opportunities for local youth. In most tiger reserves, walking safaris are prohibited, but in Baghdarah, nature trails could be developed for naturalists and photographers. The sanctuary offers excellent chances to observe cheetal, nilgai, blackbuck, chinkara, and sambar, while the lucky few might even spot a leopard, sloth bear, or a pack of wolves. Night safaris could reveal jungle cats, porcupines, and pangolins.

More than 200 bird species have been recorded here, including the endemic white-bellied minivet. Despite a sharp decline in vulture populations across India, the Indian vulture and Egyptian vulture are still occasionally seen in Baghdarah, breeding on its numerous rocky cliffs. Perhaps the most exciting wildlife highlight is the presence of Indian skimmers and gharials in the Son River. On March 28, 2011, I observed around 40 Indian skimmers resting on a sand island and six to seven gharials basking on the riverbanks. The Forest Department estimates that over 100 gharials may inhabit this stretch of the Son River. I do not know how many are there!

A Call to Action

Like Baghdarah, countless protected areas across India suffer from neglect, receiving neither the attention of authorities nor the support of conservationists. I cannot be the sole advocate for India's overlooked biodiversity. More voices must rise in support of these neglected landscapes, ensuring that Baghdarah and similar sanctuaries receive the protection and recognition they deserve.

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Dr. Asad R. Rahmani *is a veteran Indian ornithologist and conservationist, best known for his long tenure as Director of the Bombay Natural History Society (BNHS). His work has focused especially on grassland and wetland birds, including lesser-known and threatened species. After retiring as Director of BNHS in 2015, he continues contributing as a Scientific Consultant to The Corbett Foundation and the Hem Chandra Mahindra Trust.*

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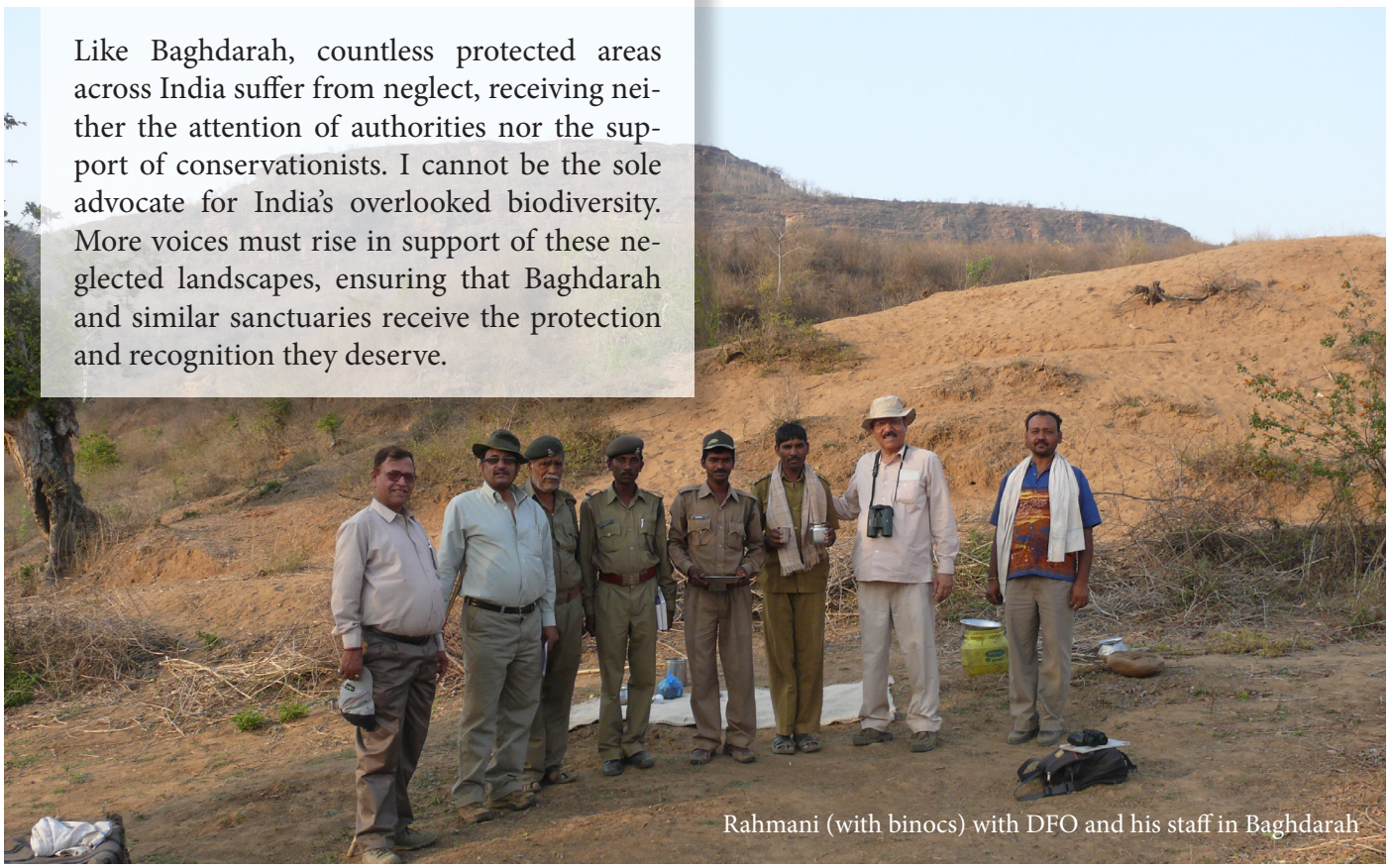
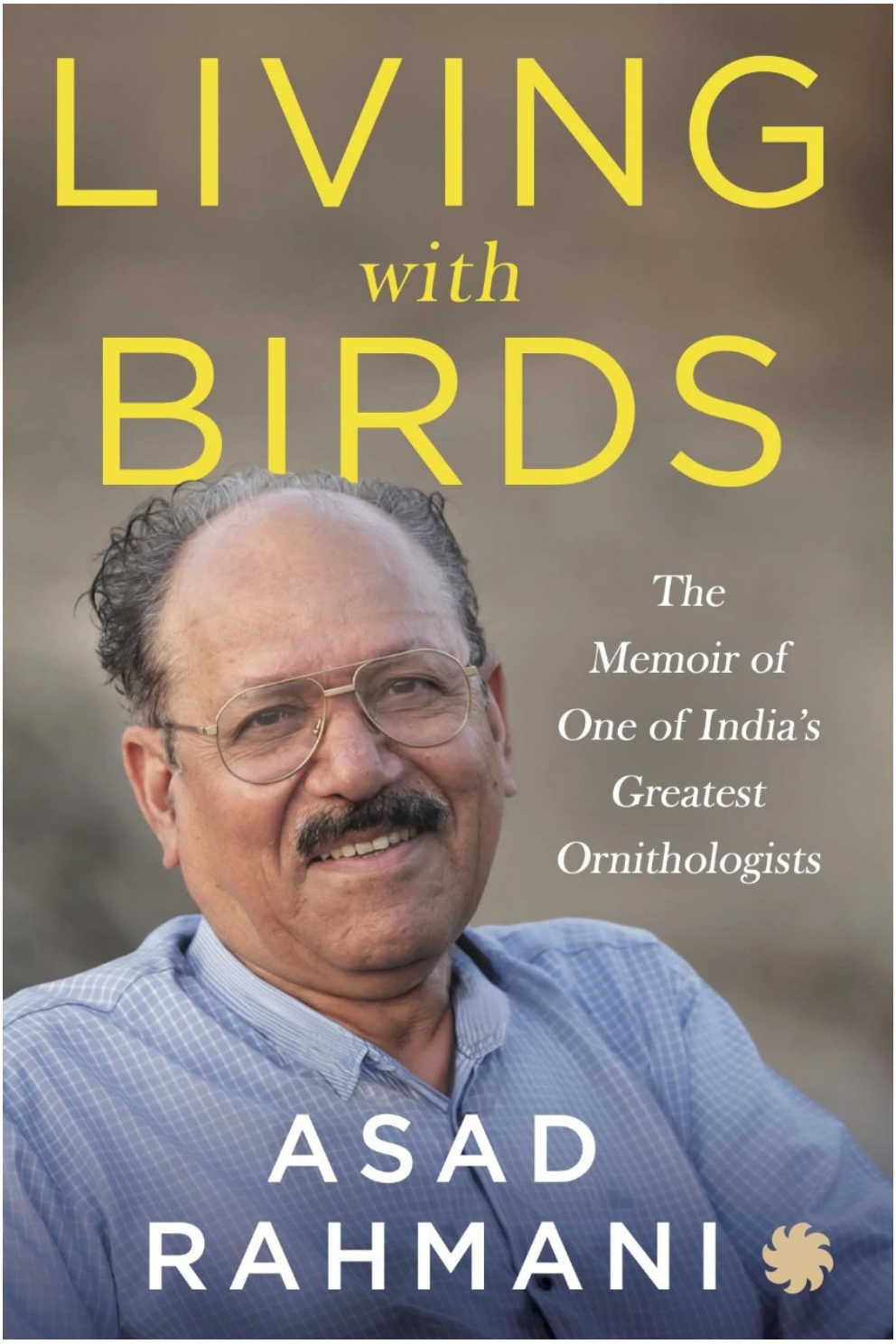


Rahmani (with binocs) with DFO and his staff in Baghdarah

Book Suggestion: Living with Birds — Asad R. Rahmani



Living with Birds - offers an insightful blend of ecology, conservation history, and personal field experiences from one of India's most respected ornithologists. The author describes the behavior, habitats, and conservation challenges of a wide range of Indian bird species, while emphasizing the cultural and ecological importance of living harmoniously with them. The book serves as an accessible introduction to Indian ornithology as well as a thoughtful reflection on human–bird relationships.

Photo credit: Manav Sajan

Extinction of Experience: Losing Sight, Losing Care – Why Feeling Nature Matters

- Rohit R.S. Jha

An Encounter to Remember

In the summer of 2011 – just before my graduation – I was volunteering with the Centre for Wildlife Studies in Karnataka. I found myself walking several 4-kilometre line-transects in the moist-deciduous forest of Bandipur Tiger Reserve, mostly accompanied only by Cariappa, our local field collaborator from the Jenu Kuruba tribe. On one of these days, as dusk fell, he suddenly froze, binoculars pressed to his eyes. Without uttering a word, I peered through my own pair, following his gaze — and there it was. A massive tiger, sprawled and resting beside a small pond, surrounded by a murmuring mixed-species flock of birds. The animal filled my entire field of view; its striped coat gleaming in the fading light, a breathtaking moment!

And there we stood. Two humans weighing barely 100 kilograms between us, neither taller than 5.5 feet and a bit more, separated from this powerful cat by merely 50 metres of forest floor, armed only with a basic backpack, water, biscuits, and binoculars.

Giddy with excitement, I fumbled to switch on my camera; perhaps I shifted, or a dry leaf cracked underfoot. That was enough. The tiger, once oblivious, was alerted, rose gracefully, crouched like a giant housecat, and fixed its penetrating gaze, sizing us up — a potential light snack, perhaps? After what felt like an eternity but was probably mere seconds, and to my utter amusement, it probably classified us bipedals as potential threats (rightly so) and vanished into the surrounding bushes with remarkable swiftness, leaving only rustling vegetation in its wake.

The surge of adrenaline, awe, and joy has stayed with me ever since — that moment of mutual recognition between human and wild animal in the tiger's natural domain!

Why Such Moments Matter

Moments like this go far beyond anecdote — they forge visceral, emotional bonds with the natural world. Whether as a researcher, volunteer, tourist, or even as a regular citizen spending time in a patch of green, these direct encounters tap into something deeply human. They ignite empathy, curiosity, and a sense of stewardship (although not all such direct interactions are positive, see *Evans et al., 2023*). But what happens when such experiences grow rarer?

The "Extinction of Experience"

Noticed by lepidopterist Robert M. Pyle in the late 1970s, the term "Extinction of Experience" describes how urbanisation and modern lifestyles are causing humans to lose close contact with nature. Pyle wrote:

"As cities and metastasizing suburbs forsake their natural diversity, and their citizens grow more removed from personal contact with nature, awareness and appreciation retreat. This breeds apathy toward environmental concerns and, inevitably, further degradation of the common habitat...people who don't know don't care."

This phenomenon was later popularised by journalist Richard Louv in his groundbreaking 2005 book "Last Child in the Woods," where he introduced the concept of "nature-deficit disorder". Since then, research has shown that this trend affects not just our well-being, but our willingness to conserve.

Swathes of tropical dry and moist deciduous forests clothe the hills of Bandipur National Park/ Tiger Reserve, Karnataka
(Photograph: Mike Prince; shared and reproduced under CCA 2.0 License)

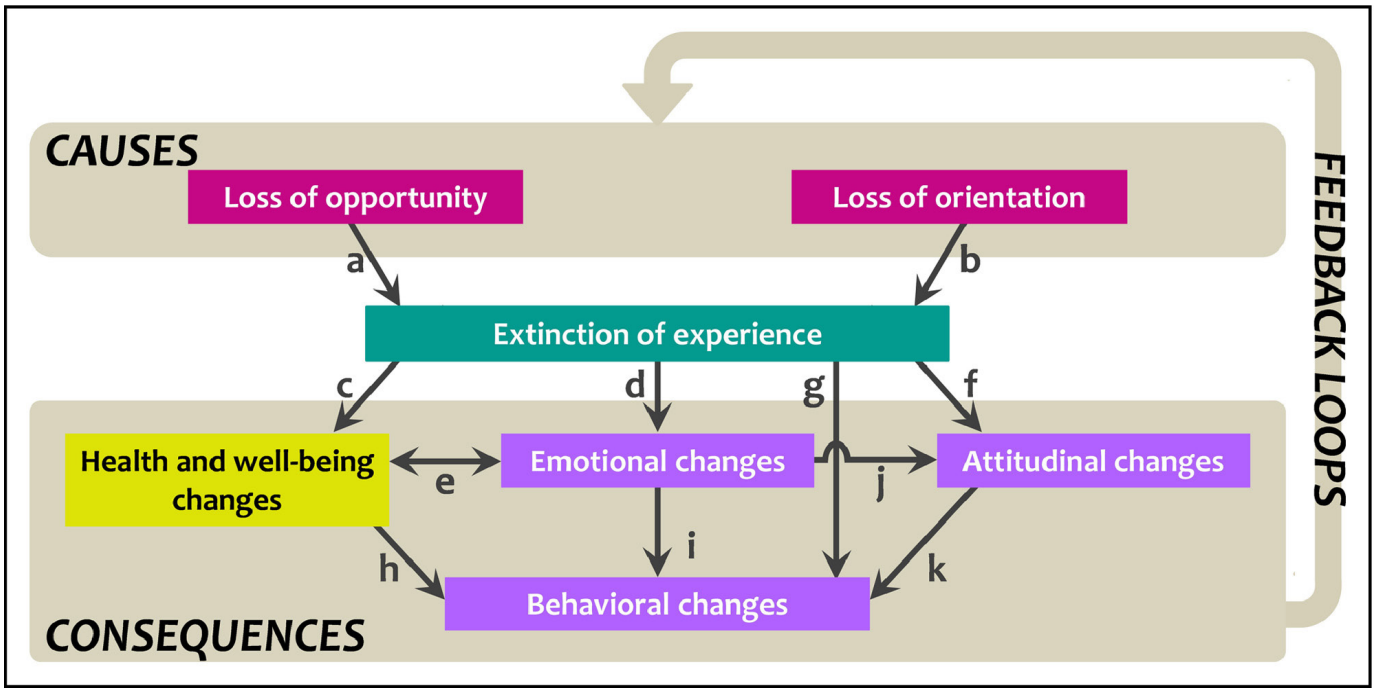
The extinction of experience is characterised by fewer human-nature interactions, which leads to lower connection to nature and potentially diminished pro-environmental behaviour. This trend is driven by accelerating urbanisation, spatial barriers to accessing nature, altered species richness in urban environments, and modern lifestyles that keep people increasingly indoors.

The Science Behind Disconnection

A 2016 review by researchers from Japan and the UK revealed that decreasing interactions with nature reduces benefits to health and well-being, and diminishes positive emotions, attitudes and behaviours towards the environment. Agathe Colléony and colleagues (2020) used surveys and structural equation modelling among Tel Aviv residents to demonstrate that while access to nature (opportunity) improves health, only emotional orientation towards nature fosters conservation attitudes and behaviours.

Another recent study by Miles Richardson (2025) found that human connection to nature has declined by over 60 percent since 1800, closely mirroring a loss of nature-related words in literature; a clear signal that cultural and experiential disconnection is accelerating.

Other studies indicate that the absence of nature experiences can contribute to various problems, including attention difficulties, higher rates of physical and emotional illnesses, obesity, and reduced creativity. The phenomenon creates a vicious cycle: as opportunities for nature experience diminish, people become increasingly disconnected from nature, leading to reduced motivation to protect natural environments. This disconnection is particularly pronounced in urban areas where children and



The causes and consequences of the 'Extinction of Experience', and the potential pathways among them that create a feedback loop (figure reproduced from Soga & Gaston, 2016).

young adults alike now spend significantly more time indoors, engaged with screens rather than exploring natural environments.

In the Indian context, research conducted by IIM-Indore and IIT-Bombay in 2025 across 25 of India's most populated cities found that urban youth with access to green spaces within 3 kilometres of their residence and frequent recreational visits to these spaces reported significantly better well-being outcomes. However, the study also revealed concerning trends of nature disconnection among young urban populations, particularly as screen time proliferation has intensified post the Covid-19 pandemic.

Why This Matters in India

In Indian and broader Asian cultures, reverence for nature and wildlife is woven into our general ethos and way of life. Indian mythology and traditional thought have long emphasised environmental consciousness, viewing nature as sacred and interconnected with human life. Traditional Indian communities, particularly tribal groups, have always been nature worshippers, considering forests, rocks, rivers, and mountains as sacred.

The erosion of these cultural connections to nature threatens not only individual well-being but also the very foundation of environmental stewardship that has sustained Indian ecosystems for millennia. As urbanisation continues and younger generations become increasingly removed from nature experiences, we risk losing the emotional foundation necessary for environmental conservation. As our policymakers increasingly come from urban, tech-centric backgrounds, lacking firsthand experience of the wild, their understanding and sensitivity to on-the-ground ecological dynamics may narrow. A society detached from nature may undervalue inclusive, location-linked nature-based solutions in favour of top-down, homogenised and large-scale techno-bureaucratic 'fixes'.

Bridging the Divide: What Can Be Done

For policy-makers of this country and decision-making authorities of institutions nationwide, and based on my limited knowledge, I present an Indicative Wishlist.

1. Cultivating Early, Meaningful Experiences

Integrate nature connection into early childhood through forest-preschools, experiential environmental education, and family-oriented nature exposure. Richardson emphasises that intergenerational transmission of nature affinity is pivotal and effective, only if started young. In India,

organisations like Nature Classrooms are working with educators to connect school learning to the natural world through age-appropriate, locally and culturally relevant resources. The Eco-Schools (India Chapter) Program – jointly run by the Centre for Environment Education (CEE, under the Ministry of Environment, Forest & Climate Change) and the Denmark-based Foundation for Environmental Education (FEE) – is part of a Global Sustainable School Certification that promotes environmental and sustainability education in schools (Kindergarten to Grade 12, any board/medium of instruction). In fact, since its establishment in 1984, the CEE has developed and implemented several educational and experiential programs/learning resources around ecosystems such as rivers, wetlands, forests, oceans, mangroves, arid areas, etc. All these efforts need to be appreciated, supported and suitably scaled-up.

