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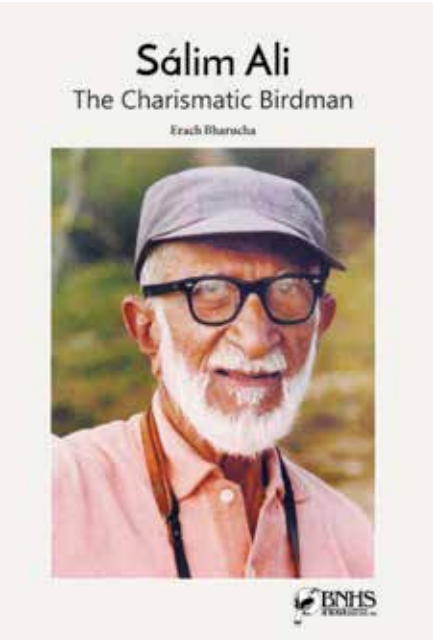
OCTOBER–DECEMBER, 2022

BNHS INDIA CONSERVING NATURE SINCE 1883

BOMBAY NATURAL HISTORY SOCIETY

Sálim Ali
The Charismatic Birdman

by Erach Bharucha



This is the story of Dr Sálim Ali's life and his times, which were an important fragment of the conservation movement in India, from the late British period, through the tumult of the struggle for independence, to the early years of India as a sovereign nation state. It is linked to the organization that Sálim Ali steered for decades, the Bombay Natural History Society. Read Dr Erach Bharucha's inspirational account of the incredible Birdman of India.

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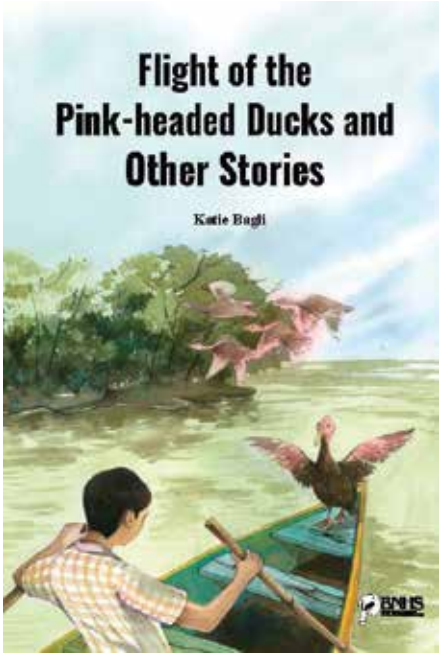

Flight of the Pink-headed Ducks and Other Stories

by Katie Bagli

This collection of short stories of five rare animals, all pushed to the edge of their existence, will prod young readers to think through issues such as hunting and pollution that have rendered these animals vulnerable. Katie Bagli's stories show us how a little care can go a long way to save them.

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Cover: Nicobar Pigeon
Caloenas nicobarica
Arjun Kumar P.

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The cover of this issue of *Hornbill* features a Near Threatened species, the Nicobar Pigeon *Caloenas nicobarica*, which derives its common and species names from Nicobar Island in the Andaman and Nicobar Archipelago, where it is found. Though not endemic, it is a rare species, of which Arjun Kumar P. has skilfully captured two individuals in one frame. Its population size is unknown, though it is recorded as decreasing due to capture for food and the pet trade, habitat destruction, and predation by introduced mammals in its restricted island habitat. The future does not augur well for this tree-and-shrub nester that lays a single egg per clutch. Therefore, all its distributional range countries, including India, would do well to follow the conservation actions proposed by BirdLife. These include protection of its known breeding islands and preservation of reserve areas of lowland forest close to its breeding islands; education of the local people to prevent trapping for food and the pet trade; eradication of rats, cats, and other alien predators on particularly important breeding islands. Most of all, further habitat loss and introduction of alien predators on its breeding islands must be prevented.

The global pandemic urged us to look for positive stories, and this issue provides us with more than one example. The title "A Village with Blue Doors" intrigues us to follow the story by Antara Kulkarni, a young student who was pushed by COVID restrictions and a life away from college and friends, to look for internship opportunities. A break came her way in the form of habitat and behavioural studies on the Lesser Florican *Sypheotides indicus* with the BNHS team in Shokaliya and Madhopura villages in Rajasthan. She writes that the Lesser Florican may appear to be well adjusted to people and anthropogenic activities in its habitat, but this understanding would be naive. Almost 60–80% of the florican's grassland habitat has been encroached by the invasive Mesquite, forcing floricans towards agricultural fields, and away from grasslands. Sadly, even croplands are not free of threats. Excessive pesticide use is toxic to the birds, while noisy agricultural machinery and vehicles disturb the florican's breeding behaviour. However, the BNHS team of which the author was a part is striving to bring about positive changes in the peoples' perception, which would ultimately be a long-term solution to this and similar problems.

Moving northeastwards, we find Gangadharan Menon's description of a memorable birding trip to Neora National Park in the Eastern Himalaya. Neora is a global biodiversity hotspot, with intact and well preserved forest patches. "Nestled on Cloud Nine" is how the author felt, surrounded by Neora's unique biodiversity (which is well illustrated in the article), and he recollected Dr Asad Rahmani's words: 'If you want to gauge the health of a forest, don't look at the canopy. Instead, look at the forest floor. The less disturbed it is, the healthier the ecosystem will be.'

Dr Asad Rahmani too has contributed a success story – the restoration of a forest estate spread across a hundred acres in the western Terai Arc Landscape, adjoining Corbett National Park. In 2016, young Udaiveer Singh bought an over-grazed and over-lopped piece of land that was unfit for cultivation, and began to work on reviving its native flora and fauna. This private estate lies between the bhabar and terai tracts, where migratory birds from the Himalaya are abundant. In an hour-long birding session, Dr Rahmani could enumerate 30 species. The "before and after"

photographic record tells a tremendously positive tale, and Udaiveer Singh is among the true conservation warriors, who give us hope that not all is lost for Indian biodiversity.

Our centrespread carries a migratory flock of Lesser Sandplover *Charadrius mongolus*, a quintessential shorebird among this highly diverse group of migrant species, which are threatened by numerous adverse anthropogenic factors, such as urbanization, environmental degradation, habitat loss, and climate change. Thus, conserving them and their habitats along the eastern and western coasts of India, where they occur in massive numbers, is crucial. India supports major wintering populations of Lesser Sandplover, which are commonly seen in all its coastal states. Bird monitoring and ringing data collected by BNHS indicates that the species' population is declining in its Indian wintering grounds, and undertaking suitable measures to conserve Lesser Sandplover and its habitats in India is the need of the hour.

Finally, it is with deep regret that we record the loss of two friends of BNHS. Ramki Sreenivasan – a name that evokes brilliant images of India's avifaunal diversity in the field – even those of us who never met him came to know him through his abiding interest in the conservation of biodiversity and the beautiful images that he generously contributed to BNHS publications. BNHS and Ramki collaborated to save the Amur Falcon from hunting in Nagaland. Along with conservationists Bano Haralu, Rokohebi Kuotsu, and Shashank Dalvi, Ramki created a video of Amur Falcon being hunted at Doyang Reservoir in 2012, which he brought to show Dr Asad Rahmani, then Director of BNHS. Immediately, with an emergency fund launched by BirdLife International, a team of conservationists began work in the area to advocate against hunting of Amur Falcons, that ended soon after. In one of the most successful conservation projects of recent time, BNHS focused on education, outreach, state-level advocacy, and long-term contact, while Ramki would visit the area and check on the birds, dedicating field days and months to the project. In the words of friend and collaborator Neha Sinha, Ramki's passing is like a flame that has been cruelly extinguished, but the flame he lit in countless others will remain alive and bright.

BNHS member Dr Ajit Kumar Mukherjee, an outstanding ornithologist and field biologist, joined the Zoological Survey of India (ZSI) in 1946 under the directorship of Dr S.L. Hora. Dr Mukherjee was keenly interested in faunal surveys, and devoted his time to collecting zoological specimens, especially birds, across India. His bird collection remains a valuable part of the repository of ZSI, as do his reports, photographs, and papers on birds. His classic on the 'Food habits of the waterbirds of the Sundarban, 24-Parganas District, West Bengal' was published in five parts in *JBNHS* from 1969 to 1972. Curator of the Indian Museum, Kolkata, and Visiting Professor of Museology at the University of Calcutta for many years, Dr Ajit Kumar Mukherjee won many hearts with his simplicity and compassion. His professional and personal legacy that will not go unsung. ■

GOBIND SAGAR BHARDWAJ

Lesser Florican male

The Village with the BLUE DOORS

Among Lesser Floricans in Rajasthan

Text: **Antara Kulkarni**

Pandemic Problems

June of 2021 was an unforgiving month. With the COVID-19 infection rates spiking, and the temperatures peaking, there was little for me to do. I was becoming increasingly restless, as I was spending the most exciting period of my life away from college and friends. The confinement was bringing out the worst in me, so I decided to look for internship opportunities. I was ready to work hard and was willing to travel. To my great pleasure, I got an opportunity to intern under the guidance of project leader Dr Sujit Narwade of the BNHS in a project on the Endangered Lesser Florican *Sypheotides*

indicus in Shokaliya village in the Ajmer District of Rajasthan. Needless to say, I was very excited to be a part of his team, to conduct habitat and behavioural studies on the Lesser Florican.

The fact that I would have to work under scorching conditions did not bother me! I was over the moon and yearning to begin this new venture. My friend Riya also joined me for this internship, so we were two happy souls setting out together on this exciting journey.

Scenes of Shokaliya

The BNHS field station was located in Madhopura, a charming quintessential Indian village near Shokaliya. I was amazed by the visuals of Madhopura's streets – moustached patriarchs, sporting colourful turbans, sipped *chai* from clay cups, smoked bidis, and spoke in the musical Marwadi language. Beautiful women, draped in vibrant coloured saris, walked gracefully with water pots on their heads, their faces completely covered with a *ghoonghat* and their chunky silver ornaments gleaming in the sunlight. Cheerful children scampered around in the heat throughout the day. It was a different world altogether.