2. Greening Human Habitats

Urban planning must go beyond parks. Policies should aim for transformative greening, alongside consistent management and active conservation efforts (including rewilding, based on the eco-cultural context and capacity). Richardson suggests cities may need up to 1,000 percent more biodiverse green space to reverse disconnection trends. This is particularly critical as climate risks such as heatwaves, flooding, and air pollution intensify, and it is the often overlooked blue-green infrastructure (parks, tree-lined streets/avenues, lakes, wetlands etc.) that could determine the liveability of our cities. India's 'Urban Greening Guidelines' of 2014 is the right step; however, it needs significant percolation at all levels of governance and suitably incentivised for effective implementation.

3. Fostering Emotional Orientation

It's not enough to increase access. We must cultivate emotional bonds through interpretive trails, storytelling around wildlife, citizen science/community-based biodiversity projects — to strengthen nature-relatedness and conservation intent. An Institute in a setting like ours is aptly placed to do this. Nothing stops us from establishing a dedicated and financially well-supported 'Nature Education & Connection Cell' with qualified individuals whose sole and entire responsibility may be to develop creative ways and means to carry out high-impact programmes, day/week-long modules, workshops/field-camps for fostering nature-culture relationships.

4. Cultural Reimagining

Revive traditional ecological knowledge and myths to build modern narratives that connect people emotionally with nature. Cultural events, school textbooks, and public art celebrating nature in Indian mythology and nature reverence among India's various communities can foster resonance.

Role of Wildlife Researchers

As a community intimately familiar with the wild, researchers like you and me can help bridge this gap, given the requisite support and resources. Ideas include:

- Organising immersive "urban–wild" camps or weekend nature-connect workshops.
- Hosting storytelling evenings where field experiences like mine are shared with the larger society through multimedia aids.
- Partnering with urban schools for guided nature walks or citizen-science projects.
- Creating multimedia "feel-of-the-forest" experiences: videos, sounds, stories, and art — that evoke emotional engagement even in urban classrooms.
- Widely writing about issues related to nature and environment in a non-jargon style palatable to a wider readership on all possible platforms, but especially in Indian-language news media (little point in preaching to the already converted).

A screenshot depicting various theme-based Nature Learning Resources available on the Nature Classrooms website. The initiative's vision is to bring "nature learning to everyday education with a hope to spark and rekindle wonder, curiosity, empathy and love for our Natural World."

The Path Forward

The "Extinction of Experience" isn't just an academic phrase — it's a looming affliction for society. As urbanisation and digital immersion strip away personal encounters with the natural world, we risk losing not only our health, awe, and cultural heritage, but the very connection that motivates conservation.

We need policy and programs that foster direct experience, emotional orientation, and cultural resonance with nature — especially early in life. And we wildlife researchers, grounded in the field, have a unique role to play: to tell stories, to invite people back into the forest, and to kindle the spark of caring.

If we don't feel the forest/ grassland/ desert/ oceans/ rivers and wildlife, how can we save them?

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Calibrating Carnivore Chronicles: Trophic Cascades and Mesopredator Release

- Shivam Shrotriya

For most of my research career, I have worked with people primarily working on carnivores. Adding to that, my PhD on the Himalayan wolf severely exposed me to a worldview of the carnivores. Which is that by holding the top of the trophic pyramid, carnivores are the main drivers of ecosystems, shaping the structure of life beneath them through what we call the top-down effect or the *trophic cascade* (Ripple *et al.* 2016). As carnivore ecologists, we develop a notion that the outsized effect of the carnivores on the ecosystems they live in raises their status compared to other species, giving them some sort of ecological supremacy. In fact, I've often opened my talks on wolves by invoking these very theories, sometimes as scientific grounding, sometimes as reverence. But lately, I've felt compelled to step back to have an ecologically wide view and examine this fascination for carnivores as ecosystem engineers.

If you haven't come across once viral short film *How Wolves Change Rivers* (2014) yet, I urge you to stop reading this article and go on YouTube to watch it. This four and half minutes long video perfectly captures the essence of the trophic cascade – how wolves, reintroduced into Yellowstone National Park after decades of absence, reshaped the entire ecosystem as top predators. The story goes that wolves regulated elk numbers, which in turn allowed vegetation to recover, stabilising riverbanks and even altering water courses (Ripple & Beschta 2012).

The idea originated with Hairston *et al.* (1960) arguing that the abundance of herbivores is generally limited by their predators and not by the food (plants). The term '*trophic cascade*' was later coined by Robert T. Paine, who further conducted experimental work by studying the effect of a top predator removal, sea star *Pisaster ochraceus,* on the marine community of the intertidal zone (Paine, 1980). Incidentally, Paine also coined the term 'keystone species'. The cascading interactions do not play out only by changing population numbers but also through fear. Apex predators can alter the behaviour of their prey; the presence of a predator's scent or sight alone can shift foraging patterns and space use (Palacios *et al.*, 2016). The core of the trophic cascade theory is that predators can exert a controlling influence over entire ecosystems, not just by what they eat, but by how they make other species behave.

Ripple *et al.* (2016) noted about a decade ago that "the term [trophic cascade] has been a central or major theme of more than 2000 scientific articles", suggesting strong evidence for trophic cascades. For example, Terborgh *et al.* (2001) described how predator loss in island forest systems leads to over-browsing and collapse of vegetation regeneration, while Myers *et al.* (2007) found that the decline of sharks on the U.S. Atlantic coast allowed cownose rays to boom, devastating scallop populations. The pattern that removal of the top predator changes the structure of the ecosystem, sometimes to the point of breaking, repeats across continents and biomes.

But what happens when the apex predator disappears in a multi-predator system? The predators that functioned under the top carnivore so far try to fill the void. Enter the *mesopredator release hypothesis*, another quite influential and debated idea in modern ecology.

We need to first clarify another question before we dive into the mesopredator release hypothesis - what a mesopredator actually is? Researchers have used a couple of different ways to define a meso-predator. Relative body size is one of the approaches, e.g., 1 to 15 kg in the case of terrestrial carnivores (Gehrt & Clark 2003). Inability to hunt down the large prey can also be used as a predatory-efficiency based criterion. However, the ecological definition is a mid-ranking predator in a given food web. A species can be an apex predator in one ecosystem and a mesopredator in

another. Wolves are a good example of functioning as top predators as well as second-order predators in areas with bears and tigers.

The term 'mesopredator release' first appeared in Soulé *et al.* (1988), later popularised by Crooks & Soulé (1999), who described how the decline of coyotes in fragmented Californian landscapes allowed smaller predators, particularly domestic cats, to proliferate, devastating local bird populations. The concept caught on quickly. It offered a simple, compelling narrative – remove the apex predator, and the mesopredators' numbers will rise, leading to a collapse of smaller prey and a loss of biodiversity. The framework has since been applied across ecosystems, from sharks and rays in the oceans (Myers *et al.*, 2007) to dingoes, foxes, and feral cats in Australia (Johnson *et al.*, 2006), and wolves and coyotes in Yellowstone (Berger *et al.*, 2008). In each case, the arc of the story is that the top falls, the middle rises, and the bottom breaks.

Across the world, management practices and conservation planning have drawn heavily on these two theories. Reintroduction programs, from wolves in Yellowstone and lynx in Europe to tigers and cheetahs in India, often cite trophic cascades as justification. The mesopredator release concept has shaped predator control policies, arguing that maintaining apex predators helps keep smaller carnivores in check and protects biodiversity. For example, protecting dingoes in Australia was proposed as a natural control mechanism for invasive cats and foxes (Johnson *et al.*, 2006). In practice, though, the results are far from expected. Field results often show that apex predator recovery doesn't always suppress mesopredators as neatly as theory predicts.

Let's take the case of wolves and coyotes in Wisconsin. Despite wolf recovery, coyote numbers did not decline significantly, suggesting that top-down control is not universal and may depend on landscape features and prey abundance (Crimmins & Deelen, 2019). In Norway, mesopredator increases were linked not to predator absence but to bottom-up effects, getting benefitted by carrion from high densities of reindeer (Henden *et al.*, 2014). In some systems, mesopredators may even stabilise ecosystems by partially taking on the roles of missing apex predators (Suraci *et al.*, 2017). Jachowski *et al.* (2020), investigating mesopredator release in terrestrial North American mammalian predators, found no support or mixed support in 46% cases. The more we study, the more we realise that these patterns are not always generalizable but context dependent.

The reason is that it is fundamentally difficult to prove that mesopredator populations increase only because of the loss of apex predators, and not because of other factors, like habitat changes, that often happen at the same time. The fragmented landscapes provide an ideal setting for explosive mesopredator population growth because both the top-down control by predators and bottom-up constraints (like resource scarcity) are relaxed. "Uncertainty surrounding the causal mechanisms that underlie mesopredator outbreaks muddies prescriptions for management" (Prugh *et al.* 2009).

The global rise of free-ranging domestic dogs is another interesting story about the effect of carnivores on ecosystems. Currently, the most abundant carnivore on earth, dogs have become dominant competitors in the mesocarnivore guild in India and many parts of the developing world, thriving on human subsidies and outcompeting native species like foxes and jungle cats (Vanak & Gompper, 2009; Carricondo-Sanchez *et al.*, 2019). Native carnivores often shift their diets, activity patterns and habitats to avoid dogs (e.g. Reshamwala *et al.* 2018). In this case, dogs act as 'mesocarnivore suppressors', causing declines in smaller species through direct competition and indirectly via transmitting diseases like rabies and distemper. Here, human influence blurs the trophic hierarchy of the carnivore guild around the wilderness areas.

Mesopredators may increase in response to the disappearance of the top predator but are less likely to reduce once the top predator is back, which questions the strength of the top-down effect itself. Our favourite ecological success story and example of a trophic cascade, the Yellowstone wolves, has also sparked debate in recent years. Studies suggest that vegetation recovery in Yellowstone's valleys owes as much to climate variation, the historical loss of beavers affecting stream conditions and human management as to wolves themselves (Smith *et al.* 2016). While wolves contributed to shaping ecosystems, they are just

one factor among many. Some studies have further questioned the sampling and cascade strength calculation as well (Brice *et al.* 2021).

It reminds us that ecological systems are rarely governed by a single driver. Bottom-up forces, like nutrient availability and productivity, often shape ecosystems just like top-down predation. Add to that the pervasive influence of humans, such as land modification, hunting, overextraction of resources, global warming, pollution, etc. In today's Anthropocene (Crutzen & Stoermer, 2000), ecosystem dynamics are controlled by three major processes – top-down control, bottom-up constraints, and human interference. Human activity doesn't just disrupt; it often creates new forms of ecological order. Resource subsidies, altered fire regimes, and conservation interventions like plantations and species recovery can all produce their own kinds of cascades.

However, this is not to suggest that the theories matter any less. Theories give us the scaffolding to think about complexity, to see hidden connections, to predict, and to ask questions. They remind us that ecology is not chaos but a pattern, even if that pattern is sometimes fuzzy or incomprehensible.

Scientific communication classes will tell you that storytelling is a key skill. I don't doubt them. Good stories turn heads, make headlines and let films like *How Wolves Change Rivers* go viral. But stories demand simplicity while science is often complex. Newer facts are discovered, and older understanding is updated. In due course, the scientific process disregards storytelling over fact-telling. The Yellowstone story was powerful, until it wasn't. Nonetheless, carnivores continue to fascinate us, and as Prugh *et al.* (2009) put it that perhaps the most important motivator is simply that they compete with us for food and space.

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Echoes of Silence: Memoirs of Remoteness, Resilience and Hope!

- Swapnali Gole

The Beginning

On a partially cloudy afternoon of September 2014, my sleep was pierced by the captain's announcement from the cockpit. A declaration of our arrival in Port Blair, capital of the Andaman and Nicobar Islands. Glancing through the window, I, as a naive researcher, was overwhelmed by the specks of landmass interspersed across the emerald blue sea. I was here to study the fascinating marine world of the Islands and had opportunely begun with sea turtles of Great Nicobar, the southernmost island of India!

On the morning of February 2015, aimlessly waiting to embark, I was baffled by the unidirectional *paan* (areca nut) spits that artistically adorned the walls of Haddo Jetty. Neatly packed bags of fellow passengers ready to be boarded. The flavor of steaming *idlis* and *rasam* from a distant food stall wafted through the air, and laal chai (black tea), brewing with all its might, stood ready to be served to its next customer!

Three whistles and the ship shuddered. On-duty crew pulled up the anchor ropes, the entry wooden planks were hauled, and the doors closed. A tiny turbine boat, with all its force, pushed the giant ship out of Haddo port. *MV Harsha-Vardhana* was all set to sail!

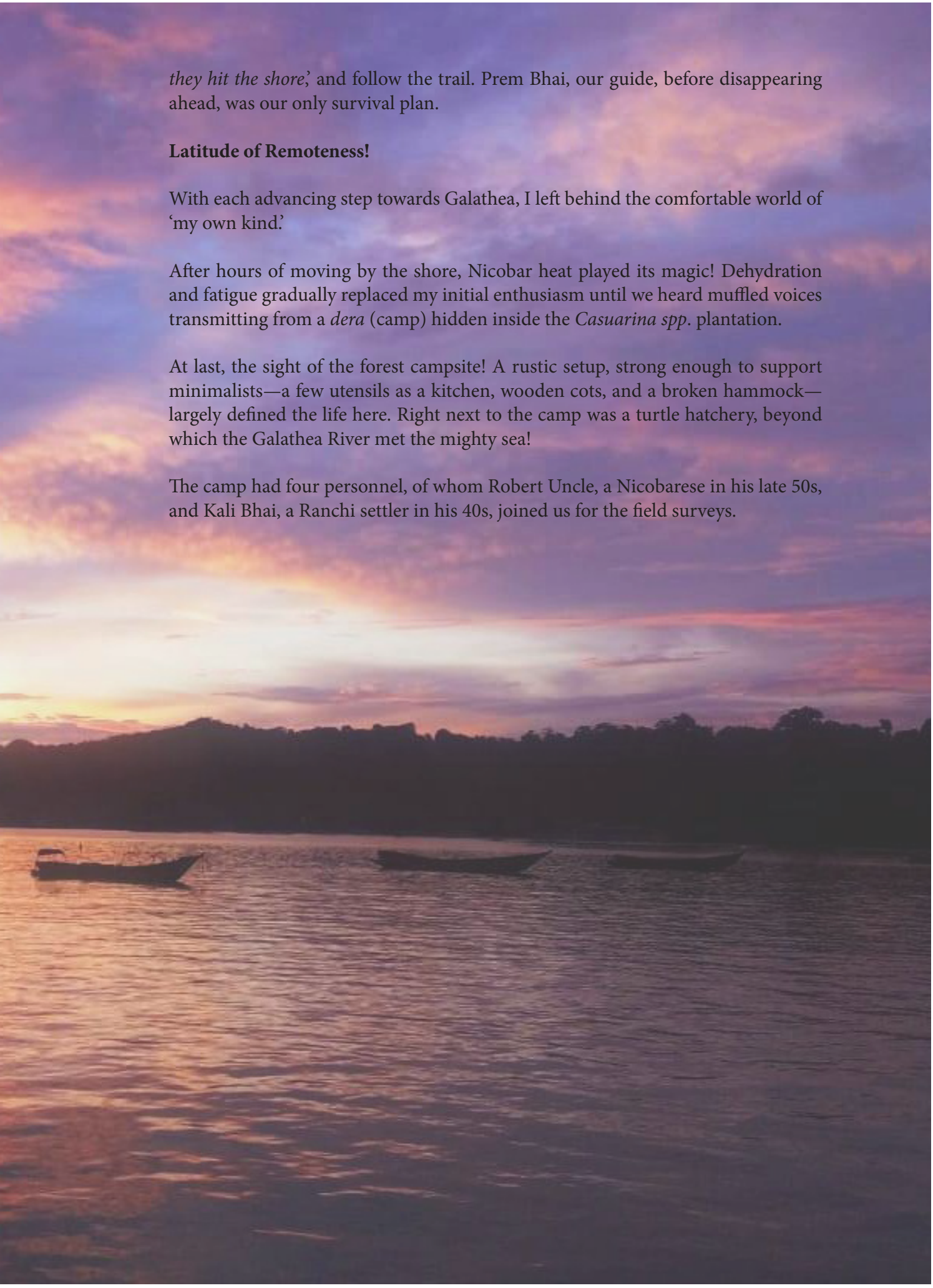
From the limitless oceanic realm, I watched the sky change colors. Golden rays sprawled across the horizon until the sun disappeared into the ocean's belly—only to be shadowed by an echoing darkness at night! The next morning, locals muttered, "पहुँच गए," and with a sigh of relief, I knew we had reached Campbell Bay.

Campbell Bay (alias 0 km)

Campbell Bay was the heart of the Island— a place with a bucolic tinge straight out of *Malgudi Days*. A Murugan temple, a small fishing jetty, a tiny marketplace, a panchayat guest house, and tsunami shelters surrounded by orchid-clad giant tropical trees completed this scenic picture. Our base was a guest house run by the tourism department (IP&T). Right next to it stood a small Nicobari home on wooden stilts. Whenever I passed by, through a squinted glance, I could see the entire family assembled around a black and white television set, keenly watching *Doordarshan*, which would instantly throw me back to childhood nostalgia, reminding me of the home I had left behind.

Entering the Distant (Galathea Bay at 42 km)
The euphonious calling of birds filled the silence of dawn. The rising sun rays breaking impenetrable canopies. Dampness of the dew-laden ground, on which Nicobar Macaques (*Macaca fascicularis umbrosa*) strolled in slumber. At times, the remnants of fallen trees in nallahs (creeks) evoked thoughts of the 2004 Indian Ocean tsunami. Everything came to a halt when we reached Shastrinagar (35 km), the last sign of civilization!

With no roads beyond this point, we carried out our further journey on foot. After a few miles, the forest gave way to the shore, with no visible route for our safe passage. Strong waves crashed on rocky shores matted with red algae, only to be pulled back with equal vigor. *'Rush when the waves recede, climb on the rocks when*



they hit the shore,' and follow the trail. Prem Bhai, our guide, before disappearing ahead, was our only survival plan.

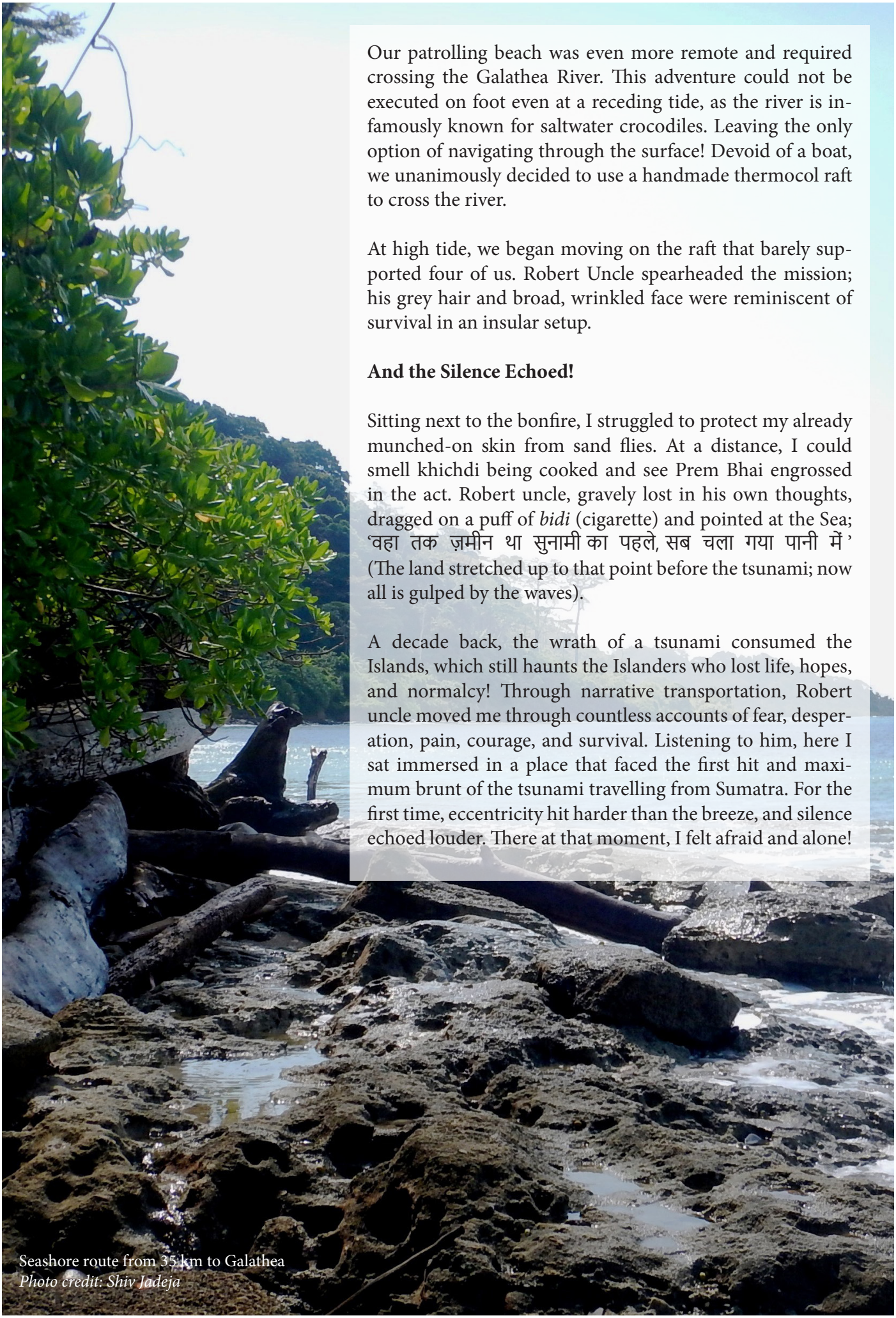
Latitude of Remoteness!

With each advancing step towards Galathea, I left behind the comfortable world of 'my own kind.'

After hours of moving by the shore, Nicobar heat played its magic! Dehydration and fatigue gradually replaced my initial enthusiasm until we heard muffled voices transmitting from a *dera* (camp) hidden inside the *Casuarina spp*. plantation.

At last, the sight of the forest campsite! A rustic setup, strong enough to support minimalists—a few utensils as a kitchen, wooden cots, and a broken hammock—largely defined the life here. Right next to the camp was a turtle hatchery, beyond which the Galathea River met the mighty sea!

The camp had four personnel, of whom Robert Uncle, a Nicobarese in his late 50s, and Kali Bhai, a Ranchi settler in his 40s, joined us for the field surveys.



Seashore route from 35 km to Galathea
Photo credit: Shiv Jadeja

Our patrolling beach was even more remote and required crossing the Galathea River. This adventure could not be executed on foot even at a receding tide, as the river is infamously known for saltwater crocodiles. Leaving the only option of navigating through the surface! Devoid of a boat, we unanimously decided to use a handmade thermocol raft to cross the river.

At high tide, we began moving on the raft that barely supported four of us. Robert Uncle spearheaded the mission; his grey hair and broad, wrinkled face were reminiscent of survival in an insular setup.

And the Silence Echoed!

Sitting next to the bonfire, I struggled to protect my already munched-on skin from sand flies. At a distance, I could smell khichdi being cooked and see Prem Bhai engrossed in the act. Robert uncle, gravely lost in his own thoughts, dragged on a puff of *bidi* (cigarette) and pointed at the Sea; 'वहा तक ज़मीन था सुनामी का पहले, सब चला गया पानी में' (The land stretched up to that point before the tsunami; now all is gulped by the waves).

A decade back, the wrath of a tsunami consumed the Islands, which still haunts the Islanders who lost life, hopes, and normalcy! Through narrative transportation, Robert uncle moved me through countless accounts of fear, desperation, pain, courage, and survival. Listening to him, here I sat immersed in a place that faced the first hit and maximum brunt of the tsunami travelling from Sumatra. For the first time, eccentricity hit harder than the breeze, and silence echoed louder. There at that moment, I felt afraid and alone!

Haven of Hope!

The tsunami had destroyed most of the nesting beaches, after which the status was not explored much! So here we were, anticipating turtles on reforming beaches. Yet hours of patrolling and no signs of turtles made me restless. Little did I know that patience was a product of experience. Although my optimistic side witnessed the sky painted with stars. And lighthouse-lit waters at a distance kept our spirits high. Then my peripheral vision caught something blinking. One, two, and three! Three flashes of torchlight meant the turtles had come!

Robert uncle pointed out towards the sea. And there she was, a giant female! And then came the second and the third! With a strong flipper force, pits were dug, and the nesting began. I, like an enthralled tiny toddler sat there. Witnessing one of the most surreal moments of my life. To realize that these giants travelled several miles, against all odds, only to be a few meters next to you was a feeling that needs a lifetime to soak in!

A leatherbackLeatherback female (*Dermochelys coriacea*) crawls out for nesting at Galathea Bay.
Photo credits: Shiv Jadeja

A field to remember- Galathea Bay, Great Nicobar
Art work- Swapnali Gole

Galathea River meets the Sea.
On the right side lies the forest camp hidden in Casuarina vegetation, while the left is the patrolling beach.
Photo credits: Shiv Jadeja

The Unvarnished Truth

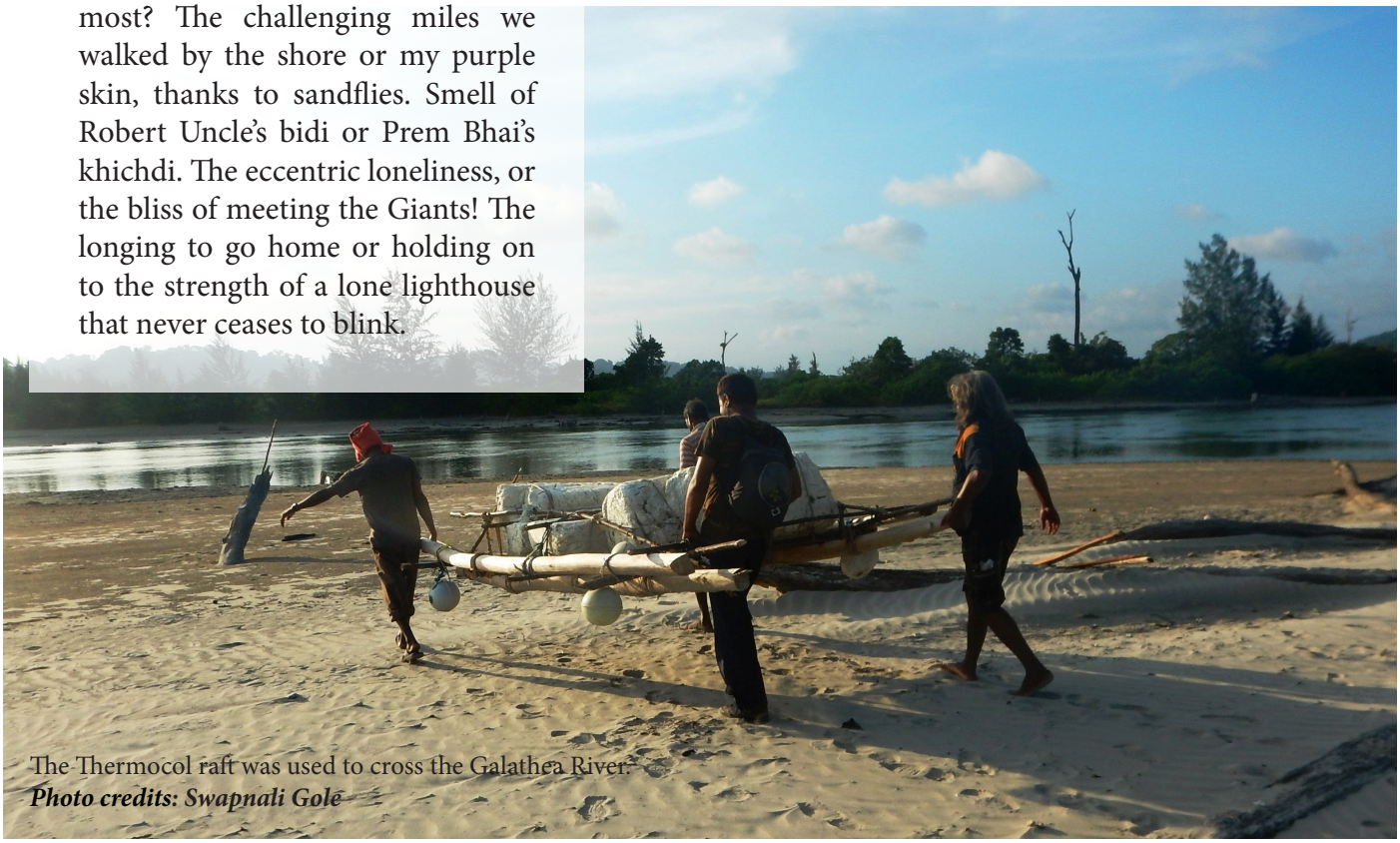
Securing her future safely in the sand, she returned back to the Sea. The others followed her into the water and disappeared, leaving a well-defined trail behind. My trance broke, and I bid adieu to them! But we were not the only ones watching. A rustling sound from the bushes and the predators revealed themselves.

Nicobari Pigs (*Sus scrofa nicobaricus*) vigorously dug up and foraged on the eggs; the leftovers were gobbled by hermit crabs in their never-ending scavenging pursuit. Robert Uncle mentioned how helpless they feel at times, given the remoteness of the Islands, limitations in resources and manpower, showcasing the harsh reality of sea turtle conservation in remote setups such as Galathea.

Reminiscing about the Quiet Retreat!

To date, when I think about this field trip, what do I remember the most? The challenging miles we walked by the shore or my purple skin, thanks to sandflies. Smell of Robert Uncle's bidi or Prem Bhai's khichdi. The eccentric loneliness, or the bliss of meeting the Giants! The longing to go home or holding on to the strength of a lone lighthouse that never ceases to blink.

Forest camp at Galathea
Photo credits: Swapnali Gole



The Thermocol raft was used to cross the Galathea River.
Photo credits: Swapnali Gole

The Lighthouse that never ceases to blink — Indira Point, the southernmost tip of the Indian Territory.
Photo credits: Swapnali Gole

I remember and relive everything.

Great Nicobar—my first field in the wilderness was an adventure that pulled me out of my cocoon. Here, silence and human emotions echoed louder than the words. The accounts of resilience and never-ending hope shaped my perspectives, both as a human and a field biologist! And the limitless sea made me see the world through a different lens!

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Swapnali Gole is *a marine researcher, National Geographic Explorer, public speaker, and science communicator. For a decade, she has been studying the marine ecosystems in the Indian waters, including intertidal communities, coastal vegetation, and megafauna. She believes in translating science into action through a collaborative, grassroots-level stakeholder approach.*

Beyond the Peaks: Journey through the Adi-Kailash sacred landscape

- Anindita Debnath

Himalaya is a mystical world. It tempts us to unveil countless layers that lie beyond its vastness. It draws people from every walk of life, including academic scholars, philosophers, writers, and so on. From explorers to scientists to monks and renunciates of all ages arrive here from all over the globe in search of meaning and some answers. The magnificence of the Himalaya is reflected by its unique biogeographic and cultural elements. The Indian Himalayan region extends from west to east across the country's northern expanse and shares international borders with Afghanistan, Pakistan, Nepal, Bhutan and China. This journey is about exploring the nature-culture linkages within the Askot-Adi Kailash-Om Parvat landscape, of the Western Himalaya, under the Pithoragarh district of Uttarakhand, India.

Dotted with sacred sites, high-altitude lakes, rivers and snow peaks, this ecologically diverse and multicultural landscape has a history that goes back thousands of years. The district of Pithoragarh finds mention in ancient scriptures like the Mahabharata, Skanda Purana, and many others, as the holy Mount Kailash and the divine lake Mansarovar in Tibet are located close to its northern boundary (Srichandan *et al.* 2021). From a strategic geopolitical perspective, this landscape is situated at the tri-junction of India, China, and Nepal. Ecologically, it is a unique converging point of biogeographic elements of the Western & Central Himalaya and the Tibetan Plateau. It is home to ancient transhumance routes used for pilgrimage (*Kailash–Mansarovar Yatra*), trade, and seasonal migration. The Askot-Adi Kailash region is of great reverence and brings together people of different faiths such as Hindus, Buddhists, Jains, and Bon. The landscape's elevation ranges from 500m to 6000m. While the majestic heights of Panchachuli (6,904 m), Adi Kailash (6,191 m), and Om Parvat (5,590 m) fascinate geologists, it was the profound stillness of the place that moved me, as though divinity itself whispered through the silence.

The landscape has a very intricate network of valleys, interspersed with beautiful hamlets connected through deep passes. It has four major valleys, namely- Gori Ganga (Johar valley), Dhauli (Darma Valley), Kuti (Vyas valley) and Dharchula, where the Kali River serves as a border between India and Nepal. There are transhumant settlements and Trans-migration in the upper reaches (above 3000m), mainly by the *Bhotiya* communities in Vyas, Darma and Johar valley. Dharchula is a major town in the landscape, an administrative hub, and just right across a bridge lies its sister city, Darchula, in Nepal. Markets thrive on both sides of the river, allowing people to cross briefly into Nepal and return easily. As I crossed the gushing river and walked back, I felt this was one of those rare places where the boundaries of different people and nations seemed to dissolve. The philosophy of *Vasudhaiva Kutumbakam* felt real. Due to its proximity to the international border, the journey towards the Adi Kailash requires an Inner Line Permit. I obtained the permit and wandered through the Darchulamarket and visited the museum dedicated to the Rung community, showcasing their vibrant culture, crafts and traditions. On the way to Darchula, I noticed road widening work is underway, and could not help but think that, while it may improve connectivity, it could also increase the delicate landscape's susceptibility to landslides and other natural disasters.

The region's only protected area is the Askot Wildlife Sanctuary, which partially falls under the Vyas valley. As the journey progressed, I was awed by the gradual transition from diverse vegetation types, ranging from Sub-tropical Sal (*Shorea robusta*) forest to several *Quercus* species, *including Quercus leucotrichophora* (Banj Oak), *Quercus semecarpifolia* (Kharsu Oak), and *Quercus floribunda* (Moru Oak), to temperate conifer and broadleaf forests. Further ahead, there were sub-alpine and alpine zones with vast meadows. The diverse characteristics of the valley provide the habitats for rare, threatened and endemic biodiversity of the Himalaya, i.e., Himalayan Musk deer (*Moschus chrysogaster*), Himalayan goral (*Naemorhedus goral*), Himalayan tahr (*Hemitragus jemlahicus*), Himalayan serow (*Capricornis thar*) below 3500 m; and blue sheep (*Pseudois nayaur*) above 3500 m. The top predators include the Snow leopard (*Panthera uncia*), the Asiatic black bear (*Ursus thibetinus*) and the Red fox (*Vulpes vulpes*) (Bhattacharya 2020). Though I saw no mammals on this trip, I often wondered—what if they had seen me instead?

Upon reaching the Kuti village, I had the opportunity to interact with the locals, and their stories revealed that life in the hills is met with numerous challenges, such as rugged terrain, harsh climatic conditions, lack of income-generating sources and many more. Most of them have small landholdings, where the crops grown include wheat, lentils, mustard, spinach, peas in winter and paddy, maize, soybeans, potatoes, rajma in summer. The landscape is blessed with natural resources, and a wide range of high-value resources are also harvested for livelihood. However, *Ophiocordyceps sinensis*, a natural resource counted among the most expensive in the world, and commonly referred to as "kida jadi" or "yartsa gunbu," contributes significantly to the region's cash inflow as the market for this resource expands in China.

Traversing through the deep forests, breathtaking peaks, and vast alpine meadows, a realization dawned upon me. It was evident that the entire landscape sustains a wide range of ecosystem services. While essential provisioning services derived from forest products, rivers, the region's livelihood and socio-economy are also dependent on natural resources. Diverse vegetation offers vital regulating services, including carbon storage & sequestration, crucial for climate change mitigation. These habitats support rich biodiversity, making them key providers of supporting services. Rich cultural services, shaped by spiritual traditions, religious faith, and a vibrant array of rituals and festivals, connect indigenous communities with the landscape. This region is comparatively less populated, as if nature itself chose to safeguard its pristine character. The Askot-Adi-Kailash Sacred Landscape is more than just a beautiful geographical area - it is a confluence of faith, ecology, trade, and resilience.

The journey continues….
And a voice whispers
Within very deep
As I sit in silence and hear, it says
"Miles to go before I sleep".

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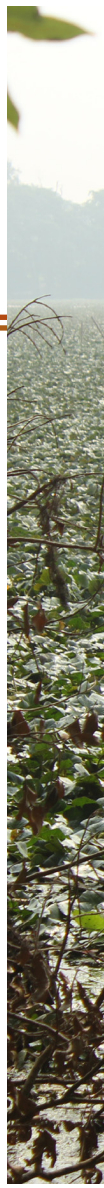
Photo credit: *Anindita Debnath*

Greylag Geese and Their Love for Foraging on Water Chestnuts: An Intertwined Story from the Upper Gangetic Plain, India

- Neelamadhab Sahu



Revan's article published in the Summer 2025 WII newsletter highlighted a unique grassland patch of hygrophilous and mesophilous grasses in the Haiderpur wetland of Uttar Pradesh. Building on his observations, I now describe how the wetland ecosystem supports local livelihoods and promotes biodiversity in the privately managed ponds surrounding Haiderpur Wetland.

As winter approaches, the Greylag Goose (*Anser anser*) migrates from its northern breeding grounds in Central Europe and Iceland, flying across the Himalayan Mountain range via the Central Asian Flyway towards the Indian subcontinent. These geese seek shelter in wetlands and marshes, typically remaining in the region until March. This period is particularly significant, as late October to November marks their arrival in the Gangetic Plain, precisely when farmers are actively harvesting water chestnuts (*Trapa natans*), known locally as *Singhara*, from their cultivation ponds.

A cloudy morning in October 2024, just after the monsoon receded, welcomed my first field visit. After observing a moderate flow of water in the mighty Ganga River, downstream of the Madhya Ganga barrage near Bijnor town, I began exploring the Haiderpur Wetland. This region is well known for being a suitable habitat for swamp deer, or wetland barasingha (*Rucervus duvaucelii duvaucelii*), and also a large congregation site for migratory waterfowl during winter. Hours were spent watching the wetland-scape and its resident bird species. Drawn by a bustle of activity at the edge of the wetland, my attention shifted to a large pond in the immediate vicinity of the Haiderpur Wetland, where hundreds of people were harvesting something in the distance. Speaking with one of the harvesters and a local Ganga Prahari, it was revealed that they were harvesting water chestnuts. The cultivation of water chestnuts in this area began after 1984, following the establishment of the Haiderpur Wetland, which was created by constructing the Madhya Ganga barrage on the Ganga River. Today, more than 2,000 bighas of private land have been cultivated with water chestnuts around the Haiderpur wetland, and harvesting takes place between September and December. Over 500 workers from more than 15 villages are engaged in this seasonal activity.