A striking feature of Madhopura was that all the houses had blue doors. I inquisitively asked the local people the reason for painting their doors in shades of azure, and they told me that the blue colour reflected the vast, rich, and infinite expanse of the sky. How true! I looked closely at those richly-hued doors on a clear day, and I could not tell where the sky ended and the ground began.

While this escape from the hustle and bustle of pandemic life was refreshing, it took me some time to acclimatize to the summer in Shokaliya. The monsoon, I learnt, was delayed that year, and although the air was heavily humid, there were no rains. The grasslands looked parched, yellow, and dry. The late rains also spelt bad news for the Lesser Florican, since its arrival was heralded by the monsoon. And so, I had no choice but to wait in the simmering heat of Rajasthan.

I was not the only one awaiting the monsoon. The farmers of Shokaliya, who had just sown their fields, also eagerly waited for the rains, which influenced the fate of their harvest. All of

ANTARA KULKARNI

Houses with blue doors — a distinctive feature of Madhopura

us would stare at the clear blue skies daily, hoping for grey clouds to gather. But the days turned hotter, with the temperature crossing 47 °C. Moreover, the humidity was high, and yet there was no sign of the monsoon. So, all we could do was wait for the weather to relent.

Surprisingly, despite the hot weather, the Shokaliya grassland bubbled with life! There was never a dull moment in the barren landscape – life resided in every nook and corner. At dawn, the peacocks searched ardently for willing hens. A little annoyed, but thankful for their punctual wake-up call, I would shake off my sleep and set out for the daily habitat survey, silently walking across the dew-dropped ground. As the sun rose, the grasslands, called *kankad* locally, slowly transformed into a bustling hub, alive with scuttling quails, sandgrouse, and even the occasional Indian Courser! The vegetation was woody scrubland, with trees such as Kair *Capparis*

ANTARA KULKARNI

ANTARA KULKARNI

Villagers of Madhopura in their traditional colourful attire

SOMSHEKAR

Leaping breeding display by the male Lesser Florican

decidua, Khejri *Prosopis cineraria* and Mesquite *Prosopis juliflora*, which dominated the landscape. Although the landscape appeared dull at first glance, the scrubby Kair trees added a vibrant pop of colour with their coral flowers, which attracted sunbirds, drongos, mynahs, and bulbuls.

Befriending the Florican

It was on one of those days, when the hot afternoon sun was pounding on my head, that Chandraprakash, my dynamic field assistant, made a quick motion pointing far ahead in the grassland. I caught a movement in that direction, and I saw a black and white bird with long yellow legs trotting away. There it was – the elusive Lesser Florican! My heart thumped so loudly with excitement, that I thought everyone around me could hear it! Though my first sighting of the florican lasted for only a few minutes, it is permanently etched on my mind. It was much later, with the onset of the monsoon, that I saw the breeding bird's famed leaping display.

When the rains finally set in, the flush of the moong and jowar crops added a splash of green to the Shokaliya landscape. It was in these fields that I first witnessed the display of the male florican. To the naked eye, it looked like a white spot briefly suspended in the air; but through the spotting scope, the white spot transformed into a resplendent florican, springing two to three metres up in the air. At the zenith, the florican gracefully arched its back, proudly displayed its crown feathers, much like the pose of a movie star for its adoring fans, and within a few seconds, it returned to the ground. Then, it kept leaping repetitively, with a distinctive '*trrrrrr*' sound, resembling the croak of the Indian Skipper Frog. Floricans can perform this leap display about 5–10 times in a minute, contesting for the attention of their lady love.

Over the course of my internship, I saw the Lesser Florican male display on 15–20 occasions, first in the jowar fields, and once the crop grew tall, in the moong fields. I have watched the florican several times, but each time I am entranced by its majestic display. Despite my best efforts, I never sighted the female florican due to her cryptic plumage, which effectively camouflaged her among the crops. Also, the

female is relatively shy and infrequently seen compared to her flamboyant male counterpart.

I realized that the lives of all animals are linked to the human communities with whom they share their habitats. The Shokaliya communities were familiar with the Lesser Florican, which they call *Kharmor*. They were also aware of BNHS's project on this species, and were prompt in providing any information about the bird's whereabouts.

I observed that the bird was rather unperturbed by the presence of the locals, and would often display right behind a farmer as he ploughed his field. That's when I had my eureka moment! Why not dress up like a local woman and inch closer to the birds to observe them better? The idea was approved by Chandraprakash's family, and the ladies happily lent us their colourful saris. Next morning, Riya and I walked into the crop fields dressed like the local women, with our faces covered with a *ghoonghat*. But instead of sporting shining silver jewellery, we hung cameras and binoculars around our necks, and instead of the water pot, we clutched our datasheets! To blend in, we also tried to trick the bird with an imaginary plough in our hand, occasionally pretending to plough the field. As we struggled to manage our attire, we got entangled in thorny vegetation, bumped into each other, and tripped on our saris. We even crawled on all fours, managing both our equipment and the *ghoonghat*s. We were a hilarious sight, providing comic relief to our team. But our efforts were not wasted – the florican was completely tricked by our guise and we could get a much closer look as it went about feeding, unhurriedly sauntering in the fields. We spent a long time recording data and were deeply satisfied to have been completely ignored by the florican!

ANTARA KULKARNI

Barred Buttonquail, a master of camouflage

Future of the Florican

It may appear that the Lesser Florican is well-adjusted to people and anthropogenic activities in its habitat, but this understanding would be naive. An alarming portion of the grassland, almost 60–80%, has been encroached by the

ANTARA KULKARNI

Flocks of Rosy Starling added to the joy of being in the wild

ANTARA KULKARNI

Lesser Floricans are moving to agricultural fields, as their grassland habitats are being lost, but excessive pesticide use and noisy machinery in the fields also threaten their survival

invasive Mesquite. This rapid habitat loss is forcing floricans towards agricultural fields, and away from grasslands. Sadly, even croplands are not free of threats. Excessive pesticide use threatens the birds, while noisy agricultural machinery and vehicles disturb the florican's breeding behaviour. On one occasion, I observed a florican leave its territory mid-display due to an approaching tractor. Lesser Floricans are territorial birds that form clearly demarcated domains called leks, from where they display, competing for females. Disturbances in the leks can impact their breeding activity. Therefore, in a small grassland that hosts about 125 floricans, it is important that the breeding success is high.

Based on my observations and after discussions with several BNHS scientists, I understand that concrete conservation efforts are urgently needed to preserve the steadily declining Lesser Florican's habitat and resources. The participation and support of the local community in the conservation initiatives for this species are equally important, as is robust field data to assess the success of conservation initiatives.

The Lesser Florican's life is intricately woven with the grasslands, which have been used by the local people for centuries. Changing land use patterns may impact the future of the florican adversely and this is an issue of concern, but the spirit of science, the serenity of Shokaliya, and the positive outlook of the locals have given me new found faith. The blue doors of the village have opened new vistas for me, and I hope to witness the florican time and again in Shokaliya in the future. My days spent in the Shokaliya grasslands have enriched me in several ways, and paved the path for a new thought process that nudges me to ask questions and observe lifeforms from a wider perspective!

Antara Kulkarni is a 4th year BS-MS student in IISER Bhopal. Her training as a biologist has encouraged research interest in avian behavioural ecology and community-based conservation.

NESTLED ON CLOUD NINE

– Neora Valley National Park

Fiddlehead fern

Text and Photographs: **Gangadharan Menon**

It was almost 37 years ago that my wife Anita and I first visited the northern regions of West Bengal. At that time, we were not birders but mere mortals who stared wide-eyed at the many splendours of Mother Nature (an incidental trip to Bharatpur in Rajasthan much later, and an introduction to Sálim Ali's THE BOOK OF INDIAN BIRDS, ignited a fire in us that is still burning bright!). We had taken a break-neck ride through a bus service, aptly named 'Rocket', from Kolkata to Darjeeling through the fragile area of Dinajpur, which was the gateway to north-eastern Bengal and to the greater Northeast. Two images from that trip that are deeply etched in our minds are those of innocent apple-cheeked faces vying for attention among the vibrant wild flowers blooming in balconies, and the divine sight of the Khangchendzonga Peak with the golden sun melting down its slopes.

Rhododendron sp.

Rhododendron yedoense

Our present trip, organized by BNHS, was a birding trip to Neora Valley National Park in Kalimpong District, West Bengal. Situated at an altitude of over 7,500 ft, it nestled amongst clouds that perennially played hide-and-seek. Fortunately the military airport of Bagdogra had opened for civilians; so we could fly directly from Mumbai to Bagdogra.

Marina Motel, our halt for the night, was close to the airport. Although our birding trip was to start the next day at 8:00 a.m., our fellow birders did not wait for the actual birding trip to begin. A casual walk in the motel garden that evening yielded three sightings: an Oriental Pied Hornbill, an Indian White-eye, and a collared dove – all on a Mast tree and an exotic Avocado tree. For the first time, we saw a Great Pied Hornbill holding a Calotes kill as its evening snack. Typically, you see a Pied Hornbill with a ripe red fig in its oversized beak – a delightful sight for any photographer worth his lens.

On the morning of April 6, 2022, the sun rose almost an hour before we expected at Bagdogra, located in the far-eastern part of India. Stirred into action, the Oriental Magpie-robin sang melodiously. Could there be a better way to start a birding trip?

We drove to a canal that connected two mighty rivers – Teesta and Mahananda. But unlike the two legendary rivers that have majestic character and rich cultural history, this man-made canal was lifeless – meandering like a dying snake. At the Teesta Barrage, from where the Teesta river flows into Bangladesh, was a huge waterbody named Gajoldoba. The only migratory bird spotted in this waterbody was a lazy Northern Shoveller, which had probably missed the proverbial bus, and a few other birds, such as coots, grebes, and whistling teals.

Further along the way to Neora, we halted at other waterbodies. At one such waterbody, we saw a pair of Bronze-winged Jacanas. Dr Raju Kasambe, our trip leader, shared an interesting behaviour about these birds – unlike most bird species, the male jacanas take care of the newborn chicks. The males transport their chicks to different places, carrying them under their wings. To make sure that all the chicks are of the same size and that the male can easily transport them all together, the female jacana lays the entire

clutch simultaneously, and incubates and hatches them together.

Another interesting fact we learnt was the difference between cormorants and grebes. Cormorants create ripples in the water when they dive, whereas grebes dive so smoothly that they do not leave behind even a single tell-tale ripple.

Further along the way, we saw a pair of Ashy Woodswallows cuddled on a wire. Later, on the ground, we saw a Red-wattled Lapwing nest that was revealed by itself. As we passed the nest, the bird created such a ruckus that we paused to find the reason; and there they were – perfectly camouflaged eggs amongst pebbles. Silly lapwing, if it had not made such a fuss, we would have never noticed those eggs! After a while, Mithun Biswas, our logistics person who also doubled up as our guide, pointed to a nearby tree, which exhibited hectic nesting activity of Asian Pied Starlings – three separate nests were being made simultaneously on three different branches of the tree.

We hiked further through a mountain road lined with white Rhododendrons surrounded by curtains of fluffy clouds, till we reached our spot on cloud nine. There, hidden among the pine trees, was our abode for the next four days: the Neora Valley Jungle Camp. Chiselled aesthetically on a beautiful hill, it had wooden cottages named after birds. My wife and I were assigned the Shikra cottage. Each cottage had skylights that let in natural sunlight. The restaurant of the camp was also well appointed, with vases on each table bursting with smiling wild flowers, which matched the smiles of the staff, including that of an 81-year-old kitchen help, Kim Bahadur. Most prominent among the staff was young Prem, one of the finest cooks I have ever met anywhere, let alone in an isolated forest.

That night after dinner, my wife and I indulged in an hour of moth-watching with the closed window pane acting as a light curtain. Later we snuggled under the thick blanket of the night, hoping that the mist would clear by morning, to reveal the mystical Khangchendzonga.

To our dismay, that was not to be. We were gently woken up by the rhythmic pitter-patter of raindrops on the tin roof of our cottage, a sound just like a lullaby, but we did not sleep again as

Raju Kasambe led the birding trip to Neora Valley

we had miles to go, looking for birds. Although the persistent drizzle had reduced visibility, by the time we finished our morning cuppa the light was good enough to spot birds, and we set off to the nearest village, 'Kolakhamb'.

Two plants, the Tree Fern and Snake Plant, confirmed that these forests were ancient. Four decades ago, Ussanar, our guide in the Silent Valley of Kerala, had told me with his typical wry humour, 'Sir, these two plants have not mutated for millennia – if dinosaurs were to be born again today, they would recognize these plants immediately, as they used to grow in their backyards!'

We later saw birds of different feathers flocking together on a massive tree nearby. Contrasting with the small size of most of these birds, their calls were loud and clear. And just like everything else about the Himalaya, even the bird names – Yuhina, Minla, Leiothrix, Myzornis, Elachura, Sibia – were unique. Little did we know that the congregation of birds in front of

Top L-R: *Rhododendron dalhousiae*, *Arisaema speciosum*
Bottom L-R: *Usnea* sp., *Rhododendron* sp.

us was because Sandeep, our local guide and an ace birder, was drawing them out from the deep forest towards us by playing back recorded bird calls. Sadly, like many of his peers, he too was a part of the numbers game, to show tourists as many species as possible on a single birding trip. On realizing this, Dr Kasambe forbade him to use unethical means to lure the birds.

An unexpected drizzle resulted in a plethora of movement of other lifeforms – leeches arising from the forest floor; a pretty-looking moss named Sphagnum harvesting rain droplets; and a bunch of woolly caterpillars huddling together. Among the wild strawberries, honeybees were having a field day. Curtains of mist swirled aside to reveal Lava Monastery in the distance, which was wrapped in a robe of mysticism. The name of the monastery is apt as the landscape is embedded with ancient volcanic rocks, which are now covered with vegetation, similar to Angkor Wat. We ended our day with an evening walk to the Changey Falls, where we witnessed a celestial drama – the murmuration of the migratory Tibetan Siskin.

The next day, we visited Chaudapheri in Upper Neora, at an altitude of over 8,000 ft. After

Neomarica gracilis, also known as Walking Iris

reaching the town of Lava, we drove in a four-wheel-drive jeep on a path that did not exist! The star of this birding trip was the Russet Sparrow, whose endless chattering drew us into the forest.

In this forest, prehistoric trees laden with primeval moss appeared like a sacred grove, where one should enter on tiptoe, lest you disturb the spirits of the forest. We had encountered such moss-laden rainforests only twice earlier – in Mawsynram in Meghalaya and Agumbe in Karnataka – both of which are among the wettest places in India. The main vegetation in the upper reaches of Neora comprised different varieties of bamboo, such as common bamboo, cane bamboo, and Malingo bamboo, the last of which is the elusive Red Panda's favourite food.

Pollinator on wild strawberry

Moth caterpillars at work

Hoary-bellied Squirrel

As I gazed at the forest floor, where life was regenerating at every step, Dr Asad Rahmani's words echoed in my ears: 'If you want to gauge the health of a forest, don't look at the canopy. Instead, look at the forest floor. The less disturbed it is, the healthier the ecosystem will be.'

Stopping by a gurgling brook, we were instantly recharged after drinking the cool, sparkling water. Paradoxically, this pristine water which is common property is bottled and sold back to us in the name of Himalayan spring water. At the Chaudapheri Check Post, over-enthusiastic forest guards tried to entice a couple of laughing-thrushes out into the open by throwing cooked rice, but the birds were not lured and they had the last laugh.

The next morning, around 3:00 a.m., we were rudely woken by the pitter-patter on the tin roof, accompanied by thunder that echoed in the mountains and lightning that flashed through the dark night sky. This raised doubts whether our last day of birding would be a washout, but fortunately the skies cleared by 5:30 a.m.

Stunning landscape in Neora Valley National Park, West Bengal

Bird species sighted at Neora Valley: Top (L-R): Red-wattled Lapwing, Bronze-winged Jacana, Bottom (L-R): Russet Sparrow, Asian Openbill

Laddam Road in Lava town was our birding site for the next day. Its picture postcard beauty was only marred by the occasional landslides that dotted the scenic slopes. Here, houses were few and far between. One of the visual delights of this trip was a Niltava that caught a worm, impaled it on a branch, relished it in our presence, flew downwards to do a jig mid-air, and then disappeared like a blue streak into the green foliage. Most other birds were constantly flitting around, barely giving us any time to identify them, which made me wonder about the subtle difference between 'This *is* a Minla' and 'This *was* a Minla!'

This memorable trip to one of the lesser-known national parks of India ended with a short night drive. The calls of owls and flying squirrels assured us that all was well in Neora Valley National Park, even in the thick of night. I also carried home a unique souvenir from this forest – a scar from a leech bite, which was a reminder that in a forest, you are at the mercy of its denizens, as you are an intruder in their abode.

They say, 'Don't miss the woods for the trees.' In Neora, with its tremendous biodiversity, I learnt another cardinal natural history lesson: 'Don't miss the forest for the birds.'

Gangadharan Menon is a writer and wildlife photographer interested in everything that is there in a forest. He was felicitated by Sanctuary Asia in 2016 for his contribution in saving Silent Valley.

A heron's nest in view from my terrace

I first saw a Black-crowned Night-heron from my balcony in July. As this was a lifer for me I rushed to get my Nikon Coolpix P950, and clicked a few pictures. I identified the bird from its ashy grey upperside, with black crown, back and scapulars, and its long black occipital crest; it also had the typical hunchbacked posture.

Initially, I thought that the bird was merely resting on the Sonmohur *Peltophorum pterocarpum* tree near my housing society, but when I spotted the same bird at the same location a few days later, I wondered if this was a coincidence or was I seeing the same bird yet again. I began closely observing the heron and noticed that it was in breeding plumage, and that it appeared to have a partner, of which I could really not be sure at that time, as there is hardly any difference among the male and female of the species, except that the female is slightly smaller and has a less prominent occipital crest.

A few weeks later, I saw some more herons, and an egret too. A few days later, I heard loud calls that were less noisy than those of juvenile Painted Storks. It was later that I discovered that the calls were of Black-crowned Night-Heron juveniles. I ran to the terrace once again to capture the juveniles in my camera. The juveniles were learning to jump from one branch to another, and their parents were watching over them. These juveniles were in the nest for almost four weeks. They were slow, but restless, and kept taking small flights. Before each flight, they would stretch their necks, observe their surroundings, and then take off. The calls of the juveniles were most audible at early morning and lessened as the day progressed. Thick foliage prevented me from getting a picture of them while feeding.

Bird life was blooming right in midst of such a heavily concretized city as Mumbai, and this can be credited to the tree planters, conservationists, and of course, to the adaptability of the birds.

– Vikas Pansare
Mumbai, Maharashtra

Feathered fairies on my cherry trees!

In June 2022, I introduced a variety of sweet cherry, bought from the United States, in my orchard in Nainsukh, a hamlet in central Kashmir. The plant grew well and also bloomed profusely, but the entire plantation was soon infested by larvae that voraciously defoliated the tender shoots. I sprayed pesticide over a few plants, to prevent further infestation, but unfortunately it adversely affected the tender buds. And so, I was left with only one alternative – to pick each larva manually! This too was difficult as the plantation was spread across a large area. Nonetheless, I began this arduous task, but soon I observed that a flock of House Sparrows had joined me in this venture; they began feeding on the larvae. In no time, my feathered friends had eliminated all the larvae from the cherry trees! I do not know what would have happened to my plantation in the absence of these birds!

– Mian Raza
Nainsukh, Jammu & Kashmir

A girl of the mudflats...