Local community harvesting water chestnuts from ponds in the immediate vicinity of the Haiderpur Wetland, Uttar Pradesh.

Local community harvesting water chestnuts from ponds in the immediate vicinity of the Haiderpur Wetland, Uttar Pradesh.

When I returned in November 2024, the cultivation ponds were bustling with water chestnut harvesting. It was also the time when migratory waterfowl—such as Gadwall (*Mareca strepera*), Tufted Duck (*Aythya fuligula*), Eurasian Wigeon (*Mareca penelope*), Common Pochard (*Aythya ferina*), Red-crested Pochard (*Netta rufina*), Cotton Pygmy Goose (*Nettapus coromandelianus*), Ferruginous Duck (*Aythya nyroca*), and Greylag Goose (*Anser anser*)—had begun arriving in the wetland. Contrasted sharply, the bird community within the cultivation ponds revealed how habitat use varied even within the same wetland complex.

Only resident waterbirds and water-associated species were sighted in the chestnut ponds, including Asian Openbill-stork (*Anastomus oscitans*), Glossy Ibis (*Plegadis falcinellus*), several species of Egrets (*Egretta* spp.), White-throated Kingfisher (*Halcyon smyrnensis*), Grey-headed Swamphen (*Porphyrio poliocephalus*), Pheasant-tailed Jacana (*Hydrophasianus chirurgus*), Bronze-winged Jacana (*Metopidius indicus*), Black-winged Stilt (*Himantopus himantopus*), and various wagtails (*Motacilla* spp.). Meanwhile, large flocks of Greylag Geese and Lesser Whistling-ducks (*Dendrocygna javanica*) were seen congregating on a sandbar of the Ganga River, farther downstream of the Madhya Ganga Barrage.

By early December, the harvesting activity in chestnut ponds around the Haiderpur Wetland had gradually declined, with only 40–50 people engaged in the harvesting compared to nearly 500 during October and November. With reduced human presence, the Greylag Geese took full advantage of the minimal disturbance and congregated in thousands to forage on water chestnuts. The numbers were overwhelming, and counting the individuals—both those feeding in the ponds and those flying overhead—became a herculean task. After careful observations, we estimated that the total number of Greylag Geese had surpassed 3,000 in that single large pond of approximately 125 hectares. This included over 2,500 individuals foraging on the chestnut and approximately 500 in flight, producing a distinctive three-syllable call. The two hours spent observing this massive congregation of greylag geese cruising effortlessly across chestnut-laden water transformed the pond into a live display of motion and sound, which made the day memorable forever.

This seasonal pattern highlights how Haiderpur wetland functions as a communal platform, where people, water chestnut cultivation, and migratory waterfowl interact in a dynamic balance. Notably, some cultivators are positive towards Greylag Geese foraging on the chestnuts, while most restrict their access during the peak harvest to protect the fruits. Once the harvest is completed by the first week of December, the remaining fruits are left for the geese. Over the next 15–20 days, the frenzied foraging clears the chestnut layer from the water surface, transforming the cultivated area into a suitable habitat for other waterfowl, such as Gadwall, Northern Pintail, Northern Shoveler, Cotton Pygmy Goose, and Ferruginous Duck. The co-occurrence of water chestnut farming and large congregations of Greylag Geese highlights the global conservation importance of this landscape.

A close-up of greylag geese cruising gracefully through a pond cultivated with water chestnuts in the immediate vicinity of the Haiderpur Wetland, Uttar Pradesh.

A large group of greylag geese foraging in a pond filled with water chestnuts in the immediate vicinity of the Haiderpur Wetland, Uttar Pradesh.

Water chestnut cultivation provides both food security and seasonal income for local residents, while these ecosystems offer vital sustenance and refuge for winter migrants and resident water and water-associated birds. Considering the importance of water chestnut for geese, cultivators are encouraged to use eco-friendly fertilizers, ensuring the health of both waterbirds and people. Haiderpur Wetland, recognized as a Ramsar Site as well as protected under the jurisdiction of Hastinapur Wildlife Sanctuary, exemplifies that wetlands are not merely crucial habitats for wildlife but also a source of vital resources for people. This emphasizes the essential balance between conservation efforts and human well-being, which is necessary for a sustainable future.

Acknowledgments

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Why do climbers choose to climb?

- Satyam Saumya

A few days ago, while walking around the WII campus and looking at Mixed Sal Forest, I found myself wondering: "*Why do climbers choose to climb?*" As it turns out, I am not the first to be fascinated by this question. Charles Darwin himself, in 1875, was struck by these neglected yet remarkable plants. Climbers may be among the least collected plant groups, but they are critical to forest landscapes, especially in tropical ecosystems. Climbers germinate from the soil and then grow upward, anchoring themselves to trees or other objects using specialized organs. Darwin described this exploratory growth as circumnutation- a slow, circular motion of the shoot tip as it searches for support. Anyone who has watched time-lapse videos of germinating seedlings will recognize this restless swaying motion. Circumnutation is inherent to all plants, but for climbers it becomes a way of life.

The diversity of climbing mechanisms is striking. Australian morphologist Adrian Bell classified them into root climbers, hook climbers, tendril climbers, leaf bearers, and twiners. Each developed different evolutionary strategies to the same challenge: reaching light without building a massive trunk. Darwin observed that climbers evolved to maximize leaf exposure efficiently, bypassing the heavy investment in woody tissue required by trees. This ability to explore new roles- canopies above, while still thriving on the forest floor below helped climbing plants diversify.

Twinning- Darwin described it as a "continuous self-bowing of the whole shoot, successively directed to all points of the compass. Twining plants are a stunning blend of biomechanics, cellular dynamics, and evolutionary elegance.

Leaf bearer- Darwin classified certain climbing plants as leaf bearers, which exhibit faster circumnutation using sensitive petioles (the stalks attaching leaves to stems), bending and clasping supports upon contact. Over time, these petioles can become woody and develop internal structures similar to stems.

Tendrils- Tendrils are slender, thread-like, irritable organs. They can originate from stems, leaves, or flower peduncles and exhibit movements like circumnutation, contact coiling, and free coiling.

Hook climber- As Darwin (1875) noted, these climbers lack spontaneous revolving movements, unlike twining or tendril-bearing plants. These plants climb using recurved spines, hooks, or thorns. Hook climbers may seem less sophisticated than tendril-bearers or root-climbers, but their mechanical ingenuity and adaptive resilience make them a vital part of the climbing plant repertoire.

Root climbers- These clinging climbers showcase a brilliant blend of biomechanics and biochemistry, turning simple contact into a lasting grip. Uses adventitious roots, modified tendrils that secrete adhesive substances.

A hook climber ***(Photo credit- Revan Y Chaudhari)***

Phylogenetic evidence confirms that climbing evolved multiple times across angiosperms: in basal groups such as Piperales and Austrobaileyales, in monocots like Dioscoreaceae and Arecaceae, and in both rosids and asterids. In short, climbers have independent origins in many lineages, pointing towards a case of convergent evolution. Monocots lacking secondary growth and true wood might seem unlikely climbers. Yet they include some of the most prolific groups: *Dioscorea*, *Calamus*, *Philodendron*, and *Smilax*. Their success lies in structural ingenuity. Scattered vascular bundles act like flexible cables within soft parenchyma tissue; limited stem thickening and early internode elongation keep stems slender and fast-growing; and thick leaf sheaths in palms provide external stiffness. These adaptations together mimic the cable-like mechanics of woody lianas, enabling monocots to climb effectively without the need for wood.

Why climb at all? Beyond Darwin's understanding, biomechanics and physiology reveal further answers. Many climbers reduce stem stiffness by limiting secondary and radial growth, making them more pliable. Others evolve multi-stranded, cable-like stems to avoid snapping. Hydraulically, lianas are "overachievers," with large vessels that transport water rapidly but are vulnerable to embolism. Some herbaceous climbers counter this with root pressure that restores flow. These traits also shape climber distribution. Large vessels freeze easily, which is why most climbers are tropical in nature. Temperate exceptions like *Vitis* survive by draining their vessels before winter. Ecological studies further show that twiners dominate older forests with tall supports, while tendril bearers prefer younger forests with smaller trees. This can be interpreted as an indicator of the successional stages of the forest. Woody climbers, in particular, are too often seen as indicators of increasing forest disturbance, as they tend to grow in abundance across tropical ecosystems.

Climbers embody efficiency. Instead of investing in trunks, they channel energy into leaves, flowers, and fruits, boosting photosynthesis and reproduction. They fill canopy gaps when trees fall, knit the forest ceiling together, alter habitats for animals, create the forest floor and stabilize the microclimate. Unlike parasites, climbers anchor in the soil with their own roots. They form relationships with trees, whether it's just a competitive or exploitative leaning, or both, is still questionable. In this way, climbers act as both opportunists and stabilizers, reminding us that in nature, survival is not only about standing tall alone, but also about finding such creative ways to rise.

Ficus hederacea

A *Clematis* spp. using patioles to climb

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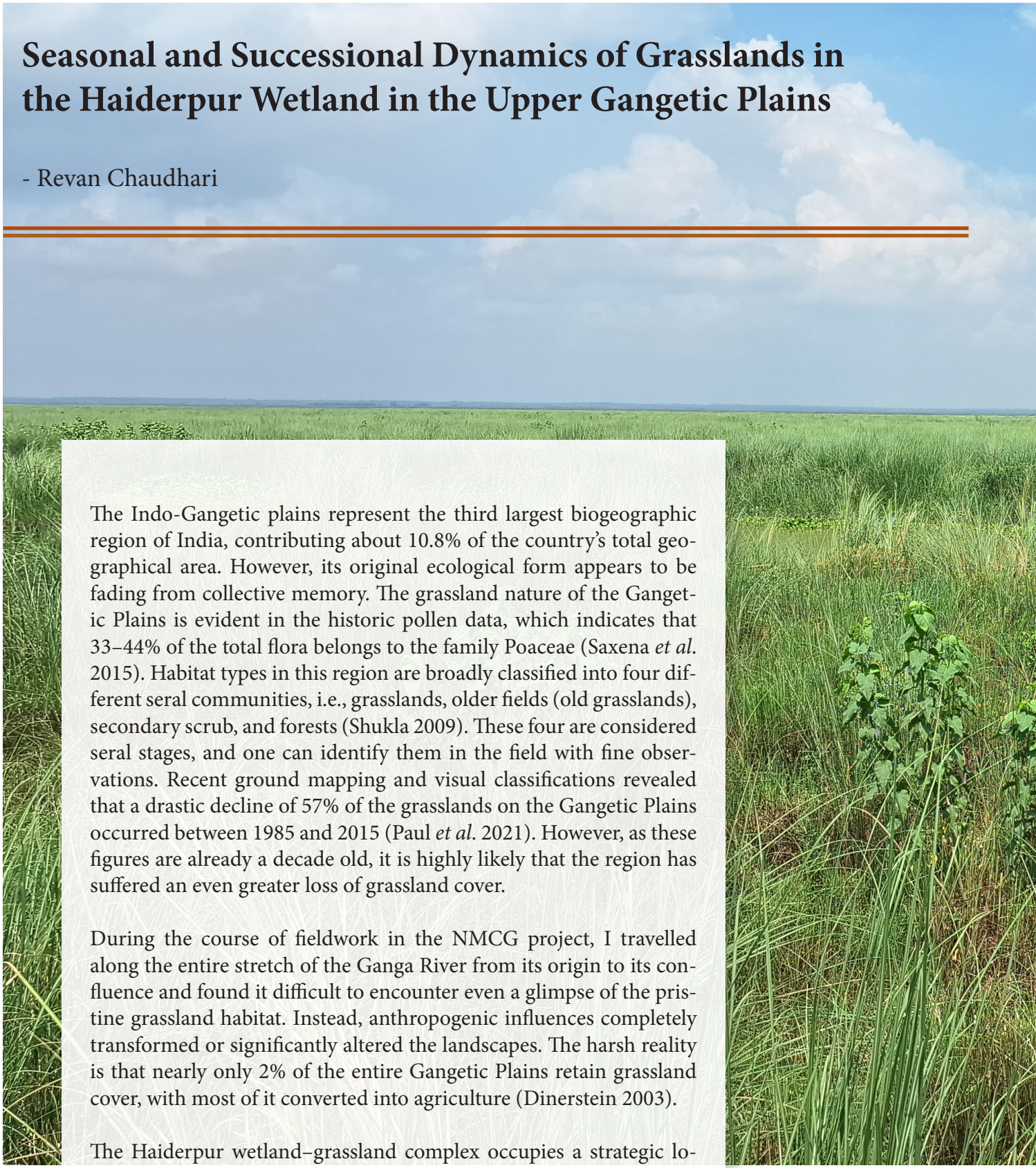
Seasonal and Successional Dynamics of Grasslands in the Haiderpur Wetland in the Upper Gangetic Plains

- Revan Chaudhari



The Indo-Gangetic plains represent the third largest biogeographic region of India, contributing about 10.8% of the country's total geographical area. However, its original ecological form appears to be fading from collective memory. The grassland nature of the Gangetic Plains is evident in the historic pollen data, which indicates that 33–44% of the total flora belongs to the family Poaceae (Saxena *et al.* 2015). Habitat types in this region are broadly classified into four different seral communities, i.e., grasslands, older fields (old grasslands), secondary scrub, and forests (Shukla 2009). These four are considered seral stages, and one can identify them in the field with fine observations. Recent ground mapping and visual classifications revealed that a drastic decline of 57% of the grasslands on the Gangetic Plains occurred between 1985 and 2015 (Paul *et al.* 2021). However, as these figures are already a decade old, it is highly likely that the region has suffered an even greater loss of grassland cover.

During the course of fieldwork in the NMCG project, I travelled along the entire stretch of the Ganga River from its origin to its confluence and found it difficult to encounter even a glimpse of the pristine grassland habitat. Instead, anthropogenic influences completely transformed or significantly altered the landscapes. The harsh reality is that nearly only 2% of the entire Gangetic Plains retain grassland cover, with most of it converted into agriculture (Dinerstein 2003).

The Haiderpur wetland–grassland complex occupies a strategic location where remnants of the original amphibious grasslands (*Saccharum–Imperata–Phragmites* type) can still be found. This unique habitat owes its existence largely to the construction of the Madhya Ganga Barrage, which created waterlogged conditions and deposited fresh alluvium, allowing grasses to thrive since 1984. After decades, the site was finally recognized as the 47th Ramsar site of India in 2021.

Grasslands of Haiderpur wetland

However, I am not claiming that grassland thrived in this region only after 1984; rather, reliable records are available only from that period onward. To explore the earlier landscape, however, one must turn to historical texts such as the *Adiparva* of the *Mahabharata*, which describe the types of forests that once existed in the vast Hastinapura kingdom, of which today's Haiderpur formed an inseparable part.

During 2024–25, I visited the wetland 11 times, and each visit revealed a new chapter in its successional dynamics. The sampling consistently showed shifts in grass communities, particularly among short grasses, with species composition changing in response to seasonal variations and water availability. Many of these species also serve as direct indicators of specific soil and water quality conditions. The short grasslands of Haiderpur are semi-permanent in nature and can survive prolonged submerged periods of rainy and winter seasons. However, in the transitional phase between winter and summer, the underground rhizomes of *Eleocharis*, *Bolboschoenus*, *Hemarthria*, *Carex*, and *Cyperus* begin to sprout and grow underwater, racing upward to reach the surface where they can access sunlight and air. Such a phenomenon was very new to me, and it took me days to understand what was happening.

Semi-aquatic plants exhibit underwater growth, growing up to 2–4 feet tall or even longer to reach the water's surface. It was mesmerizing to observe uniform grass/sedge growth spread across acres of crystal-clear water on a boat ride. As soon as summer's heat reaches its peak, the surrounding land turns dry and thirsty, and Haiderpur comes alive with lush green growth. At other times of the year, when we can see heavy flowering of *Nymphaea* lilies, those very areas are overtaken by dense grasses of *Bolboschoenus* and *Eleocharis*.

This dense growth lasts only about a month, and it emerges during the driest time of the year. To achieve this, these species endure immense physiological stress just to secure enough time to reproduce, re-establish, and revive themselves. This phenomenon is part of ecological succession, which helps preserve the natural character of the landscape, with water and fire serving as the primary driving force. Think about it: how do these small grasses manage to establish themselves in a lotic system, where constant water flow brings new deposits every minute and washes away existing substrates?

Seasonal changes in semi permanent grasslands due to water inundation in Haiderpur wetland.

Underwater growth of grasses struggling to reach water surface.

Well established short grassland in shallow water.

Complete change in the landscape during the monsoon season.

Annual successional dynamics of short grasslands at Haiderpur wetland

This cyclical process repeats multiple times, gradually leading to the next stage of succession towards more stable, permanent grasslands characterized by multiple layers of vegetation. The ever-changing rivers of North India have created these interesting and complicated patterns of succession, which are mostly caused by water and fire. Yet, to truly experience them, one must be at the right place at the right time. Such grasslands once extended widely across the plains, but anthropogenic pressures and pseudo-successional disturbances have already caused significant damage. What remains now are only very confined patches, and unless preserved, these ecosystems will soon exist only in books, remembered as something that once occurred. As a Ramsar site, the point of attraction in Haiderpur is mainly its diverse avifauna, but beyond that, it has a lot more to express and share. As a student of botany, I always try to interact with these wetlands in a botanical language, but there are many more aspects yet to capture the readers' attention. Throughout my fieldwork, I am convinced that every wetland has its uniqueness, but only when it is explored in the right way.

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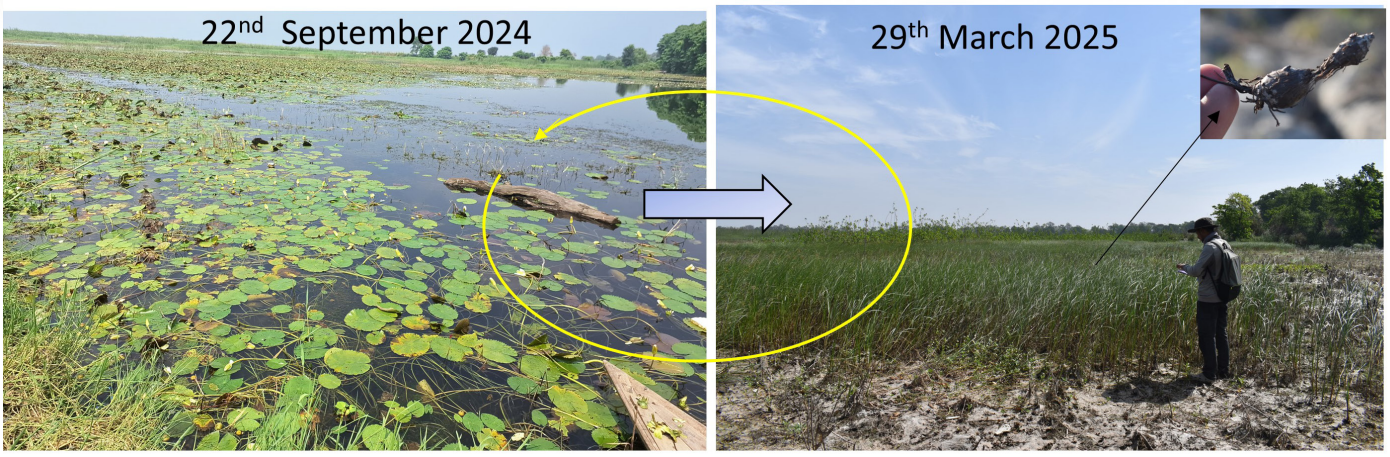

Beautiful marshy habitat during the winter season

The same location converted into grasslands during the summer

Annual successional dynamics within marshy (wetland) habitats and short grasslands at Haiderpur wetland

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Roots in Rock, Blooms in Air

- Monal Rajendra Jadhav

Primula sp.