I got up to the dawn, too sleepy & still tired
Going to be another long day, my mind sighed
Hopped onto the push bike, my optics set
And rode to work, as nightjars wept
I stepped into the chilly water, my toes going numb
Its dark still, only the Curlew's up, his companions to come
It felt lonely, then my fisher friends passed, their smiles warm
And we waited for the sun, to kiss the blues & browns as it brings the morn
Vibing with the sun, the hungry Knots arrived, the Great & Red
Their summer coats on, the Godwits next & stitched the mud
The Golden rays started a slow dance to the music of rising tide
The hundred sandpipers couldn't wait & joined the pride
The noisy pied bunch, the crab hunters out
At them a Whimbrel laughed, making the Redshanks shout
And there marched an army of peeps, their plumage all dull
Yet their thousand mile journey carried an awe overfull
My scope and my eyes got busy absorbing the delight
It filled my soul, Oh! my day just begun so bright
As I wade along, with the birds my heart chats
And yes... i'm glad that i'm a girl of the mudflats

– Gayomini Panagoda

NISHIGANDHA PEDNEKAR

ABOUT THE POSTER

Shorebirds constitute a highly diverse group of migrant species that move across continents along their flyways. For their annual journey between wintering and breeding grounds, shorebirds require a high amount of energy. They are known for their long-distance migration to breeding, stopover, and wintering sites, driven by seasonal influences on resources. Shorebirds are considered a fragile group of birds; their number has been declining significantly and so are the patterns of their migratory phenology, due to major environmental changes around the world. Many of these changes have been linked to anthropogenic factors, such as urbanization, environmental degradation, habitat loss, and climate change. Thus, conserving them and their habitats along the eastern and western coasts of India, where they occur in massive numbers, is important.

The Lesser Sandplover *Charadrius mongolus* is listed in Appendix II of the Convention of Migratory Species, which includes species that need conservation attention. It is also included in the Agreement on the Conservation of African-Eurasian Migratory Waterbirds, an intergovernmental treaty dedicated to the conservation of migratory waterbirds, and East Asian-Australasian Flyway Partnership for conservation in different habitats across Asia and Australia. Additionally, the Lesser Sandplover is listed as a priority species in the Central Asian Flyway National and International Action Plan, for its conservation throughout its range. India supports major wintering populations of this species, which is commonly seen in all its coastal states. The bird monitoring and ringing data collected by BNHS indicates that its population is declining in its Indian wintering grounds, and thus, undertaking suitable measures to conserve this species and their habitats in India is the need of the hour. ■

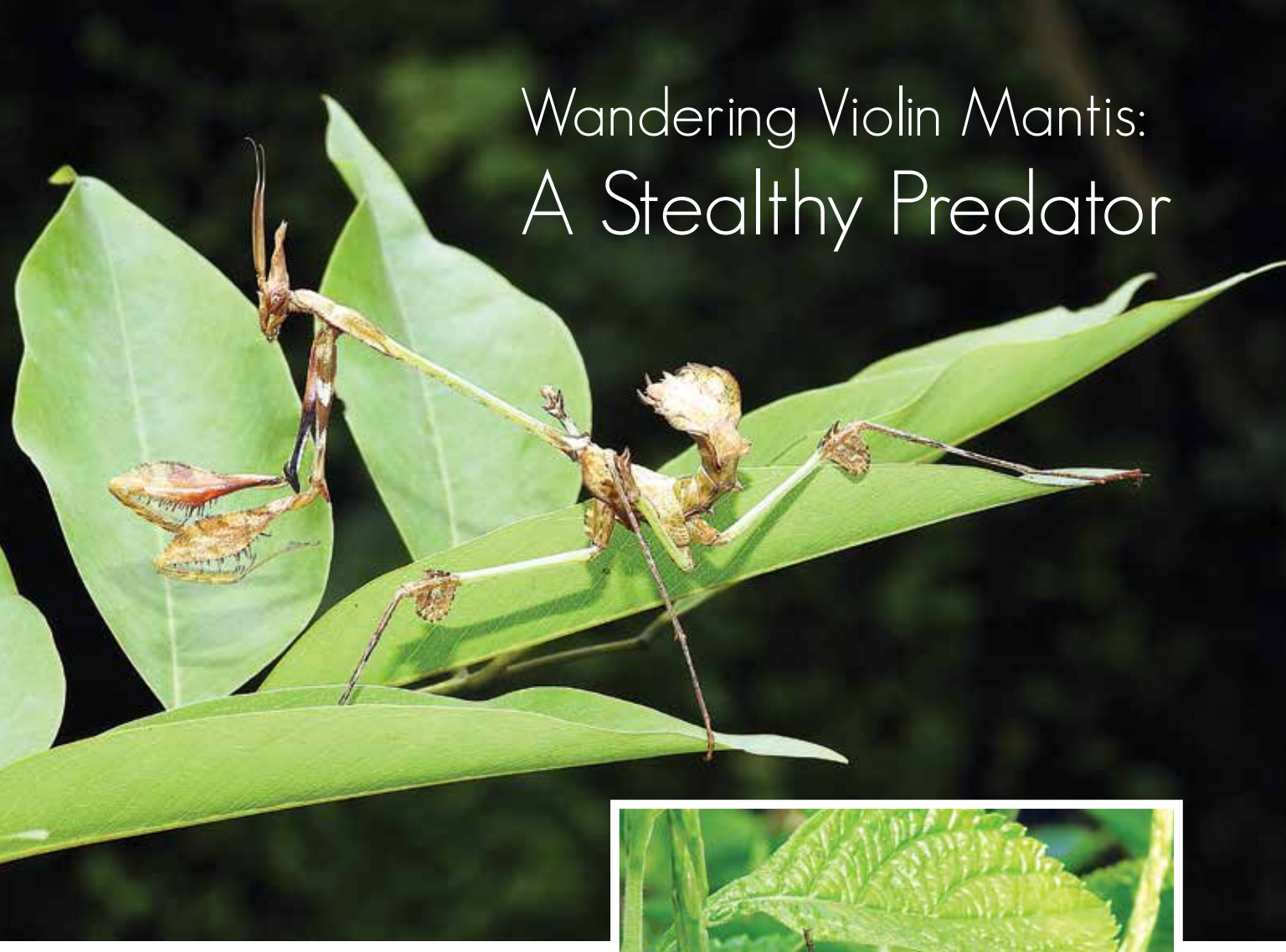
DEEPAK NALAWADE

Lesser Sandplover *Charadrius mongolus*

DEEPAK NALAWADE

Lesser Sandplover *Charadrius mongolus*

Wandering Violin Mantis: A Stealthy Predator



Text and Photographs: **Raju Kasambe**

When I first saw this insect that mimicks a dry stick, I was surprised at the effectiveness of its camouflage. The mimicry was so perfect that we all believed that we were looking at a dry stick, and not a living creature near the flowers. The insect was later identified as Wandering Violin Mantis *Gongylus gongylodes*. This species may not be rare in the forests of Mumbai, but it is surely not easy to locate! It often remains undetected due to its unique shape and cryptic dull brown colours. The violin in its name comes from its unique shape. The body resembles the soundboard of a violin, the head looks like the top of a violin, and the long, thin midsection like the neck.

This mantis was often seen stealthily hanging upside down from a stem or sitting erect near the flowers on a branch in the butterfly garden at BNHS Nature Reserve, Mumbai. It remained motionless for many minutes. On windy days, the mantis also swayed with the wind, and it appeared as if dry leaves and sticks were moving! In reality, this stealthy predator was using its sit-and-wait, ambush strategy to catch an unsuspecting prey, which would visit the flowers in search of nectar. Its prey here would mainly be butterflies, which flew slowly around or settled on the flowers to feed on nectar! On multiple occasions, Common Wanderer butterflies and sometimes a Yellow Orange Tip fell prey to its hunting tactics. Once, the mantis was seen catching a butterfly straight out of the air! The mantis chopped off the head of the struggling butterfly to start its meal!

Like most mantids, the midlegs and hindlegs of the Wandering Violin Mantis are very thin, resembling dry sticks or grass. But the forelegs are typically large with enlarged femur and tibia structurally modified to look like the bulging muscles of a body builder! These parts have curved spines on them, which close in like a trap to prevent the escape of its prey! The mantis usually walks on its mid- and hindlegs, keeping the forelegs raised, thus it looks like a quadruped. A close-up of its face, with its biting-chewing mouthparts, demonstrates its predatory instincts!

On October 27, 2020, an egg case (also called ootheca) was found on a dry branch of a tree. The egg case was collected for rearing, and kept in a plastic container with tiny holes for aeration. On January 2, 2021, young mantids (called nymphs) were seen emerging from the ootheca. Soon there were many tiny mantids climbing over each other. They looked whitish grey, not having camouflaging colours like their parents. They were soon released into the butterfly garden where the ootheca had been found. Next day, some of them were seen perched atop flowers! I hoped they would all soon grow up into stealthy predators like their parents, and would start performing their role in the forest food chain!

Raju Kasambe is Assistant Director, Education and manages the Conservation Education Centre (CEC), Mumbai. His main interests are birds, butterflies, and environmental education.

Ramki Sreenivasan
April 03, 1972–December 17, 2022

A few months ago, Ramki Sreenivasan contacted me. With his characteristic zeal, he wanted to brainstorm with me to counter attacks being made on the Indian Wild Life (Protection) Act by a senior ecologist. When I reflect on this, 'brainstorm' is a good way to remember Ramki. His persona was like a storm, with his needle-sharp opinions and data-driven mind. He believed in collective intelligence and forging collaborations whenever possible. We tragically lost Ramki Sreenivasan, friend, wildlife photographer, conservation crusader, and co-founder of the web portal Conservation India on December 17, 2022. His passing feels like a loss that is at once personal and for the community.

Ramki believed that given the right tools, everyone could contribute to conservation. Over the years, I have lost count of the number of issues we spoke on, discussing policy and strategic insights, so we could design public campaigns. The best-known collaboration between BNHS and Ramki was for Amur Falcon conservation in Nagaland. Along with conservationists Bano Haralu, Rokohebi Kuotsu, and Shashank Dalvi, he created a video of Amur Falcons being hunted at Doyang Reservoir in 2012. When he brought the video to Dr Asad R. Rahmani, then Director of BNHS, who shared it with me, we felt we must do something – the heart wrenching visuals had kept us awake three nights in a row. With an emergency fund launched by BirdLife International, we began work in the area to advocate against hunting. That ended the hunting of Amur Falcons soon after, and was one of the most successful conservation projects of recent time.

While BNHS focused on education, outreach, state-level advocacy, and long-term contact, Ramki would visit the area and check on the birds, telling me the local gossip, the wildlife he had spotted, and his guess for how many falcons he had seen that morning. He would also bring in specialists, including filmmakers, birdwatchers, and other conservationists to the area. While the Amur Falcon is well-known now, other less popular issues were also taken up by him with the zeal of a crusader. I realize now that this zeal was because he always wanted to make the absolute best use of his life as a conservationist, after taking early retirement from his corporate career.

Together, we raised several issues: mitigation for flamingos affected by the construction of the Trans Harbour link in Mumbai; reconsideration of the development of a missile firing range in Tillanchong in the Andaman and Nicobar Islands; to safeguard Pulicat lagoon in Tamil Nadu from a huge port; saving Flamingo City in Kachchh, Gujarat, from linear projects; and protection of the Hesaraghatta grasslands in Bangalore. But perhaps his most well-known piece of campaign material was 'Stop! Don't Shoot like that – A guide to ethical wildlife photography', which he co-wrote with filmmaker Shekar Dattatri. This forward-looking treatise centres the welfare of wild animals, warning against nest or den photography, chasing and baiting animals, or using birdcall playback. Several irate photographers told me they don't want to be preached at, but criticism like this never affected Ramki. He staunchly believed that wildlife deserves its privacy, and that development and housing should be planned away from wildlife.

Ramki held his convictions with steadfast courage, and we did not always agree, and sometimes we fought. In many ways, he was an idealist and did not believe in pacifism. But I strongly feel that in a sea of critics, we need islands of idealism. The difference between Ramki and other idealists was that he executed his dream and brought people together to tackle issues. He was rare, in that he was chasing not personal fame but positive impacts for wildlife. He called me once to ask if he could bring expert communicators Payal Molur and Rita Banerjee to our eco-clubs in Nagaland. I agreed, and was so excited. Wonderful skits and educational material were made, and we were suffused with a friendship even though we hadn't met before. That was because we all trusted Ramki.

In a field like conservation, challenges are just as many as the birds you can see in a day. Almost everything can be a threat to a wildlife habitat, and we often find ourselves fighting court battles, long but courteous arguments in government offices, speaking to the press while trying to bring sustainable development narratives forward, and facing criticism from those who want double digit growth

at any cost. All conservationists face this, along with the possibility of an overnight loss of their loved wild animal or site. Driven always by his passion, Ramki proved that conservation can be disseminated and made into public opinion – that with the powerful tool kits he made, packed with petition links, videos and fact sheets, anyone could be involved in striving for a more wildlife-friendly India. And that the constituency of wildlife conservation can be made broader with a science based, campaign-oriented approach.

He also believed in the central value of the Wild Life (Protection) Act, which grants a stature and protection to Indian wild animals. He wasn't afraid to be politically incorrect in a country where only politicians or the ultra-wealthy get away with being controversial. He was working on a GIS based analysis of illegal land grabs in forests, by industries as well as communities.

I would often get messages from him that were unconnected, but very quirkily him, showing the range of his interests. Asking about the books I read, and WILD AND WILFUL, the one I wrote; a photograph of his dog, Silly; a sketch of Sálim Ali he had drawn; asking for a link to an op-ed on Asiatic lions I had written nine years ago; sharp criticism of public comments against wildlife; photos of single malts, and a Coppersmith Barbet on a Banyan tree near his house. When he first beat cancer, he told me the birds he loved had steered him to recovery and filled him with hope – that he owed his life to them. I believed he would continue to live a recovered life because there were still so many birds in the world – that we would still bicker and brainstorm.

Ramki's passing feels like a flame has been cruelly extinguished. But I hope that the flame he lit in countless others is alive and bright. And we all hope he is with the birds now. ■

– Neha Sinha

Dr Ajit Kumar Mukherjee

(February 1925 – July 2021)

Dr Ajit Kumar Mukherjee, an outstanding ornithologist and field biologist, was born in Varanasi, Uttar Pradesh in 1925. His schooling and intermediate education were conducted at St Andrew's College, Gorakhpur, and his higher education at Allahabad University, Allahabad. After obtaining an MSc, he joined the Zoological Survey of India (ZSI) in 1946 under the directorship of Dr S.L. Hora. Dr Mukherjee was keenly interested in faunal surveying, and devoted his time to collecting zoological specimens, especially birds, across India. His bird collection remains a valuable part of the repository of ZSI, as do his reports, photographs, and papers on birds, which bear testimony to his significant contribution. His classic on the 'Food habits of the waterbirds of the Sundarban, 24-Parganas District, West Bengal' was published in five parts in *Journal of the BNHS* 66(2), 68(1&3), 71(2), and 72(2), from 1969 to 1972. For his intensive study on the waterbirds of Sundarban, he was awarded a Ph.D. by the University of Calcutta. His studies on rare and vanishing wild animals and birds of India were documented in his books ENDANGERED ANIMALS OF INDIA (1982) and BIRDS OF ARID AND SEMI-ARID TRACTS (1995), published by ZSI. On the request of the Publication Division, Govt of India, Dr Mukherjee wrote a monograph on OUR NATIONAL BIRD, PEACOCK (1999). His internationally acclaimed and much cited article on 'Some examples of recent faunal impoverishment and regression' appeared in ECOLOGY AND BIOGEOGRAPHY IN INDIA, edited by Professor M.S. Mani, and published by Dr W. Junk, The Hague, in 1974. He was nominated as a representative to the CITES meeting held in 1981, at New Delhi.

Dr Mukherjee was Curator of the Indian Museum, Kolkata, and Visiting Professor of Museology at the University of Calcutta for many years. He guided several Ph.D. scholars in Zoology and Museology. He served in ZSI for about 37 years, and retired as Deputy Director at the ZSI's Desert Regional Centre, Jodhpur. For the next three years, he was involved in pursuing research on arid zone birds, and a book writing project as an Emeritus scientist with a fellowship from Govt of India. Dr Ajit Kumar Mukherjee won many hearts with his simplicity and compassion. The footprints that he leaves behind are a professional and personal legacy that will never go unsung. ■

– Ananda Mukhopadhyay, Rana Mukherjee & Deb Mukhopadhyay

The Sacred *Neelkanth*

Text: **Rajat Bhargava**

RAJAT BHARGAVA

Indian Roller

Almost every year on Dussehra, I remember Guddo – a bird trapper, for his fascinating anecdotes on the Indian Roller *Coracias benghalensis*, popularly known as *Neelkanth*. My neighbour in Meerut, Uttar Pradesh, Guddo once shared an incident that occurred nearly three decades ago. An old lady had ordered a *Neelkanth* from him a day prior to Dussehra, and requested, 'Kindly bring a *Neelkanth* to my house early morning, ring the doorbell, keep the bird at the gate and disappear for a while. I want to first have a *darshan* of the sacred bird, make a wish and set it free, after which you can come and collect your money.' Guddo confessed that instead of procuring a *Neelkanth*, he had kept the more commonly found White-breasted Kingfisher at her doorstep. Since the woman had no knowledge about the real *Neelkanth*, Guddo got his *baksheesh* of Rs 501. She was also unaware that the kingfisher freed by her did not fly for more than 10 metres from her home. Guddo was watching and had seen the bird fall on the road after it flew a short distance. He said, 'The kingfisher was emaciated, as we did not have much to feed the bird which we had captured two days back. Also, it had contested with other captives in the same cage for insect prey, and consequently it was injured.'

The late Guddo was part of the Baheliya tribe, whose livelihood depended on trapping birds, before the Government of India banned the trade in native birds. His family would often narrate stories about

their traditional vocation. Although Guddo had many Indian Rollers with him that day, he showed the 'lucky' bird only to those who gave handsome amounts throughout the festive day. Sadly, the fate of most released birds was the same as that of the kingfisher released by the old woman! Most of these practices have now become illegal, as they are detrimental to nature in many ways; increasing awareness has resulted in the fading of such traditions. Nevertheless, captured *Neelkanth*s are still released in some places on religious pretexts.

Neelkanth – A sacred bird in Hindu mythology

In India, from time immemorial, wildlife has been closely associated with beliefs, folklore, epics, and ancient history. For example, the sighting of the Indian Roller on Dussehra day is considered extremely auspicious among Hindus. For those familiar with the story of the churning of the ocean, a deadly poison was one among the many things that came out of the ocean. Lord Shiva drank the poison and held it in his throat, giving it the distinct blue colour (Neelkanth, a synonym of Lord Shiva, means blue throat). The bird *Neelkanth*, with its brilliant dark and light blue colouring, is believed to be an incarnation of Lord Shiva, even though its *kanth* (= throat) feathers are not blue. Also, sighting this bird on Dussehra (or Vijayadashmi) is believed to increase one's wealth, lead to victory, and fulfill wishes, as Lord Rama is believed to have killed Ravana after seeing a *Neelkanth*.

In various regional languages, the *Neelkanth* has been described as a messenger of Lord Rama. For example, '*Neelkanth tum nile rehna, meri baat Ramji se kehna. Sote hon toh jagake kehna, jage hon toh jatake kehna*.' A similar verse describes – '*Neelkanth tum nile rahiyo, dudh bhath ka bhojan kariyo, hamri baat Ramji se kahiyo.'* In the tribal belt of eastern India, this bird is revered as an emperor, and saluted by saying '*Teshe Raja Theshkumkum Maharaja Salam*'.

In Sanskrit literature, the Indian Roller is referred to by many names. K.N. Dave in his classic BIRDS IN SANSKRIT LITERATURE refers to the following eight names of the *Neelkanth*, quoting an entry from *Shabdaartha Chintamani*:

"*ashokashcha, vishokashcha, nandanah pushtivardhanah,*
hematundo, manigrivah, svastikashchaaparaajita
ashtau chaashasya naamaani chaasham drishtva tu yah pathet
arthasiddhirbhavettasya mishtamannam varaanane"

History records that Mughal emperors, from Shahjahan to Bahadur Shah Zafar, while holding durbar at the royal court of the Red Fort in Delhi on the morning of Dussehra, would set free the *Neelkanth* in accordance with Hindu tradition, signifying victory and success.