Imagine a plant clinging to the face of a cliff, its roots probing invisible cracks, drawing life from drops of dew and pockets of dust. Where soil is absent, and the sun or monsoon rains beat mercilessly against stone, these plants not only survive, they flourish. Extreme environmental factors such as high temperature, cold, alkalinity, drought, and rocky substrates exert a strong influence on plant growth and have driven the evolution of specialized adaptive traits. Among these diverse adaptive strategies, lithophytism stands out as a striking example of survival under extreme conditions. Lithophytes, often referred to as "rock plants," colonize exposed rock surfaces and narrow crevices, forming a distinct ecological niche where soil is minimal or entirely absent.

In India, they exhibit remarkable variation across different landscapes, shaped by differences in climate, altitude, geology, moisture availability, and rock composition. Their success in such inhospitable environments stems from a combination of structural, physiological, and symbiotic adaptations. They are most commonly represented by herbs, grasses, succulents, orchids, ferns, and mosses. Morphologically, lithophytes develop specialized root systems that anchor them firmly to hard substrates while exploring microscopic fissures to access trapped organic matter and moisture. Equally critical are their ecological interactions, particularly symbiotic associations with mycorrhizal fungi, which enhances their nutrient uptake in nutrient-poor settings. Moreover, lithophytes are highly efficient in absorbing water from rainfall, dew, and atmospheric humidity, with many storing it in succulent tissues to withstand extended dry periods. The nature of the rock itself plays a decisive role in shaping this flora. In the Himalayas and the Shivaliks, the geological diversity from calcium-rich limestones to sandstone, quartzite, and slate provides distinct niches for plant colonization. Calcium-rich rocks in particular favour species like *Bergenia ciliata*, while sandy or fractured rocks allow mosses and ferns to establish, creating microhabitats for orchids and smaller herbs.

During my field explorations in the Mussoorie range and adjoining Shivalik foothills, I encountered a remarkable gradient of lithophytic plants. Starting with common pioneer families such as Asteraceae, Orchidaceae, Poaceae, Cyperaceae, and Saxifragaceae which dominated the rocky slopes, their members were quick to exploit cracks and shallow soils. Succulents and semi-succulent species followed, including *Bergenia ciliata*, its thick roots hold it firmly on rocks, while its fleshy leaves save water for survival. At higher altitudes, I noticed how these plants grew smaller and more compact, their form shaped by the harsher climate. Equally striking was *Didymocarpus pedicellatus*, a stemless perennial that flourishes on moist rocks during the monsoon, generally between 2,500 and 5,500 ft above mean sea level. Its clusters of reddish-purple flowers stood out vividly against the greenery, making it one of the most captivating species of its genus. On shaded, moist slopes, *Begonia picta* thrived, its pink blooms lighting up the darker corners of cliffs. Interestingly, it is monoecious, bearing both male and female flowers on the same plant, a strategy ensuring reproduction in isolated habitats.

Along seepage zones, *Remusatia* and *Colocasia* species spread their broad leaves, while drier, sun-baked outcrops supported Euphorbia royleana, a cactus-like shrub with succulent stems perfectly adapted to arid rock faces. These contrasting life forms such as the water-loving *Colocasia* and drought-enduring euphorbias illustrated the extremes of lithophytic adaptation. Smaller herbs and annuals brought additional colour and texture. *Commelina paludosa* appeared in moist crevices, its delicate blue blooms hiding under canopies. *Platystemma violoides*, grew with a single leaf on a slender stalk, ending in a bright purple flower that seemed to spring out of the rock crevices. While *Erigeron* species brightened exposed ledges with daisy-like flowers. Damp crevices also supported *Rumex* and *Viola indica* distinguished by their relatively large fragrant violet-blue flowers scattered over slopes, while in cooler niches, bright yellow, *Primula* species were particularly striking, their bright flowers clustering in shaded crevices and hinting at the influence of alpine vegetation at higher elevations.

Didymocarpus pedicellatus

Epipactis gigantea

The rocky slopes were also rich in pteridophytes and fern allies. *Adiantum species*, with their graceful fronds, were especially abundant on shaded, moist rock faces. By trapping organic matter and retaining water, they not only colonized difficult surfaces but also created microsites for other plants. Another fascinating fern ally was *Selaginella bryopteris*, popularly known as the "resurrection plant." It survives extreme desiccation by curling up during dry spells, only to revive dramatically with the return of moisture. Locally revered as Sanjeevani, this species is an iconic example of desiccation tolerance. The monsoon season revealed the true grandeur of lithophytes, with moss-covered niches bursting into colour. Orchids, in particular, stole the show. *Crepidium acuminatum* (Jeevak), a plant of the famed Ayurvedic *Ashtavarga*, grew with fleshy leaves and subtle greenish-yellow blooms. *Epipactis gigantea*, the stream orchid, rooted along wet rock faces, its reddish flowers brightening seepage slopes while stabilizing fragile soils. During peak rains, delicate *Habenaria* species unfurled their spurred flowers, uniquely adapted for moth pollination, painting the cliffs with seasonal beauty.

Among the Family Apocynaceae, *Ceropegia macrantha* stood out as an especially fascinating lithophyte. Found in the Shivalik foothills, showing its ability to thrive across varied rocky landscapes. With its trailing stems and lantern-shaped flowers, it is instantly recognizable, while its climbing habit reflects the search for light and support in cracks of stone. Its presence points to moist, shaded microhabitats where rock fissures provide just enough anchorage and organic matter for survival. The plant's unusual floral structure, which temporarily traps pollinators, speaks of the intricate ecological strategies lithophytes employ in harsh environments. Last but not least, this rare species adds to the unique character of the region's rocky flora.

Taken together, these plants illustrated a spectrum of strategies: succulents like *Bergenia* and *Begonia* conserving water, ephemeral herbs like *Didymocarpus* and *Commelina* exploiting brief moisture, ferns and mosses preparing ground for orchids, and shrubs like *Euphorbia* stabilizing slopes. Lithophytes are not mere survivors of adversity, they are pioneers and architects of resilience, shaping microhabitats and nurturing biodiversity where life seems least likely to persist. Lithophytes remind us that life thrives not only in abundance but also in defiance of scarcity. Their persistence offers both an ecological and philosophical lesson: that even on bare rock, beauty and endurance can coexist.

Ceropegia macrantha

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Ms. Monal Rajendra Jadhav *is currently working as Project Assistant in NMCG-WII. Drawing from field explorations in the Mussoorie range and Shivalik foothills, she describes a variety of lithophytic species herbs, succulents, orchids, ferns, mosses, and shrubs and highlights their unique roles in colonizing rocks, stabilizing slopes, creating microhabitats, and supporting biodiversity.*

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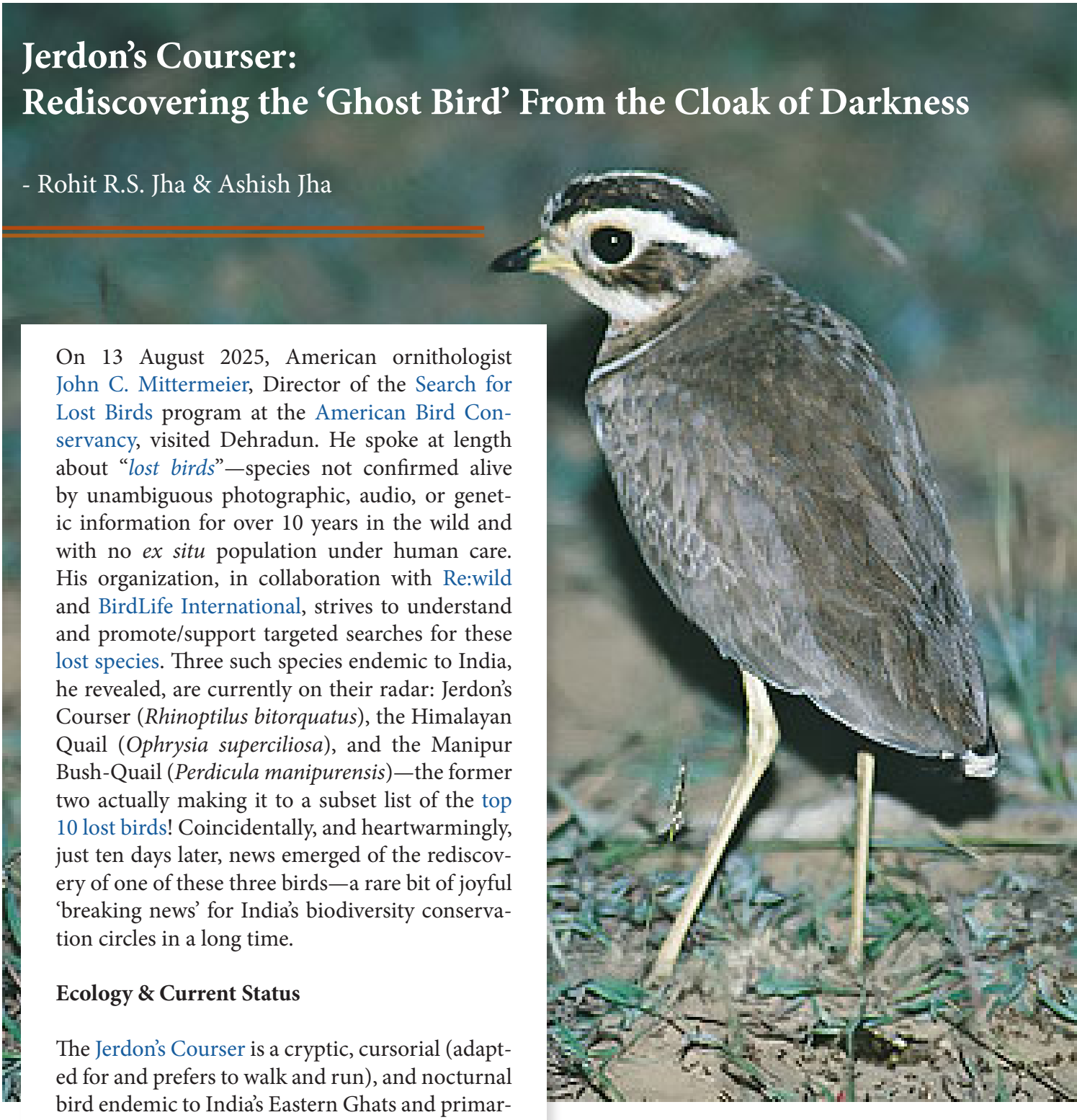
Jerdon's Courser: Rediscovering the 'Ghost Bird' From the Cloak of Darkness

- Rohit R.S. Jha & Ashish Jha

On 13 August 2025, American ornithologist John C. Mittermeier, Director of the Search for Lost Birds program at the American Bird Conservancy, visited Dehradun. He spoke at length about "*lost birds*"—species not confirmed alive by unambiguous photographic, audio, or genetic information for over 10 years in the wild and with no *ex situ* population under human care. His organization, in collaboration with Re:wild and BirdLife International, strives to understand and promote/support targeted searches for these lost species. Three such species endemic to India, he revealed, are currently on their radar: Jerdon's Courser (*Rhinoptilus bitorquatus*), the Himalayan Quail (*Ophrysia superciliosa*), and the Manipur Bush-Quail (*Perdicula manipurensis*)—the former two actually making it to a subset list of the top 10 lost birds! Coincidentally, and heartwarmingly, just ten days later, news emerged of the rediscovery of one of these three birds—a rare bit of joyful 'breaking news' for India's biodiversity conservation circles in a long time.

Ecology & Current Status

The Jerdon's Courser is a cryptic, cursorial (adapted for and prefers to walk and run), and nocturnal bird endemic to India's Eastern Ghats and primarily known from the Sri Lankamalleswara Wildlife Sanctuary in Andhra Pradesh. A member of the order Charadriiformes (family Glareolidae: pratincoles and coursers), the bird's appearance is characterized by its long legs, large eyes, two brown breast bands, broad buff supercilium, orange-chestnut throat patch, diagnostic white wing patches—visible during its infrequent flights—and cryptic brown plumage, as it navigates sparse scrub forest at dusk and by night, feeding presumably on insects, though its diet and nesting remain largely unknown.



One of the rare photographs of a Jerdon's Courser in the wild
(Image: Simon Cook/BirdLife International)

Listed as Critically Endangered on the IUCN Red List, current estimates suggest a perilously small population, possibly ranging between 50 and 249 mature individuals only, and threatened by habitat loss/degradation, agricultural expansion, and infrastructure projects.

From Discovery to Rediscovery—and Now Beyond

First described by the well-known Imperial surgeon-naturalist Thomas C. Jerdon in 1848 from the Pennar River valley, the bird disappeared from records (after 1900) for over 80 years. Despite targeted efforts in the 1970s, it was dramatically rediscovered only in 1986 near Reddipalli village, YSR Kadapa district of Andhra Pradesh, by Aitanna (a former hunter-turned-forest guard), later verified by Bharat Bhushan of the Bombay Natural History Society. That rediscovery prompted the establishment of the Sri Lankamalleswara Wildlife Sanctuary (SLWS) in 1998, covering an area of 464 sq. km, to safeguard its known habitat. Since then, however, and except for occasional detections—mainly via camera traps or sand tracking—in and around this Sanctuary, the bird vanished again by the early 2000s, with the last verifiable record dating to 2004, while the last confirmed detection from anywhere dates to 2008.

Why So Elusive?

Several factors conspire to hide the Courser from view: its nocturnal habits, shy nature, subdued and well-camouflaged plumage, and its preference for a specific kind of habitat—sparse, thorny and non-thorny scrub forest and bushes, interspersed with patches of bare ground, in gently undulating, rocky foothills. All these make direct sightings extremely difficult. Furthermore, to the untrained observer and casual birdwatcher, it could be visually confused with the more common Yellow-wattled Lapwing (especially in flight), while its call was confused for a very long time with that of the Great Thick-knee. Even intensive survey efforts have borne limited success. For instance, deploying eight camera traps for two hectares would require more than 458 nights on average (i.e., more than a year!) to reasonably confirm absence. Its call consists of a short series of two-noted whistles, described as "*tuick-tuoo*" repeated 2 to 16 times, typically heard 45-50 minutes after sunset.

Citizen Science in the Spotlight

Here's where citizen birders made a difference. On 24 August 2025, a birding party led by Harish Thangaraj, along with Shashank Dalvi, Adesh Shivkar, Ronith Urs, and Pranav, recorded the Courser's call outside the Sanctuary for the first time—more than 125 years since documentation beyond the 3×4 km patch of SLWS. Their months of careful preparations, site mapping, and nocturnal fieldwork spotlight how citizen-led initiatives—when rigorous and collaborative—can extend scientific reach. Harish Thangaraj's systematic approach included an exhaustive literature review of Bharat Bhushan's PhD thesis, analysis of historical eBird data, consultation with experts like P. Jeganathan and Praveen Jayadevan, and crucially, recognition that suitable habitat extended far beyond the traditional search areas. The team's success came from questioning established assumptions and applying an "*aggressive search strategy*" that combined daytime habitat scouting with intensive nighttime acoustic monitoring.

What Comes Next?

- **For the birding and research community:** The rediscovery is sure to attract birders/photographers from various corners of the country, not all of whom may be aware or concerned about ethical birdwatching. This then demands that experienced birdwatchers pass on their knowledge and lead by example by carefully adhering to developed ethical birding standards alongside compliance with applicable forest and wildlife laws. Harish's team has prudently withheld specific location details of the rediscovery while exploring organised approaches for habitat protection and identifying more sustainable population sites. The larger community now needs to act with caution.

- Avoid disturbing habitat or excessive/unnecessary call playback while encouraging regulated surveys in association with the knowledge of local authorities.

- Limit group sizes in the Courser's sensitive habitats, and always prioritize bird welfare over personal gratification or the rush to obtain that elusive photograph.

For conservationists and policymakers:

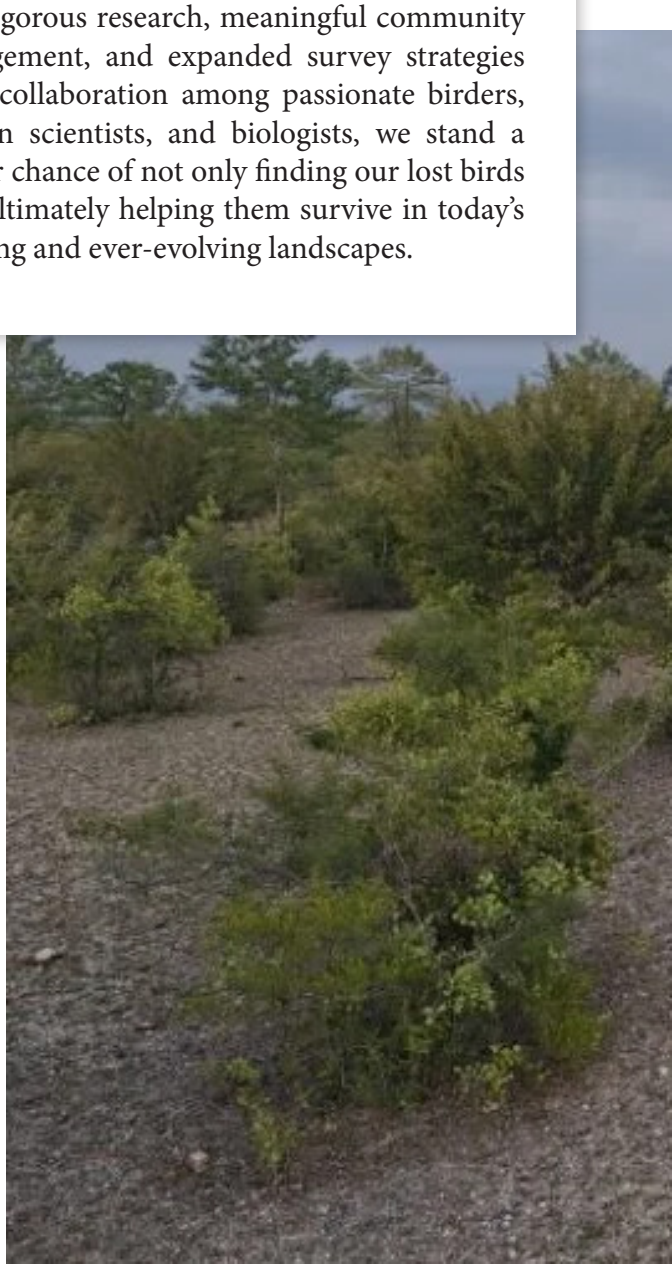
- Expand acoustic and camera-trap surveys in scrub habitats beyond SLWS. The promising habitats in Prakasam, Nellore, and adjacent districts deserve priority based on remote-sensing and modeling studies.

- Strengthen local awareness, incentivize participatory monitoring, and integrate the findings into a comprehensive landscape-level conservation strategy that includes advancing research, habitat protection, and adaptive management.

Hope Lives On!

This rediscovery, though auditory, kindles hope. It challenges the static perception that the Jerdon's Courser exists only within the Sanctuary and highlights the power of citizen science to reveal the hidden footprints of vanishing species. Who knows, somewhere in the hilly slopes of Uttarakhand, the enigmatic Himalayan Quail – not seen since 1876—still lingers, slipping cautiously through the bushes, wanting to be seen only by the most tenacious and persistent admirer!