Interestingly, in West Bengal, captive *Neelkanth*s were in great demand until a few years back, as they were traditionally associated with Bijoya Dashmi, the last day of Durga Puja. According to legend, the return of Goddess Durga along with her children to their abode in Mount Kailas, on Dashami was conveyed to her husband Lord Shiva by the sacred *Neelkanth*.

There is a poem in Bengali that translates to 'Go *Neelkanth*, fly to Kailas, inform all that Ma Durga is set to return.' According to accounts from Bengali literature, since many centuries, people in Kolkata have been following the tradition of releasing two *Neelkanth*s on the afternoon of Dashmi. The first one is released in front of the house when the goddess steps out of the house, and the second when the idol is finally immersed in water.

COURTESY: WWW.ETSY.COM

Earrings made from the feathers of the Indian Roller

The Indian Roller in Indian culture

In his epic 2013 book, BIRDS AND PEOPLE, Mark Cocker mentions an intriguing piece of folklore from Kerala – Indian Rollers are caught and 'then cooked in a kind of broth that is meant to have

RAJAT BHARGAVA

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The Indochinese Roller *Coracias affinis* (left), presumed to be a subspecies of the Indian Roller *Coracias benghalensis* (right) but now considered a separate species, for sale in a weekly village market

therapeutic value in cases of whooping cough'. In Sri Lanka, the Sinhalese call the Indian Roller as *Dumbonna*, that means one who inhales smoke. This belief stems from the practice of the annual burning of grass and secondary forests, to promote the growth of fresh green vegetation as fodder for livestock. As the fire spreads, insects fly out in vast numbers to escape the flames. This attracts insectivorous birds, such as Indian Rollers, Bank Myna, and Black Drongo, all of which congregate to catch flying insects. The Indian Roller is also believed to be attracted to fire; it flies around the margins and occasionally into the flame path 'to hunt for large insects and other edible evacuees'. This has led to its use in traditional medicine for treating asthmatic cough. Cocker explains 'One might imagine that the birds' strong lungs and renowned tolerance to smoke and fire might be the root of this practice.' His description is based on K.N. Dave's BIRDS IN SANSKRIT LITERATURE, which clarifies that this medicinal use is recorded in ancient Sanskrit literature.

In north-east India, chicks of Indochinese Roller *Coracias affinis* are sold for food and traditional medicine for various ailments, including cough. In the tribal pockets of Bastar, some Bhil and Gond tribals relish the meat of young Indian Rollers collected from nesting cavities. Additionally, in some parts of India, it is believed that feeding cows with chopped feathers of rollers along with grass increases the milk yield.

Historically, owing to their colourful plumage, hundreds of Indian Rollers were caught to meet the demand for stuffed birds, a practice that ended in 1989. Moreover, some live birds, especially juveniles, were exported to European countries from Delhi and Kolkata, for zoos and private collections. Tim Inskipp has documented the export of 405 Indian Rollers in 1975. He recorded that the retail price of the Indian Roller in the UK was £ 25 in 1976, which increased to £ 95 during 1977–79, while the Indian export price was only £ 1.5.

Recently, I saw that Indian Roller chicks were up for sale in the Dubai bird market. Ashish Kothari's BIRDS IN OUR LIVES has a photograph of an earring made from Indian Roller feathers by the Naga tribe. A subsequent online search also showed earrings made from Indian Roller feathers for sale.

Ecology of the Indian Roller

The Indian Roller is a widespread resident, seen in open countryside in fields, pasture, roadside plantations, and even large city parks. This greyish brown bird may suddenly rise and display the turquoise and sapphire-tinted splendour of its wings. Its spectacular acrobatic courtship displays give it the group name 'roller'. It breeds from March to June, in tree hollows, walls, and river banks. Often found perched on electric wires or poles, it searches patiently for large insects, caterpillars, lizards, and frogs. Once

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Illegally caught birds confiscated by the Kanpur Forest Department

Protocol for Rehabilitation of 'rescued or seized rollers'

- Feed the Roller with insects such as Cricket *Gryllus* spp. or small mice.
- Released birds with glued flight feathers have little chance of survival, as they are unable to prey on their own. Seek advice of an expert before releasing such birds.
- Please remember, a wild native bird is 'government' property, hence immediately intimate the local forest department of any rescued bird(s) in your possession.
- Release birds at the earliest in open countryside in the morning after feeding.
- Be equipped for emergencies before attempting any rescue operations.
- A good photo documentation of the rescued bird is essential for court trials.

the prey is caught, it is brought back to the perch and battered to death before it is eaten. This friend of the farmer consumes large quantities of crop-damaging insects and small rodents, however, extensive use of insecticides and pesticides are taking their toll. Shortage of old trees with large natural holes, suitable for this cavity-nesting bird, is another threat.

An incidental victim

In October, many migratory birds visit India, including the European Roller *Coracias garrulus*, called Kashmir Roller in India as it also breeds in the Kashmir Valley. This roller is a passage migrant to northwest India from its breeding grounds in Europe, northern Africa, the Middle East, Iran, Central Asia, and northwest China. Recently downlisted by IUCN from Near Threatened to Least Concern, the European Roller is a paler, duller version of the resident Indian Roller. As the Dussehra festival coincides with the onset of migration of this species, it is also caught along with the Indian Roller for festive release.

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The migratory European Roller is also caught for festive release

The trapping technique

Rollers (and kingfishers) are caught using an ingenious trapping method. A simple no-cost trap is made from two pliable twigs or wires tied to create a dome shape. The four legs of the dome are coated with a gum made from the exudate of a Ficus tree. At the centre of the dome, a cricket is loosely suspended by a thread. The roller is lured by the moving insect, and gets stuck in the trap while attempting to catch the cricket. The glue on the feathers of the caught bird is cleaned using kerosene oil, which is subsequently dried using cow-dung ash. The captured birds are force fed minced meat, or occasionally crickets. This makes them weak, despite them being insectivorous. Consequently, most released birds hardly survive in the wild, as they lack the ability to fly and hunt in urban surroundings.

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Traps made of twigs to capture different birds

Watch birds, not trap them

The Indian Roller is the state bird of Karnataka, Telangana, and Odisha. Although all roller species are protected under Schedule II of the Wild Life (Protection) Act, 1972, several religious beliefs, along with the current attention by media and social groups, is fuelling the demand for Indian Rollers, resulting in clandestine trade and trapping. A Google search on *Neelkanth* vs Dussehra would yield testimony enough to my statement.

The practice of releasing Indian Rollers (which necessitates their trapping) during Dussehra should be discouraged, and instead people should be encouraged to try to sight the bird only in the wild for 'good fortune', which would in turn necessitate conservation of its habitat.

Traditional bird markets, such as Chowk market in Hyderabad or Nakhas in Lucknow, are still actively catering to the demand for wild-caught birds. Some NGOs have been striving to prevent the exploitation of rollers, such as Humane Society International/India in Telangana. Similar efforts are required in other Indian cities and rural hamlets. Religious heads can play a key role by cautioning people against buying captive specimens; instead they could be involved in promoting *Neelkanth* darshan.

Spreading awareness

With the support of local birders and forest staff, portraying traditional bird trappers as guides in suitable habitats, an experimental programme can be developed and videographed to be broadcast around Dussehra, to create awareness among the public. This would help to promote livelihood alternatives for traditional trappers, such as Guddo. Once a bird is located by an experienced trapper, devotees can be called to witness it in the wild. This may also help to inculcate a feeling of compassion for the bird.

Awareness regarding bird trapping should be inculcated at the school and college level. I remember Guddo selling bird feathers, especially of the colourful Indian Roller, to my school mates when our biology teacher asked us to collect 20 types of bird feathers. Today, I feel that our schools should have encouraged us to watch birds outside the classroom, rather than showing us laboratory specimens, or making us collect butterflies only to pin them in insect boxes. What intrigued me the most was that while children could not identify a live bird, they were expected to identify birds from fallen or even traded feathers!

I believe birdwatching and wildlife conservation should be an essential part of the school curriculum. BNHS is taking a lead in conservation by highlighting the European Roller in the Migratory Land Bird Action Plan. It is hoped that this will also benefit the resident Indian Roller.

Rajat Bhargava, Ph.D., is a senior ornithologist working with BNHS. His main interest is documenting bird culture and traditions across India.

Before: Barren landscape in 2016

Silent Revival of Nature

Text: **Asad R. Rahmani**
Photographs: **Udaiveer Singh**

After: The same landscape in 2021

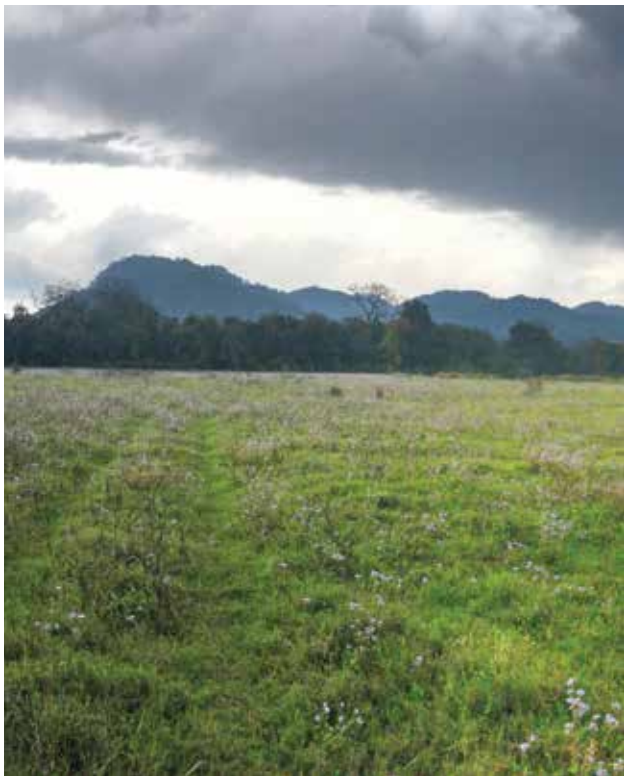
Before: Dry stream with Simul tree in the background in 2016

After: Now water remains in the stream for many months, notice the Simul tree in the background in 2021

Ever since I had read about the regeneration of a 300-acre privately owned forest, in 2017, in Kodagu district, Karnataka, by Anil and Pamela Malhotra – a remarkable couple, I wished to personally visit such a forest site. Recently I got an opportunity to visit an estate spread across a hundred acres in the western Terai Arc Landscape, adjoining Corbett – the famous tiger reserve. In 2016, my young friend Udaiveer Singh bought an overgrazed and over-lopped piece of land that was unfit for cultivation. He began nurturing the land and gradually revived it. He built a two-room outhouse, mainly to spend weekends and to supervise the protection of his land, and lovingly planted indigenous trees around it, leaving the rest in the hands of Mother Nature.

School books and popular writing have for long labelled nature as 'Mother Nature'– a term that was proved apt in Udaiveer's estate. In a short period of six years, Mother Nature performed her job well. The grasses/shrubs in

Before: Totally overgrazed ground in 2016



After: Lush grassland after five years of protection

this metamorphosed landscape are already in their finest glory, but the trees need at least a decade more to catch-up. While Spotted Deer and Nilgai enjoy the juicy grasses (earlier overgrazed by livestock), Sambar browses in the gallery forests of nullahs and ephemeral streams, cautious of the three tigers; these were captured in the camera traps. Asian Elephants marked their presence on the land by leaving their footprints. They were also heard breaking branches or trumpeting in the night. The bird and butterfly diversity in the estate rivals that in any protected area. As this private estate falls between the *bhabar* and *terai* tracts, migratory birds from the Himalaya are abundant here. In an hour-long birding session, I could enumerate 30 species, including Himalayan Bulbul, Grey Bushchat, Griffon Vulture, Yellow-breasted Greenfinch, and Ultramarine Flycatcher.

While the government spends crores of rupees annually on plantations, and gloats over the so-called 'increase in forest cover', a young entrepreneur has been silently reviving the forest/grasslands, using his own resources. It is such true conservation warriors who give us hope that not all is lost in India. What nature needs is space, time, and our loving care. The contrasting images alongside tell the complete story! ■

Asad R. Rahmani is a renowned ornithologist, and former Director of BNHS. He is now a member of the BNHS Governing Council.

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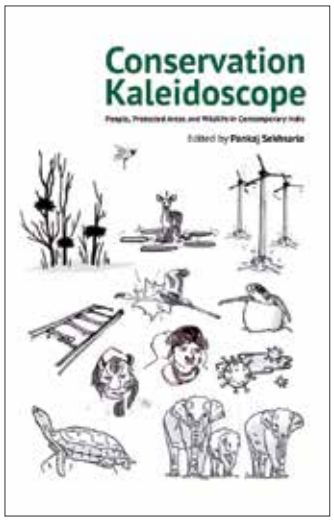

Conservation Kaleidoscope

Edited by Pankaj Sekhsaria
Published by: Kalpavriksh, Duleep Mathai Nature Conservation Trust, and Authors Upfront
Size: 23 x 15.5 cm
Pages: xviii + 412
Price: Rs. 699/-
Paperback
Reviewed by: **Neha Sinha**

In the time of climate change, species loss, and the Anthropocene, it is easy to forget that India has an enviable legal and policy structure for conserving its wildlife and forests; this year, India's Wild Life (Protection) Act, 1972 turned 50!

Twenty years ago, *Protected Area Update*, a newsletter by researcher Pankaj Sekhsaria, published a piece on the Indian Board for Wildlife (to be later called the National Board for Wildlife). The article forms a part of CONSERVATION KALEIDOSCOPE, sending strong signals against destructive projects in India. Two decades later, the book wryly notes that Galathea, a sanctuary in Andaman and Nicobar Islands, was denotified in 2021. From strong signals against destructive projects to a complete reversal of legal protection to a sanctuary, it has been a steep decline for the National Board for Wildlife, a body of experts who would otherwise stop such a complete reversal of legal and morally defensible protection. It is for such reasons that CONSERVATION KALEIDOSCOPE is a valuable collection – it acts as a chronicler of history and shifting priorities.

Covering issues such as the negative impacts of linear infrastructure on wildlife, human rights in protected areas, fate of elephants, tigers and tiger reserves, and birds in Important Bird Areas, the book should be an important addition to libraries.

One may not always agree with the editorials featured in *Protected Area Update*, and subsequently in this book. Some are thought-provoking and balanced, while others can be confusing for the stand they take. For instance, a June 2007 editorial mentions that the tiger is in crisis. An August 2011 editorial says, there is 'an unending tiger obsession'. While both the editorials may be contextually true (although the tiger is not to be blamed for this), more self-referencing among the editorials would have been of help. Inter-linked editorials should have cited each other, creating a continuous narrative to serve as a long-term response to the issue at hand. Further, I would be interested in learning how, according to the readers of a newsletter born in 1994, tough conservation questions can/should be tackled. Adding such interactions and debates – publishing the views of long term readers as part of the Newsletter's decadal aims – would make the book greater than the sum total of the of its parts.

Sekhsaria does not deign to answer the questions he raises. In the age of Google searches, one may ask what was the need to compile articles easily available in newspapers and other media. The answer to that is curation. By including some articles and excluding others, the book may help to form perspectives on conservation and development.

For instance, the section on elephants interrogates the issue of fencing and linear projects that disturb our national heritage animal; additionally, it rightly identifies that festivals, such as Ganesh Chaturthi, dedicated to the God with an elephant head, pollute water bodies. Researchers would also be interested in reading the section on development, which questions big infrastructures that come at the cost of the environment.

Stop railway constructions through tiger reserves!

Text: **Neha Sinha**

COURTESY: TIMES OF INDIA

A tigress found dead on the railway track

Sanjay-Dubri Tiger Reserve (SDTR) in Madhya Pradesh, Central India, has a biodiverse neighbourhood and is a part of one of the most productive tiger landscapes worldwide. It is connected through forest corridors to Bandhavgarh TR (Madhya Pradesh), Guru Ghasidas National Park (Chhattisgarh), and Palamau TR (Jharkhand). Covering 1,674.511 sq. km, it includes Sanjay National Park and Dubri Wildlife Sanctuary as the core or critical tiger habitat zone (812.581 sq. km), and the forested areas of Sidhi and Shahdol districts as the buffer zone (861.930 sq. km). The entire landscape hosts 141 tigers, and with its sufficient prey base, this number can increase to 500 tigers, according to the report on "Status of tigers, co-predators and prey in India – 2018" by the National Tiger Conservation Authority (NTCA), Government of India, New Delhi, and Wildlife Institute of India, Dehradun. Also, studies have established that the tigers from Central India have high genetic diversity, which is mainly due to the functionality of the existing wildlife corridors.

BNHS recently learnt that a railway line upgradation is being planned through the Sanjay Dubri TR in Madhya Pradesh. We understand that the construction of a rail doubling project from New Katni Junction to Singrauli (261 km), with electrification and allied work, has been awarded to the Govt of India Undertaking, Ircon International Ltd (= originally the Indian Railway Construction Co. Ltd). The Katni-Singrauli railway line passes through a 67-ha area 'critical tiger habitat' in SDTR and 5.3 ha of dense forest areas in Sidhi district adjoining it. Before entering SDTR, the railway line passes through an identified wildlife corridor in Shahdol district, between Bandhavgarh and Sanjay-Dubri TRs, that has high presence of Tiger, Leopard, Asiatic Wild Cat, Jungle Cat, Sambar, Spotted Deer, and several other

species of mammals, including Chousingha (Four-horned Antelope), Indian Dhole, Rusty-spotted Cat, Striped Hyena, Sloth Bear, and Indian Wolf, that are of high conservation concern.

Even in its present extent, the moderate amount of rail traffic on the Katni-Singrauli route line has caused significant wildlife mortality. During 2010–2020, 38 wildlife deaths due to the railway line were officially recorded in the area. The actual number is likely to be much higher. In 2022 alone, a tigress died after being hit by a train; her orphaned cubs now face an uncertain future due to this unfortunate incident.

In the latest official tiger estimation conducted in 2018, it was realized that not only is Sanjay-Dubri important for tigers, but also the area surrounding the TR that has been recently colonised by tigers. Thus, both the TR and the surrounding habitat are significant for tiger populations in India. The report says:

"Colonization [of tigers] probability increased from 2006 to 2010, declined from 2010 to 2014 and increased again in 2018. Colonization probability was higher in those grids that were in proximity to protected areas occupied by tigers in the previous years, and had consistent growth in prey encounter rate across the years. Hence, higher colonization was observed in the forested areas around many tiger reserves (Ranthambhore, Bandhavgarh, Sanjay Dubri, Kanha, Pench, Satpuda, Melghat, Navegaon Nagzira, Bor, and Tadoba)."

Moreover, this area is also an important part of an elephant corridor. To our delight, a population of elephants recently migrated to Bandhavgarh TR from Guru Ghasidas National Park through these corridors. Additionally, elephants have been detected in the Sanjay-Dubri TR. This is a significant finding because these parts of Central India did not host elephant populations. Elephants and tigers both have a high probability of mortality because of railway lines; therefore, the Ministry of Environment, Forest and Climate Change (MoEF&CC) recently instituted a permanent body in collaboration with the Ministry of Railways to prevent elephant deaths because of railway lines. This goal can only be met by avoiding railway lines in elephant areas, particularly in known corridors.

Presently, the wildlife of this landscape, which has been identified as a potential tiger meta-population landscape by the NTCA, is already threatened by linear projects such as national highways (343 and 75) and state highways (1, 3, and 10). The proposed expansion of the Katni-Singrauli railway line will cause serious and irreparable harm, as it will split the valuable SDTR landscape and disconnect

COURTESY: TIMES OF INDIA

COURTESY: TIMES OF INDIA

Can linear infrastructure development and wildlife conservation be made compatible?

all the conservation areas in the region from each other. The expansion also involves cutting 14,187 trees along this stretch, and will create a permanent barrier for wild animals looking to cross the track.

In the light of the above, BNHS has written to the Hon'ble Minister of Environment, Forest and Climate Change, Govt of India, with copies to the Hon'ble Minister of Railways and other senior officials of the MoEF&CC and Madhya Pradesh Forest Department, requesting that the proposed expansion of the Katni-Singrauli railway line be stopped. Additionally, we have suggested the relocation of the railway line outside the tiger reserve to ensure the ecological and conservation integrity of this landscape.