In these relatively bleak times for biodiversity conservation, the Jerdon Courser's rediscovery after 17 years and range expansion (if we could call it that) offer important lessons. By combining and implementing careful field ethics, rigorous research, meaningful community engagement, and expanded survey strategies with collaboration among passionate birders, citizen scientists, and biologists, we stand a better chance of not only finding our lost birds but ultimately helping them survive in today's shifting and ever-evolving landscapes.



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Ashish Jha *is Scientist-C at WII. He did his PhD on the southern India endemic and globally threatened Yellow-throated Bulbul (Pycnonotus xantholaemus). He is interested in avian conservation using a multi-pronged approach, including genetics, long-term monitoring, field-based natural history studies, and community outreach.*

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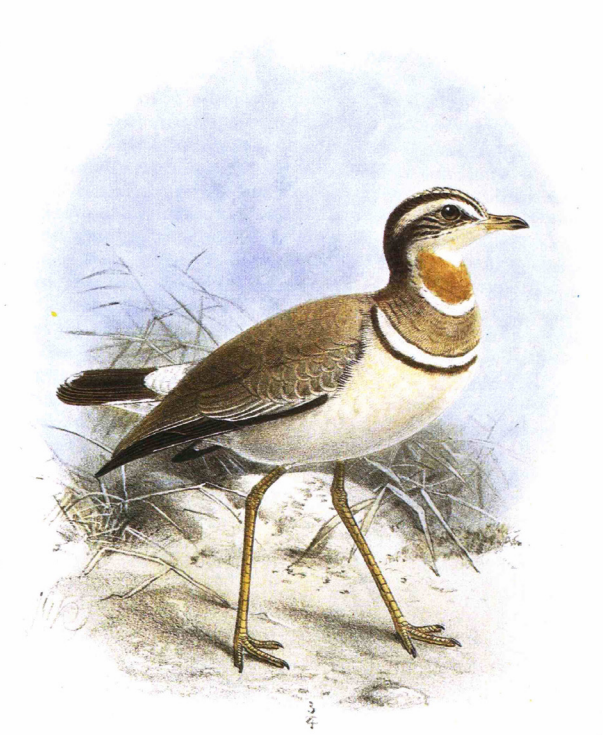
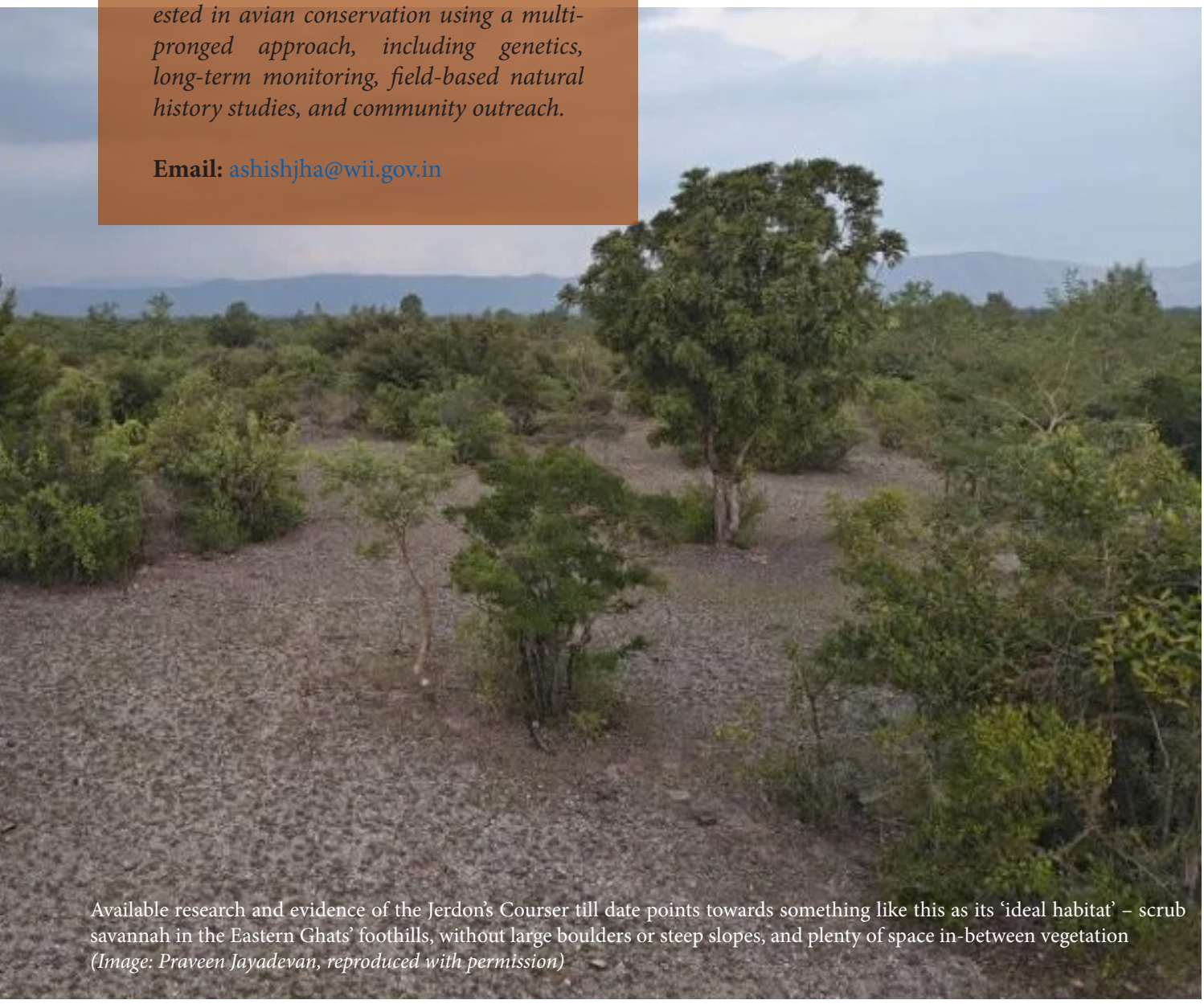


A painting of the bird by the Dutch artist J.G. Keulemans which appeared as Plate 13 in R.B. Sharpe's 1888 book '*The Birds of Prey*'



Available research and evidence of the Jerdon's Courser till date points towards something like this as its 'ideal habitat' – scrub savannah in the Eastern Ghats' foothills, without large boulders or steep slopes, and plenty of space in-between vegetation *(Image: Praveen Jayadevan, reproduced with permission)*

100 Jalmala Samvaads: A Century of Conservation of Water Wisdom

- Kumari Babli

We have established the 100th Jalmala Samvaad this year, reaching a remarkable milestone at Government Girls' College, Sonbhadra, Uttar Pradesh. Jalmala Samvaad is a form of knowledge corner set up in schools, either on walls, corridors, or classrooms, where students gain continuous exposure to the River Ganga and its biodiversity through panels on species like the Gangetic Dolphin, Gharial, Otter, turtles, fish, and riverine birds, along with information on their IUCN status, threats, and solutions. Unlike one-time sessions, these corners ensure lasting learning and inspire students to become guardians of the rivers. So far, we have sensitized more than 500 schools, across nine states of the Ganga Basin including Uttar Pradesh, Uttarakhand, Haryana, Bihar, Madhya Pradesh, Jharkhand, West Bengal, Himachal Pradesh, and Chhattisgarh, as well as districts along tributaries such as the Yamuna, Gomti, Gandak, Ramganga, Alaknanda, Chambal, Damodar, Rupnarayan, Ajay, Ghaghra, and Son. With this century mark, Jalmala Samvaad continues to weave a powerful chain of awareness, nurturing a new generation that carries forward the responsibility of protecting our rivers and biodiversity. Every Jalmala Samvaad built so far represents a step toward weaving a long-lasting chain of awareness, one that nurtures a new generation empowered with knowledge, compassion, and responsibility to protect our rivers, biodiversity, and ultimately, our shared future. We also include wall paintings in Jalmala Samvaad, representing species of the Ganga river basin. These vibrant, lively murals serve as constant visual reminders of the river's rich biodiversity. The paintings spark curiosity, make learning engaging, and help students emotionally connect with nature, ensuring that the conservation messages stay etched in their memories for a longer time.

Each Jalmala Samvaad established to date marks a step towards connecting communities under the umbrella of conservation and awareness, a way forward that builds a new generation of empowered communities, enlightened with a sense of purpose and responsibility towards our sentient rivers, thriving on our mutual coexistence.

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Kumari Babli *is a Project Assistant in the Nature Interpretation and Education Component. 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.*

79th Independence Day Celebration
15th August, 2025

India's 79th Independence Day was celebrated in the Wildlife Institute of India campus on 15 August, 2025. Dr. G. S. Bhardwaj, Director, WII, hoisted the national flag. He addressed the gathering of faculty members, officers, staff, researchers and trainees of the Institute. He informed on the major steps taken by the Institute in the recent past and also appreciated the efforts of all employees in the Institute. During the occasion, Director, WIII inaugurated the C2C Harmony Classroom and upgraded Indoor Sports Complex, 'Falcon' at WII.

Training for One-Day Behavioural Training Session of Rashtriya Karmayogi Jan Seva Programme at Wildlife Institute of India

"Behavioural training session of Rashtriya Karmayogi Jan Seva Programme at WII was carried out on four different days 13th, 18th, 25th and 28th August 2025"

OUR DOLPHIN – OUR HERITAGE:
National Museum of Natural History

Ministry of Environment, Forest and Climate Change, New Delhi

– Naaz Rizvi, Dr. C. R. Magesh, Shovana Roy

In June 2025, under Project Dolphin, the Ministry of Environment, Forest and Climate Change, Government of India, launched a nationwide awareness and outreach campaign on dolphin conservation. The National Museum of Natural History (NMNH), New Delhi was entrusted with the responsibility of spearheading this initiative across the country, focusing on both river and marine dolphins. The primary objective of the campaign was to strengthen biodiversity knowledge, sensitise communities about dolphins, and encourage students to adopt sustainable lifestyles in line with the vision of Mission LiFE.

To achieve this, NMNH designed and implemented a structured programme involving schools, colleges, and educational institutions nationwide. The Wildlife Institute of India, Dehradun, supported the campaign by providing educational resources and dolphin documentaries. At the outset, communications were sent to all central and state education boards to mobilise institutions for maximum participation. A central database was created to collect and manage reports from across India. A multilingual Dolphin Conservation Pledge was also prepared, ensuring inclusivity and outreach in diverse regions.

The event protocol suggested a wide range of activities, including:

- Dolphin Pledge Ceremonies in large gatherings
- Screening of Dolphin Documentaries in classrooms or auditoriums
- Awareness Rallies and Street Plays on dolphin conservation
- Field Visits to nearby dolphin habitats
- Painting Competitions for students

Institutions were instructed to document the events through photographs and videos, and submit their best ten entries to NMNH, Delhi, for further evaluation. Originally planned for a month, the campaign was extended up to National Dolphin Day (5th October), owing to the overwhelming response from schools and states. So far, approximately 25 lakh students from nearly 10,000 schools, colleges, and educational institutions have participated, making it India's largest dolphin outreach campaign.

Painting Competition- Indus National School Sitarganj, Udham Singh Nagar, Dehradun, Uttarakhand

Sand Art on Dolphin Conservation: ST Mary's English Medium School, Kannarpady, Udupi, Karnataka

Authors:

Naaz Rizvi *is working as Director at the National Museum of Natural History*

Dr. C. R. Magesh *is working as Scientist D at the National Museum of Natural History, Ministry of Environment, Forest and Climate Change*

Shovana Ray *is working as a Project Scientist (Sociology) under the project, Development of Conservation Action Plans for river dolphins in the Wildlife Institute of India, Dehradun.*

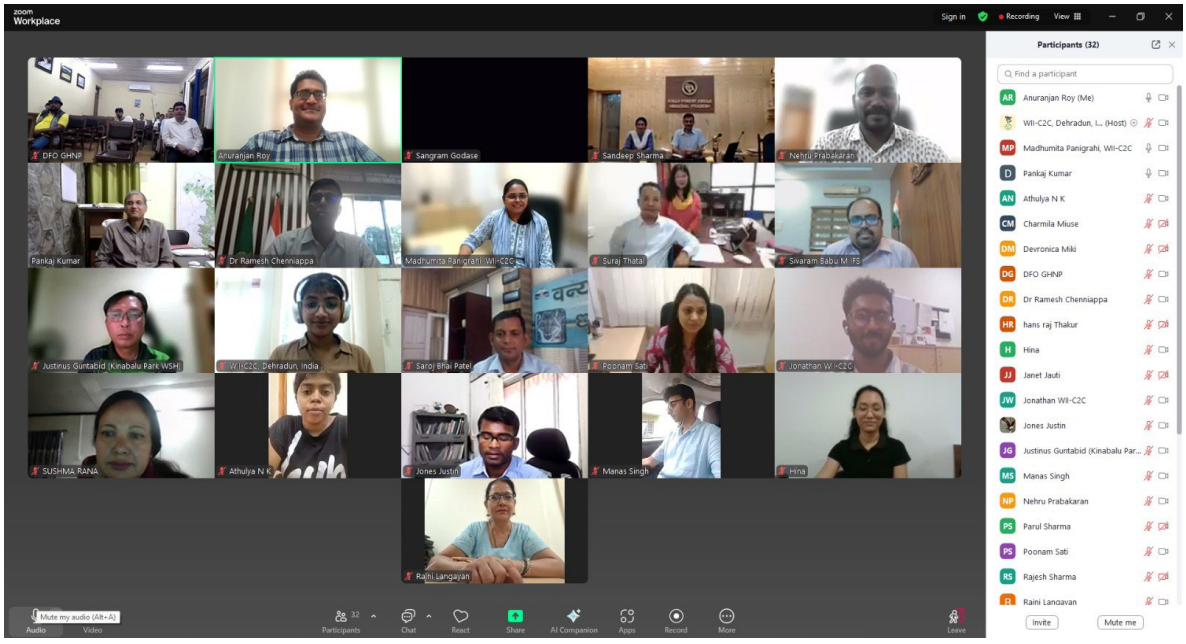
Global Advocacy for Natural Heritage

Heritage serves as humanity's shared foundation, connecting diverse cultures while preserving the collective wisdom of our species. At a global level, heritage sites - both Cultural and Natural - transcend national boundaries to become symbols of universal value that belong to all humanity. In keeping with its mandate to facilitate training programmes in Natural Heritage for the Asia-Pacific Region, in the quarter of July– September 2025, Wildlife Institute of India- Category 2 Centre (WII-C2C) hosted and facilitated a number of initiatives, enabling connections with heritage practitioners and enthusiasts worldwide. In this submission, we have also added information about a few events that were not covered in the earlier edition of the newsletter.

1. UNESCO Natural World Heritage Site Managers' Virtual Conclave (23 June, 2025)

The Wildlife Institute of India Category 2 Centre (WII-C2C), in collaboration with the Great Himalayan National Park (one of India's eight UNESCO Natural/Mixed World Heritage Sites), organized a virtual Site Managers' Conclave on 23 June to mark the park's inscription anniversary. This first-of-its-kind event brought together representatives from all of India's UNESCO-designated Natural/Mixed World Heritage Sites and received 52 registrations from site managers and officials associated with these protected areas across the country.

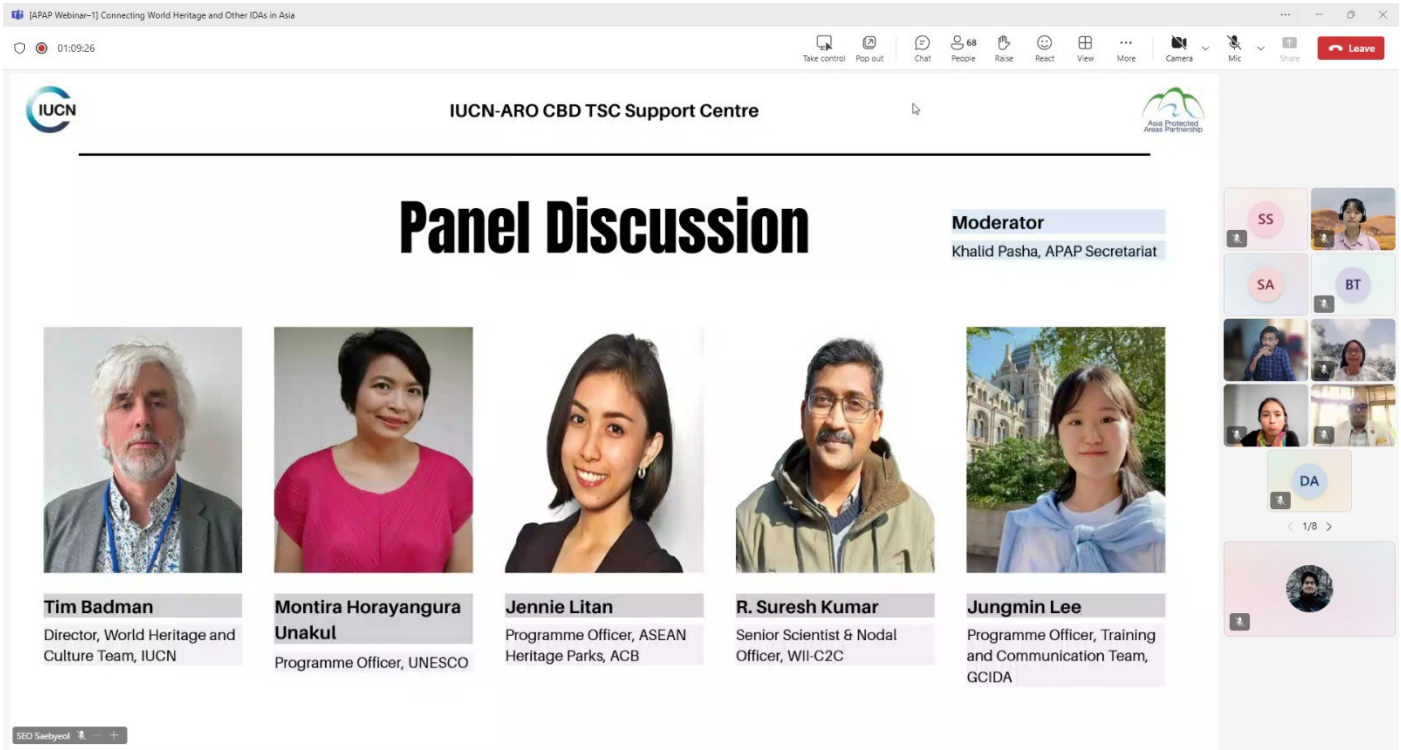
Key speakers included the Directors of mountain Natural Heritage sites in India: Great Himalayan National Park Conservation Area, Nanda Devi and Valley of Flowers National Parks, and Khangchendzonga National Park. In addition, two international experts shared their insights: the Senior Conservation Officer of Sagarmatha National Park, Nepal and the Principal Assistant Director of Kinabalu National Park, Malaysia. Thus, it created a unique platform for professionals managing similar mountain ecosystems to connect, share knowledge, and learn from each other's best practices. Moreover, the conclave brought together site managers from India's diverse UNESCO Natural/Mixed Heritage Sites and some of the world's most iconic natural heritage sites, serving as a vital platform for exchanging best management practices and promoting collaborative learning.



2. Webinar: World Heritage and Other Internationally Designated Areas in Asia (24 June, 2025)

WII-C2C collaborated with Asia Protected Areas Partnership (APAP), the International Union for Conservation of Nature (IUCN), IUCN – Asia Regional Office (ARO), CBD Support Centres for a webinar, co-hosted by Global Research and Training Centre for Internationally Designated Areas (GCIDA) in collaboration with UNESCO, and the ASEAN Centre for Biodiversity (ACB). The webinar was organized to improve collaboration among key actors involved in the management of World Heritage Sites and other Internationally Designated Areas (IDAs) in Asia. These areas, including Natural World Heritage Sites, ASEAN Heritage Parks, Ramsar Sites, Biosphere Reserves, and Multi Internationally Designated Areas (MIDAs), are vital for conserving the region's biodiversity and cultural values. Effective management of these sites requires joint efforts among governments, international organizations, site managers, youth, and local communities.

Dr. R. Suresh Kumar, Nodal Officer of WII-C2C, delivered a presentation in the webinar introducing WII-C2C and its activities, as well as participated in panel discussions focused on exploring the collaborative opportunities between IDAs as a platform for the exchange of best practices and challenges among stakeholders to support better management. This session brought together experts from IUCN, UNESCO, ASEAN Centre for Biodiversity (ACB) and GCIDA to discuss their respective roles in supporting IDAs and to explore collaborative approaches.



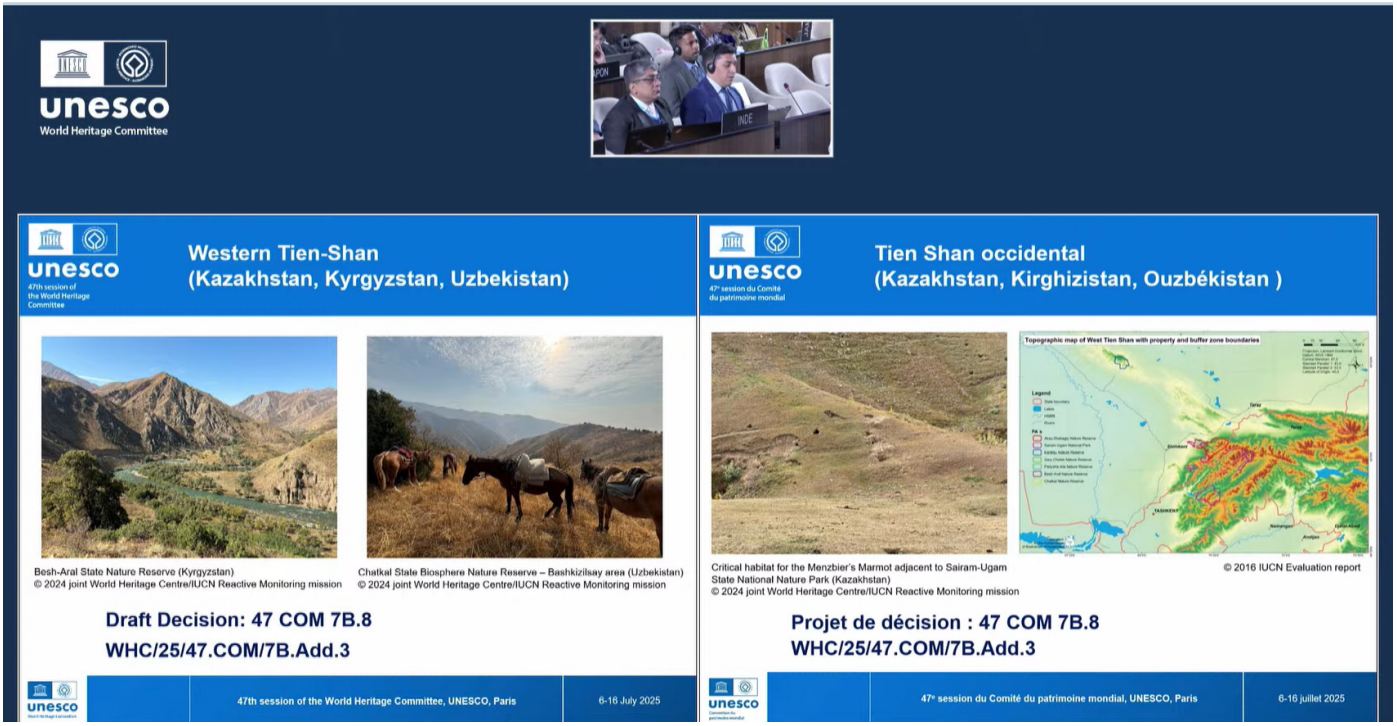
3. Capacity Building Workshop on the Management of Internationally Designated Areas (CBW-MIDA)
(1–3 July, 2025)

The 2025 Capacity Building Workshop on the Management of Internationally Designated Areas (CBWMIDA) was organized by the Global Centre for Internationally Designated Areas (GCIDA), a Category 2 Centre based in Jeju, South Korea, from 1st – 3rd July, 2025. This workshop aimed to provide a platform for sharing field-based knowledge and experiences among managers of four Internationally Designated Areas (IDAs) – World Heritage Sites (WHS), Man and Biosphere Reserves, Global Geoparks and Ramsar Sites. Its focus was on promoting harmonized management across these designations in response to shared challenges and opportunities.

Mr. Anuranjan Roy, Principal Project Associate at WII-C2C, was a resource person at the same, delivering presentations on 'Understanding World Heritage' and 'World Heritage and MIDAs– Learnings from Asia and the Pacific', besides facilitating group discussions on various aspects of Multi Internationally Designated Areas (MIDAs). There were 15 participants from 11 countries in the Asia-Pacific region, along with 20 domestic participants with an emphasis on diversity (geographical, institutional, and thematic) to encourage the sharing of a wide range of management cases and to promote mutual learning and capacity building. The field visit also reflected this diversity through visits to Suwolbong Peak, Jeju Gosan-Ri Prehistoric Site, GEOfood (Zen Hideaway) initiatives, Hallasan Mountain WHS & Hallasan Eorimok Trail Visitor Center.

4. WII-C2C at 47th World Heritage Committee (6-16 July, 2025)

The 47th Session of the World Heritage Committee (47 COM), which is a statutory meeting under the provisions of the World Heritage Convention, was held in Paris, France, from 6 to 16 July 2025. The World Heritage Committee is an Intergovernmental Committee composed of the representatives of 21 States, elected from the 196 States Parties to the Convention. India has served as a member of the World Heritage Committee from 2021 to 2025. WII-C2C serves in an advisory capacity to the Government of India on matters pertaining to Natural Heritage. Under this mandate, the centre has reviewed State of Conservation (SoC) reports of 54 Natural/Mixed WHS from all parts of the world, as well as 7 newly proposed Natural/Mixed WHS, which were discussed in the committee by the Delegation of India. WII-C2C, represented by Dr. R. Suresh Kumar, Nodal Officer, spoke at the 47th World Heritage Committee in Paris via a pre-recorded video presentation on Item 6B – 'Progress Report on the Activities Concerning the Implementation of the World Heritage Convention by the World Heritage-related Category 2 Centres'. Dr. Suresh also highlighted the extensive capacity-building programs hosted by WII-C2C for various stakeholders and the partnerships with fellow C2C's as well as other international entities to scale up the centre's activities beyond Asia-Pacific.



5. Launch of 'Harmony', a WII-C2C Half-Yearly E-zine (4 August, 2025)

Recognizing the need for a dynamic platform to elevate Natural Heritage discussions and share narratives from Natural Heritage Sites across the globe, we launched the e-zine '*Harmony*', which was officially released by the Director of WII, Dr. G. S. Bhardwaj, on August 4, 2025. The e-zine features WII-C2C activity updates, heritage news from across the globe and stories of Natural Heritage from diverse field sites. The inaugural edition features key updates from the World Heritage Convention, highlights of C2C's initiatives, and inspiring heritage stories showcasing the rich natural legacie s of India, along with contributions from our global alumni network in Tanzania and Peru.

6. Inauguration of the Classroom building 'Harmony' (4 August, 2025)

A new classroom, *Harmony*, was conceptualized to meet the growing need for a larger and better-equipped learning space at WII-C2C. Situated next to the Centre, the classroom was inaugurated on August 4, 2025, by Dr. G. S. Bhardwaj, Director, WII. It was designed by Ms. Athulya, Project Associate in Communication and Outreach (an architect by training), with inputs from Dr. R. Suresh Kumar and Dr. Nehru Prabakaran, Nodal and Associate Nodal Officers, and Dr. Madhumita Panigrahi, Programme Coordinator, WII-C2C. *Harmony* significantly expands seating capacity and introduces modern facilities, including a smart display TV, to enhance training and interaction.

7. Training Course in Natural Heritage (TCNH), (4–15 August 2025)

The Training Course in Natural Heritage (TCNH) for international participants was conducted by WII C2C from 4 to 15 August 2025. The programme was fully sponsored by the Ministry of External Affairs under the Indian Technical and Economic Cooperation (ITEC) Programme.

A total of 19 participants from 13 countries: Egypt, Lesotho, Mexico, Nepal, Russia, South Sudan, Sri Lanka, Tajikistan, Trinidad and Tobago, Tunisia, Tuvalu, Uganda and Zimbabwe, representing four continents, attended the programme.

The participants received comprehensive training in Natural Heritage management and examined the role of heritage in conservation. The course drew upon the Wildlife Institute of India's expertise in wildlife conservation and C2C's strengths in Natural Heritage management, with additional contributions from international experts. The diverse professional backgrounds of the participants enriched the learning experience and fostered meaningful cross-learning. Over the two weeks, the curriculum combined classroom instruction with applied exercises and field visits to both natural and cultural UNESCO World Heritage Sites.

Facilitating Dialogue for Conservation: Outcomes of a Stakeholder Workshop on Ganga Rejuvenation in West Bengal

- Sweta Bhattacharya, Swati Saha, Saurav Gawan, S.A. Hussain, Ruchi Badola

A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievements of the organization's objectives.

~ R. Edward Freeman (1984)

Introduction

Wildlife conservation has increasingly recognized that ecological outcomes and successful interventions depend as much on human systems as on biological ones. According to Reed (2008), environmental issues are complicated and occur at different scales, thereby requiring open decision-making that can adapt to changing conditions and integrate different kinds of knowledge. Consequently, stakeholder participation is increasingly being sought and embedded into environmental decision-making processes globally (Stringer *et al*., 2007). Collaborative approaches like partnerships and working groups are widely used to strengthen planning, thereby opening multi-way interactions where communities, stakeholders, and authorities collectively influence decisions rather than limiting them to formal exchanges (Healey, 2020; Innes & Booher, 2004). In landscapes with competing claims over resources, stakeholder participation enables negotiation and secure equitable and sustainable solutions (Sayer et al., 2015; Baylan & Karadeniz, 2018; Li *et al*., 2024).

Project goals and overview of workshop

The Jalaj project aims to promote sustainable livelihoods for marginalized communities belonging to the Ganga River basin through various skill development programs. To recognize the importance of communities heavily reliant on river resources, a multi-stakeholder participatory workshop was organized in Kolkata, West Bengal.

The workshop, held on 12th August, 2025 at the Biswa Bangla Convention Centre, Kolkata, aimed to strengthen linkages between Jalaj models in West Bengal and refine marketing strategies to ensure their long-term sustainability. Nearly 200 stakeholders from diverse backgrounds, such as government departments, educational institutes, NGOs, private firms and startups had attended, who were thoughtfully selected based on their relevance to the five models of Jalaj. The inaugural session was graced by Shri Debal Ray, PCCF and HoFF, as Chief Guest, while Shri Sandeep Sundriyal, CWLW of the state and Shri G. Asok Kumar, Former Director General of NMCG, joined as Guests of Honour. The Dean of WII, Dr. Ruchi Badola and Principal Investigator of the project, provided an insightful overview of the project's progress in the state, followed by dignitaries sharing their perspectives.

Focus Group Discussions and Stakeholder Convergence

The second half of the workshop was the technical session, which was planned in the form of 'focus group discussions' (FGDs). According to Garbutt *et al.* (2017), "*Focus group discussions are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. They are used to find out the perceptions and attitudes of a defined group of people*." This is a qualitative research and data collection technique in a semi-structured mode, using a carefully planned, open-ended questionnaire. An FGD is always facilitated by a seasoned

external moderator to ensure that all participants in a group equally contribute (Eeuwijk & Angehrn, 2017), accompanied by an assistant who takes down extensive notes (Shabina *et al.*, 2024). The technical session was divided into five parallel sub-sessions, dedicated to five models of Jalaj. Each sub-session was moderated by a senior project member along with a rapporteur, and gathered stakeholders relevant to the model under discussion. A set of model-specific questions were provided and the moderator ensured that every participant got the opportunity to share their perspectives. A round of brainstorming unfolded where participants debated and refined various ideas. Once the dialogues conclude, the moderator documents the key points from the responses. When the FGD is done for multiple teams, data examination involves identifying a representative from each group who presents the findings for cross-group comparison (Garbutt *et al.*, 2017).

Efficacy of FGD in a Stakeholder Workshop

FGD offer several advantages in a multi-stakeholder workshop. As a participatory methodology, it can engage diverse stakeholders and generate a spectrum of opinions, reveal new challenges and enable instant solutions through discussions (Garbutt *et al.*, 2017). Secondly, the moderator plays a key role in facilitating and setting the stage for collecting valid perceptions (Krueger & Casey, 2000). A skilled moderator ensures all important questions have been covered (Garbutt *et al.*, 2017; Eeuwijk & Angehrn,2017; Shabina *et al.*, 2024) and all participants have had the opportunity to express themselves, thereby enhancing participation equity and reducing bias. Finally, collaborative thinking is fostered among disparate stakeholders through a rigorous process of debate and agreement. Such discussions, therefore, help in validating project models and laying the groundwork for sustainable implementation.

Shri Debal Ray, PCCF and HoFF of West Bengal checking out products of Jalaj in the exhibition

Shri Sandeep Sundriyal, CWLW of West Bengal being felicitated by Dr. S.A. Hussain and Shri Saurav Gawan. He is being presented with 'Patachitra' of Goddess Ganga, a traditional painting style of Bengal.

Model-wise Outcomes

Group-1: Homestay

Questions were raised for upscaling homestays for tourists, such as focusing on promotion, capacity building support, synergies with government departments, and suggestions for new sites. Panellists discussed on the challenges like poor connectivity, high taxes, mismatch between tourist expectations and the actual homestay experience. They emphasized that hygiene, affordability and cultural authenticity must be prioritized. Government and industries can play a major role in promoting homestays, while the tourism, cultural and forest departments can help build capacity and upgrade amenities. Suggested actionable steps included promoting homestays for offering authentic cultural experiences, linking with the tourism department, improving visibility both online and offline, online booking, ensuring affordability and hygiene.

Group-2: Awareness and Sales Point

Suggestions were taken on potential new locations for awareness and sales points, space availability, funding and linkages, and training imparted to Ganga Praharis. Strategic new sites like Barrackpore, Kalighat and Hazarduari in Murshidabad were suggested by the panellists. They also emphasized partnerships, CSR fundings and highlighted visibility through fairs, retail spaces, digital platforms like GeM, and integrating government schemes like Utkarsh Bangla and Anandadhara.

Group-3: Dolphin safari

Key points discussed were identifying potential dolphin safari sites such as Mayapur, Gadiara and Balagarh, publicity through social media, radio and television. The group suggested that agencies like SHGs and JFMCs could be requested for funding and stressed on regulatory frameworks like permits from authorities like Port Trust, Pollution control board and forest department, maintaining strict safety protocols ranging from certified boats to safety gears and guidebooks. They finally concluded that a well-regulated safari could serve as a flagship model of conservation tourism in West Bengal.

Group-4: Health and Wellness Centre

The group explored how a wellness centre could improve community health and resilience through preventive healthcare, yoga, diet and ayurveda, while natural farming and seed banks were identified as vital to food security. Highlighted points were strengthening value chains via producer collectives and promoting products like herbal teas and pickles, and market expansion through digital platforms. Recommendations included linking farmers to schemes such as PM Fasal Bima Yojana, developing wellness retreats with herbal therapies, yoga and local cuisine, ensuring quality certification through FSSAI, KVK and ICAR.

Group-5: Livelihood Centre

The group focused on alternative livelihoods such as animal husbandry, eco-tourism, value-added foods, and eco-friendly crafts from natural fibres. Modifying the Jalaj website for e-commerce, stalls at fairs, partnering with technical institutes and NGO for building skills and GI tags for handicrafts were recommended. Panellists also highlighted training support through Utkarsh Bangla, Anandadhara and ICAR-NINFET, visibility enhancement via digital or print media and participation in national events.

The workshop concluded that Jalaj models could act as engines of sustainable growth, connecting traditional skills with modern markets and empowering riverine communities.

The organizing team

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Authors:

Sweta Bhattacharya: *Currently working as a Project Assistant in the WII-NMCG Jalaj Project, she was previously working in the CAMPA-GIB project. Having a background in Zoology, she had also worked on the taxonomy of reptiles in ZSI, urban raptors and urban small bird ecology in various DBT-funded projects.*

Swati Saha: *Currently working as a Project Associate II in the WII-NMCG Jalaj Project. With a degree in Zoology, she worked in Garchumuk Zoo in West Bengal on soft-shelled turtles, studying their ecology and the illegal trade. In 2023, she joined the WII to work on Environmental Impact Assessments in the North Western Ghats.*

Saurav Gawan: *A turtle biologist who has contributed to the conservation of India's freshwater species, with a special focus on turtles, since 2013.. He has worked with many international and national organizations to protect India's aquatic reptiles. He has surveyed more than 12 critical river ecosystems of India and is presently associated with WII as a Project Scientist in the NMCG-WII Jalaj.*

S.A. Hussain: *An ex-faculty (Scientist-G) of WII, he is right now the Subject Matter Specialist of WII-NMCG Jalaj Project. Dr. Hussain has incredible contributions in freshwater ecology, particularly in Otter biology. He is a member of the IUCN Otter Specialist Group.*

Ruchi Badola: *She is presently holding the position of Dean of WII and also the Principal Investigator of WII-NMCG Jalaj Project. She has conducted applied research on various aspects of wildlife management, such as eco-development planning, human-wildlife conflict mitigation, and livelihood development, covering almost all states in the country.*

Training Workshop on 'Conservation of Macro-fauna of Riverine Ecosystem' for University Students

- Mohd Danish Kaleem

The WII–NMCG and NRCD teams organized a two-day training workshop on "*Conservation of Macro Fauna of Riverine Ecosystem*" on 21st -22nd August 2025, at Indira Gandhi National Tribal University (IGNTU), Amarkantak, Madhya Pradesh.

Over 100 students and 12 professors actively participated in the workshop. The workshop featured presentations, interactive sessions, field visits, and group discussions, providing a unique learning experience for the students. Participants explored the ecological significance of riverine biodiversity, identified threats to aquatic species, and discussed effective conservation strategies for preserving these species.

Field exposure to riverine habitats enriched classroom sessions, while student group presentations encouraged collaborative learning and critical thinking. The workshop successfully enhanced awareness, strengthened academic engagement, and motivated young participants to contribute to the conservation of riverine biodiversity and sustainable river management efforts.

Author:

Mohd Danish Kaleem *is a Project Associate–I with the WII–NMCG project at the Wildlife Institute of India.*

Field visit

Group exercise

Photo credit: Dr. G. S. Bhardwaj

EIACP Programme Centre (RP)
"Wildlife and Protected Areas Management",
Wildlife Institute of India, Dehradun

A. Activities undertaken in: July 2025

1. Competitions/ Seminars/ Webinars/ Workshops

Workshops

1. One-day workshop on International Tiger Day, 29 July 2025 with the University of Petroleum and Energy Studies, Dehradun

The EIACP Centre at the Wildlife Institute of India organized a one-day workshop with the graduate students of UPES, Dehradun, to commemorate International Tiger Day on 29 July 2025.