Linear infrastructure development should not undermine wildlife conservation. Can the two be made compatible, with some effort? ■

Neha Sinha heads Conservation and Policy at BNHS, and is the author of WILD AND WILFUL – TALES OF 15 ICONIC INDIAN SPECIES

BNP Paribas donates eBikes to BNHS

BNHS PHOTO LIBRARY

BNP Paribas donated two ebikes to BNHS

BNP Paribas India Ltd donated two electric bikes to the BNHS Conservation Education Centre-Mumbai, on September 8, 2022. These Bajaj Chetak eBikes were handed over to Dr Bivash Pandav, Director, by Mr Philip Mayerd and Mr Laurent David, Deputy Chief Operating Officer, BNP Paribas. The bikes can run 95 km on one charge, and will be of use in CEC forests as they are almost noiseless, smoke free, zero fuel consumers, and low in maintenance.

Butterfly Festival 2022 at BNHS Nature Reserve

BNHS PHOTO LIBRARY

Participants learnt the life cycle of butterflies at the Festival

A Butterfly Festival was organized at CEC-Mumbai on October 15–16 and 22–23, 2022 in association with BNP Paribas, where 250 adults and kids participated. Activities like understanding the life cycle of butterflies, butterfly trail, exhibition, butterfly tattoo, pebble painting, poster making were organized and a short documentary on the life cycle and migration of butterflies was screened. Three prizes each were distributed in the categories pebble painting and poster making.

Screening of *Khee* at BNHS

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Screening of the documentary *Khee* at CEC-Mumbai

To celebrate World Wildlife Week, BNHS screened the documentary *Khee* at its Conservation Education Centre (CEC) at Goregaon in Mumbai on October 01, 2022, for students, nature lovers, and Governing Council members. The documentary captures the alarming increase in the number of free-ranging feral dogs that have upset the ecology of Ladakh – a magnificent terrain known for its high passes, cold deserts, and monasteries. Feral dogs in Ladakh are known to hunt endangered wildlife and even attack humans.

Mr Sumit Mullick, Chief Information Commissioner of Maharashtra and Chief Guest for this special screening spoke on the need to address this serious issue. Mr Kishor Rithe, Honorary Secretary, BNHS, expressed his appreciation of the film and hoped that it would help to better understand this critical issue, and receive support of the stakeholders. Dr Bivash Pandav, Director, BNHS, promised to screen this film in several landscapes, to address a larger audience.

Mr Sandeep Dhumal, Producer and Nikhil Talegaonkar, Director of *Khee* were felicitated by the BNHS Director on the occasion.

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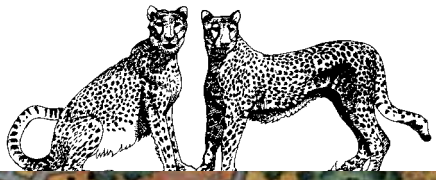

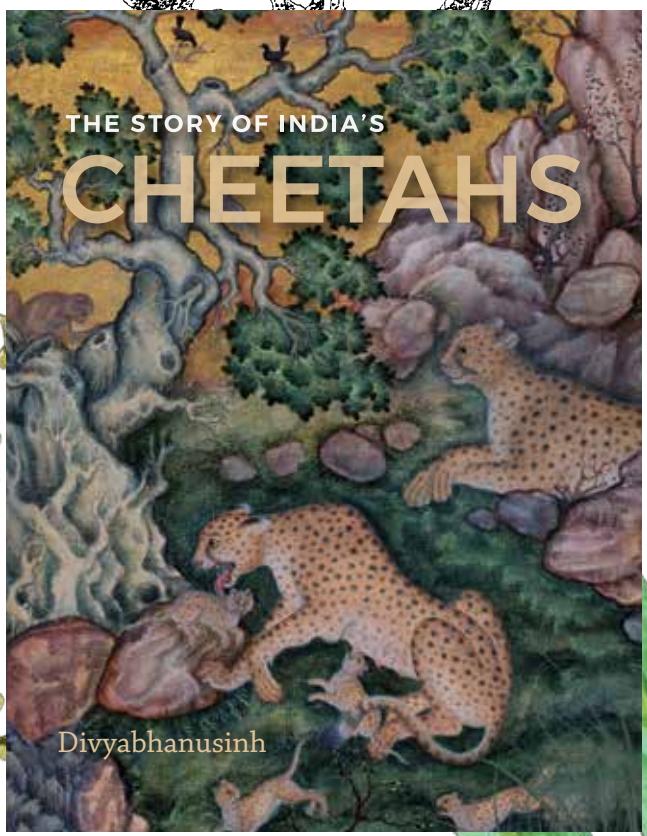

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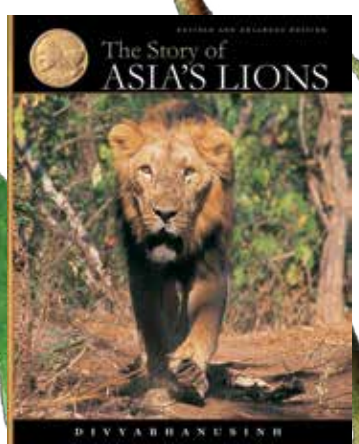

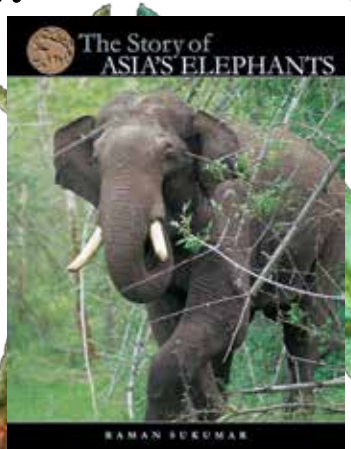

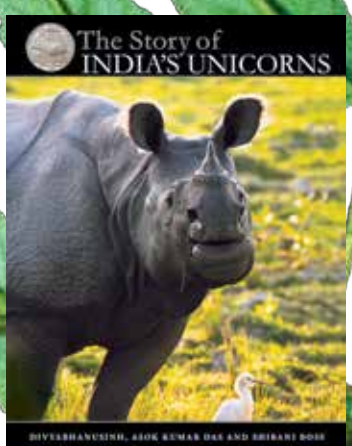

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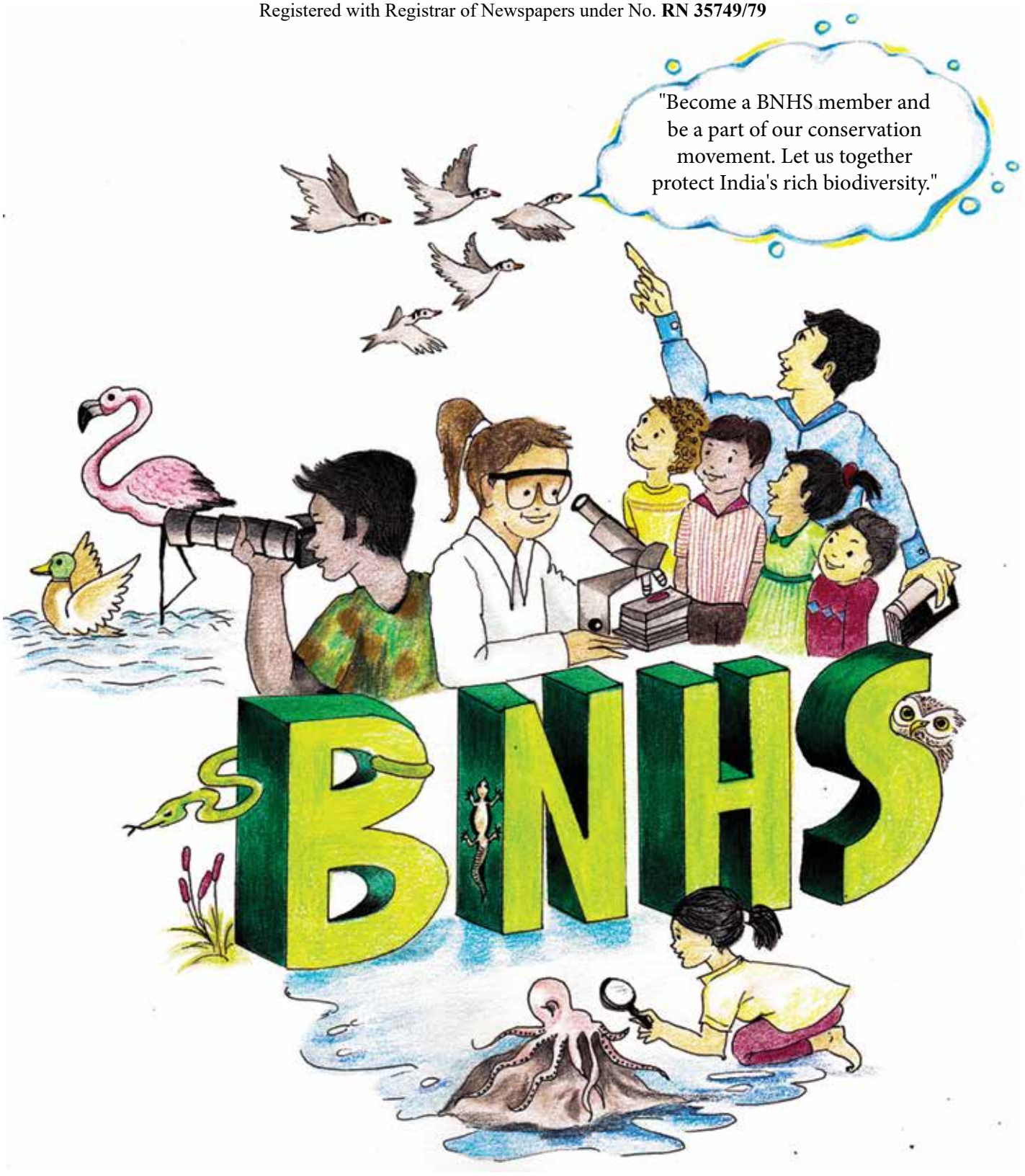

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