The event witnessed an enthusiastic participation of students and faculty, with the campus resonating with *roars of awareness* as everyone came together to celebrate Global Tiger Day 2025 and reaffirm their commitment to wildlife conservation.

The workshop featured insightful sessions by scholars from the Wildlife Institute of India, offering both knowledge and inspiration:

1. *Cameras, Conservation & Comeback* – **Ms. Ankita Sharma**
2. *Tiger Reintroduction in India* – **Mr. Shekhar Sarkar**

The talks emphasized the need to integrate science, technology, and community participation to ensure a secure future for tigers in India. The workshop not only enhanced awareness on the critical role of tigers in maintaining ecological balance but also encouraged the younger generation to take an active role in fostering a sustainable and harmonious coexistence with nature.

Competitions

1. Online Quiz from (04 -08 July, 2025)

Van Mahotsav Celebration and Quiz by EIACP Centre, WII (4–8 July 2025)

The EIACP Centre at the Wildlife Institute of India, Dehradun, celebrated Van Mahotsav from 4th to 8th July 2025, emphasizing the importance of tree plantation, forest conservation, and environmental stewardship. As part of the celebration, the Centre organized an interactive quiz designed to engage participants in learning about climate resilience, biodiversity, and sustainability.

Through this initiative, participants gained insights into the significance of preserving natural ecosystems, understanding the impacts of climate change, and adopting sustainable practices in daily life. The quiz not only tested knowledge but also encouraged discussions on innovative solutions for environmental challenges, fostering awareness and a sense of responsibility towards conserving India's rich biodiversity.

2. Online Quiz from (09 -14 July, 2025)

The EIACP Centre at the Wildlife Institute of India organized the Van Mahotsav Online Quiz Competition to raise mass awareness about the significance of trees, forests, and biodiversity. This initiative educated participants about the importance of afforestation and encouraged the adoption of green practices, which helped safeguard India's natural legacy and promoted a cleaner, greener future.

3. Drawing Contest at Arya Inter College, Dehradun

The EIACP Centre at the Wildlife Institute of India organized a Drawing Contest for students of Classes 9 to 12 on International Tiger Day, 29 July 2025. A total of 17 students actively participated in the contest, showcasing their creativity and awareness through art.

As part of the programme, an interactive session was also conducted at Arya Inter College, Dehradun, which highlighted the importance of tiger conservation and its vital role in maintaining ecological balance. The session aimed to inspire young minds to develop a deeper understanding of biodiversity, the need for wildlife protection, and the responsibility of individuals in safeguarding our natural heritage. As part of the programme, a Mission LiFE (Lifestyle for Environment) pledge was also conducted, encouraging students to adopt eco-friendly practices in their daily lives. The pledge aimed to instil a sense of individual responsibility towards reducing environmental footprints and promoting sustainable living, thereby linking personal choices to global conservation goals.

Webinars:

1. Webinar Series on International Day for The Conservation of Mangrove Ecosystems, 25 July 2025

The EIACP Centre at the Wildlife Institute of India, in collaboration with Uttarakhand Biodiversity Board and EIACP Centre at the Forest Research Institute, organized a special webinar that brought together distinguished experts to address major themes in wetland and coastal ecology. Mr. Abhimanyu, DFO Chakrata Division, Uttarakhand Forest Department, delivered insights on "Conservation of Wetlands in Uttarakhand: Management and Challenges," highlighting the region-specific threats and best practices for preserving vital wetland habitats. Dr. Saroj Kumar Barik, a wetland expert with the Department of Environment, Forest and Climate Change, Bihar, discussed "Conservation, Restoration and Wise Use of Ganga Floodplain Wetlands," emphasizing innovative restoration strategies and sustainable management for this ecologically critical region. Ms. Neha

Tamhankar, Ph.D. scholar at FRI Dehradun, spoke on "Mangroves: The Coastal Warriors," shedding light on the unique ecological role of mangroves in coastal protection and biodiversity conservation. The webinar enabled enriching dialogue, expanded knowledge, and fostered connections among stakeholders working for wetland and coastal ecosystem sustainability.

2. Webinar on International Day for The Conservation of Mangrove Ecosystems, 26 July 2025

The EIACP Centre at the Wildlife Institute of India organized a webinar on 26 July 2025 to observe the International Day for the Conservation of Mangrove Ecosystems. The event featured a presentation by Dr. Debajit Datta, Associate Professor at Jadavpur University, titled "A Social-Ecological Restoration Approach for the Settlement-fringe Mangroves of Indian Sundarbans: Strategies towards a Resilient Landscape".

Dr. Datta highlighted the unique challenges and opportunities of conserving mangrove ecosystems situated near human settlements in the Indian Sundarbans. He emphasized the importance of adopting restoration strategies tailored to the dynamic social-ecological context, including the need for site-specific interventions and community involvement to ensure successful mangrove regeneration and resilience. The webinar underlined how healthy, structurally diverse mangrove forests not only protect coasts from erosion and cyclones, but also support local livelihoods and biodiversity, fostering a harmonious balance between human needs and ecosystem health

A. Activities undertaken in: August 2025

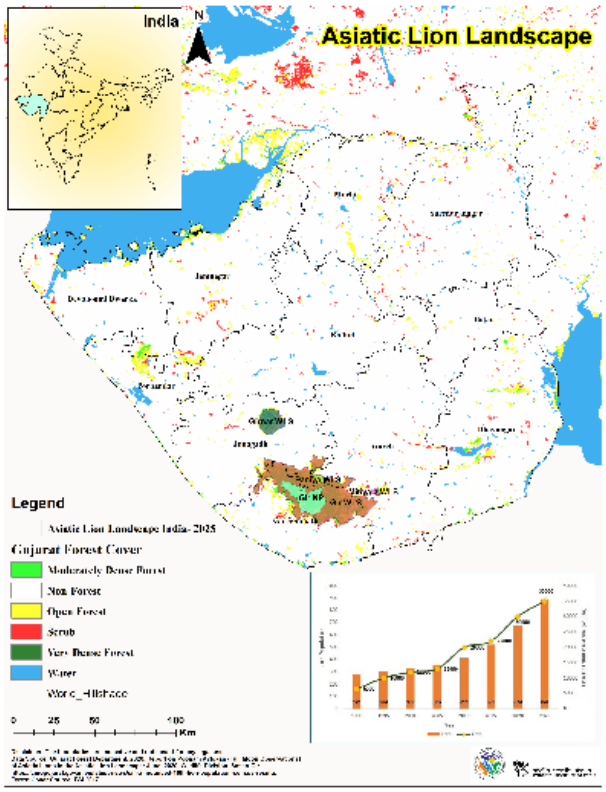
Knowledge Products

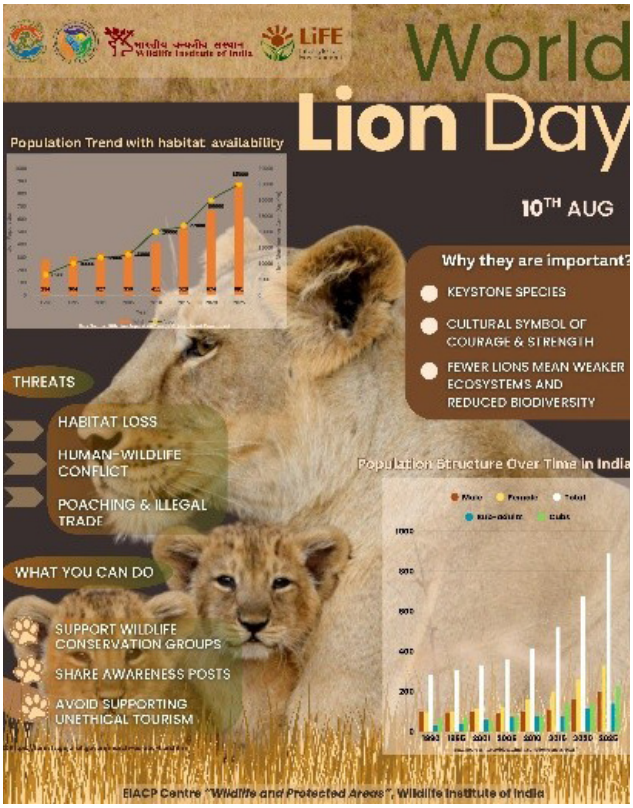
1. Release of Informative Posters on World Lion Day, 10 August 2025

Purpose: To raise awareness about the conservation of lions, their ecological importance, and the threats they face (habitat loss, human-wildlife conflict, poaching).

Significance:

Lions are apex predators and help regulate prey populations, maintaining balance in ecosystems. Their decline signals broader environmental health issues. The day encourages action and support for lion conservation efforts globally.





2. Release of Informative Posters on World Elephant Day, 12 August 2025

World Elephant Day is celebrated on August 12 every year. It is a day dedicated to raising awareness about the conservation of elephants and the threats they face, while also highlighting their ecological importance.

Brief about the Day:

World Elephant Day was first observed in 2012 to bring global attention to the urgent need to protect both Asian and African elephants. Elephants face threats like habitat loss, poaching, human-elephant conflict, and climate change. The day is an opportunity for governments, NGOs, scientists, and citizens to unite in ensuring the survival and protection of these gentle giants.

The poster has been prepared under the theme "Celebrating the Gentle Giants". It highlights:

1. Asian Elephants (Elephas maximus):

- One of the most endangered species.
- India is home to **60% of the global population.**
- Found in diverse habitats from semi-arid to tropical forests.

2. Elephants in India:

- India has **33 Elephant Reserves** covering **80,777 sq. km.**
- The **Project Elephant** (since 1992) focuses on:

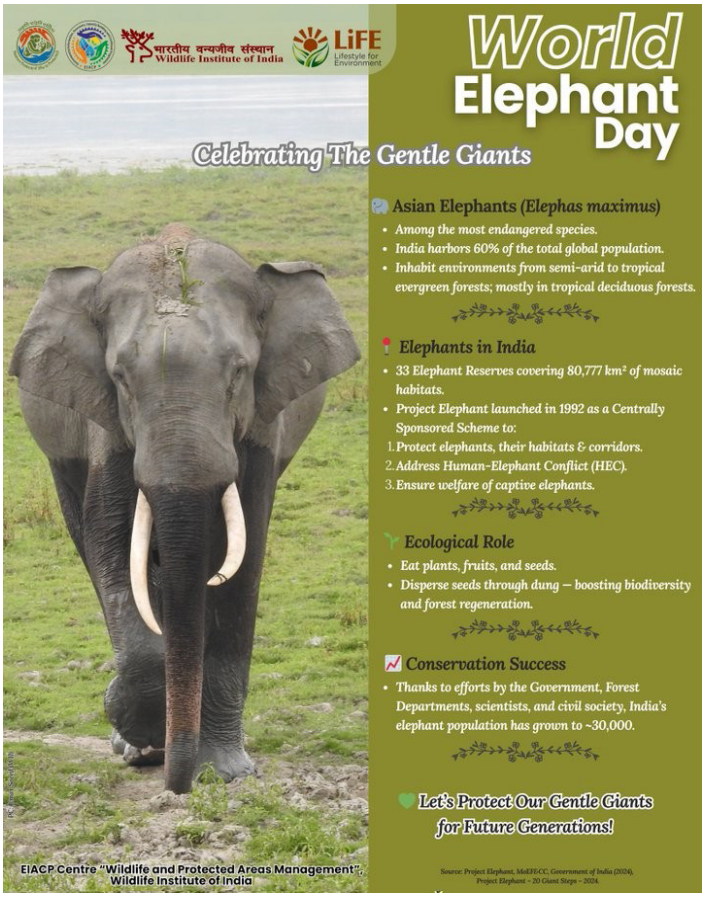
1. Protecting elephants, habitats, and corridors.
2. Addressing Human-Elephant Conflict (HEC)
3. Welfare of captive elephants.

3. Ecological Role:

- Elephants eat plants, fruits, and seeds.
- They help **disperse seeds through dung**, supporting biodiversity and forest regeneration.

4. Conservation Success:

- Due to combined efforts of government, scientists, forest departments, and civil society, India's elephant population has increased to **~30,000**.



2. Drawing and Essay Writing Contest on World Elephant Day, 12 August 2025

World Elephant Day is observed globally on 12 August each year to raise awareness about the urgent need to protect elephants and their habitats. Elephants play a crucial role in maintaining the ecological balance of forests, yet they face threats from poaching, habitat loss, and human–elephant conflict. To mark this occasion and sensitize students about the importance of elephant conservation, EIACP Centre at Wildlife Institute of India organized a Drawing Contest and Essay Writing Contest at Galaxian International School on 19 August 2025 for the students of Classes 6 to 12.

The themes of the contest were:

- A Trumpeting Future: Elephants in a Safe, Green World
- From Calf to Giant: The Life of an Elephant
- Elephants and Humans: Coexistence or Conflict

A total of 74 students participated enthusiastically in the contest and expressed their thoughts creatively through drawings. The students showcased great imagination, awareness, and concern for the conservation of elephants. The event was well-coordinated by the teachers and staff members of Galaxian International School.

The contest not only provided a platform for students to display their artistic talents but also enhanced their understanding of the importance of elephants in maintaining biodiversity. It encouraged them to reflect on the coexistence of humans and wildlife.

In a step towards sustainable living, 115 students and staff at Galaxian International School, Dehradun took the Mission LiFE Pledge on 19th Aug, led by the EIACP Centre at Wildlife Institute of India. Together, they committed to making eco-conscious choices for a better planet.

A. Activities undertaken in: September 2025

EIACP National Evaluation Workshop 2025

The EIACP National Evaluation Workshop 2025 was successfully held at the Wildlife Institute of India, Dehradun from 18–20 September 2025, organized in collaboration with the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India.

The three-day workshop brought together coordinators of EIACP centres from across the country for technical evaluations, knowledge sharing, and collaborative discussions.

- Day 1 featured the inaugural session with dignitaries from MoEFCC, the launch of the Digital Resource Centre (DRC) portal, culmination of the Breath of Change campaign, technical sessions, and a cultural evening.
- Day 2 focused on intensive parallel technical evaluations across three venues, strengthening collaboration and peer learning.
- Day 3 included ministry-led sessions on the DRC, financial aspects, green skilling, and capacity building, followed by the valedictory with awards and certificates.

Top Performing EIACP Centres:
1st Place — WWF India (New Delhi)
2nd Place — CPREEC, Chennai, Tamil Nadu
3rd Place — ASTEC, Assam

Special felicitation was also given to students of Arya Inter College for their creative participation in the Drawing Contest.

The workshop concluded with closing remarks from MoEFCC, a vote of thanks by WII, and a collective resolve to take forward the legacy of ENVIS through EIACP to greater heights in environmental awareness, capacity building, and sustainable development.

Release of Wildlife Series – Elephant Reserves of India: Anamalai Elephant Reserve, Tamil Nadu

As part of the EIACP National Evaluation Workshop 2025 held at the Wildlife Institute of India, Dehradun, a new volume in the Wildlife Series – Elephant Reserves of India was officially released:

"Anamalai Elephant Reserve, Tamil Nadu."

This publication is part of an ongoing series developed under the EIACP Centre at WII, aimed at documenting and showcasing India's network of 30 Elephant Reserves. The series highlights ecological significance, management practices, biodiversity values, and conservation challenges of each reserve, serving as a knowledge resource for researchers, forest managers, policymakers, and students.

The release of the Anamalai volume reflects the commitment of EIACP and WII to raise awareness about elephant conservation and to promote knowledge exchange across the country. With each addition to this series, EIACP continues to strengthen its role as a hub of information on Wildlife and Protected Areas Management.

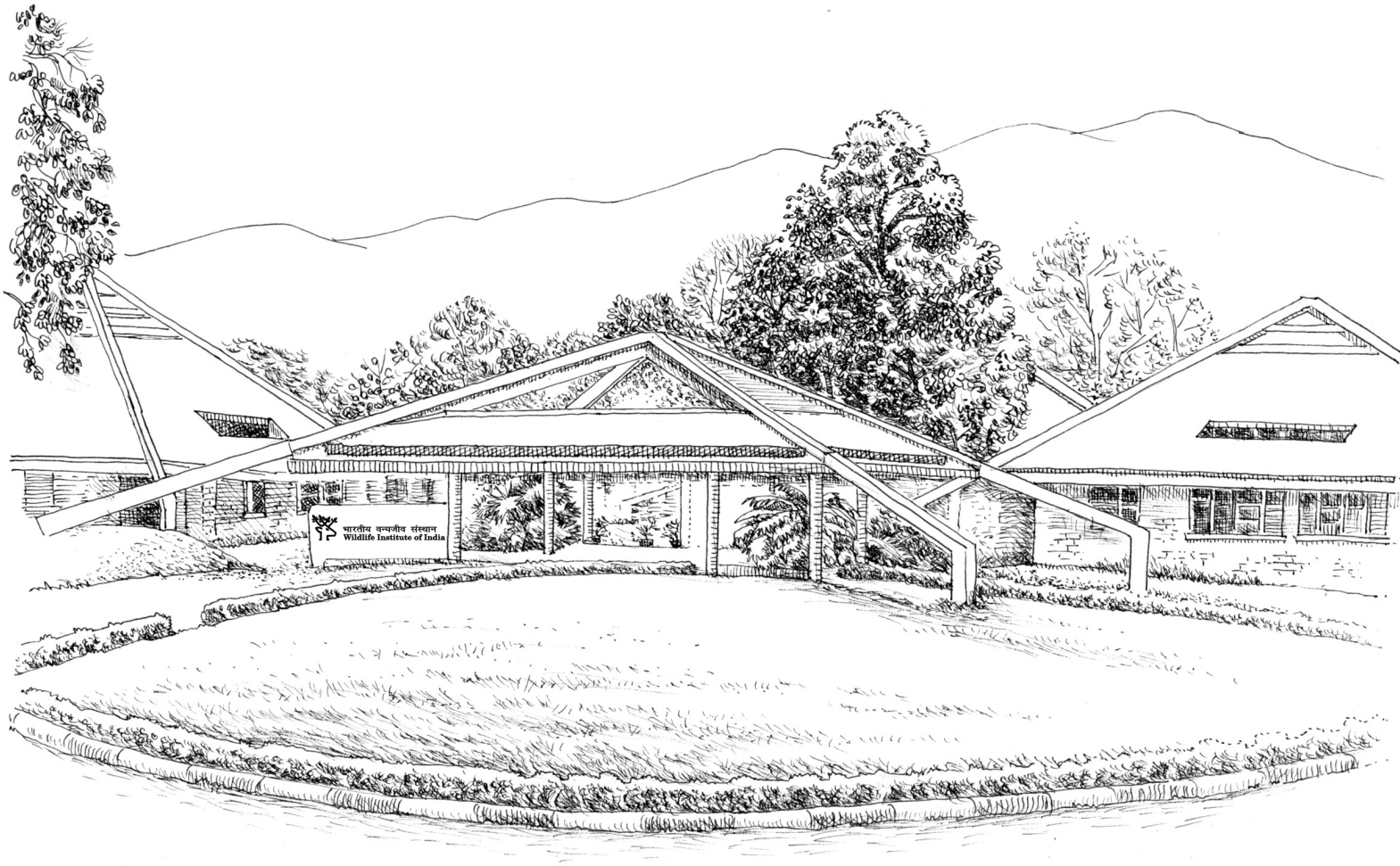
Photo credit: Amarjeet Kaur

Legacy in Retirement:
Honouring Our Retired Personnel

Smt. Baljeet Kaur Jolly
Deputy Registrar ,WII

Date of joining: 27.03.1987

Date of farewell: 31.08.2025



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