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COVER : Great Pied Hornbill

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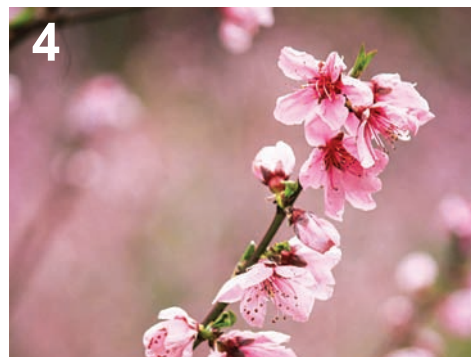
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Water Crisis: “Today’s Myth, Tomorrow’s Reality”

I hope you enjoyed reading our latest insightful issue on Human-Wildlife Conflict, another addition to our series of thematic special issues of *Hornbill*. The present issue is a regular number that features articles on natural history written by members.

Monsoonal flora is in full bloom and you must have enjoyed the nature trails arranged by our Programmes team to Kaas, Valley of Flowers, and Sanjay Gandhi National Park to explore the magic of the south-west monsoon. Monsoon brings with it another priceless commodity – fresh water, which has been abused by all of us for decades. The recent UN convention to combat desertification (UNCCD COP 14) held in New Delhi clearly sent alarm signals regarding our vulnerability to climate unpredictability. The state of our water resources, be it surface or ground water, is precarious and it is a frightening thought that all future wars will be fought over water. Most of the deteriorating impacts on our wetlands are human induced, be it unplanned and unscientific land use that enhances climate unpredictability, or any other; the reasons will be many. It is time we realize that our water and food security eventually depends completely on our immediate actions to save water and its catchment forests. If we do not get our act together to save every drop of fresh water, before it is too late, we will have lost the opportunity for remorse too.

Another issue that will dominate debates among government and conservation groups is a paradigm shift in the way governments are looking at infrastructure development. Personally, I feel that the debate is not about development; it is about how we go about it. The current discourses virtually ignore wildlife, and moreover, the issues are no longer restricted to development projects outside protected areas. Development of all kinds, e.g., linear infrastructure like roads, highways, transmission lines, canals, passing through protected areas, is now the focus of debates. Such short-sighted approaches will only fragment forests further and bring human-wildlife conflict to epic proportions. But with the growing aspirations of the 1.2 billion strong human population, choices for sustainable development and alternative models of development are tough. Thus, population control again needs to be the thrust agenda for governments.

But all is not lost. There are some very positive developments. Conservation breeding of vultures, great Indian bustard, lesser florican, green avadavat, and Finn’s weaver is a case to rejoice. Many will say – it is too late or too little. But I feel it is better late than never or nothing. Launch of the Central Asian Flyway Action Plan aims to work on saving migratory birds and critical wetlands along the flyway, as well as to develop bird sensitivity tools. And the Prime Minister’s recent pitch to ban single use plastic is something we all should embrace.

I hope you have registered to attend the BNHS International Conference on ‘Wetlands, Migratory Waterbirds, and Flyways of Asia’ from November 18–22, 2019 at Lonavala, Maharashtra. Please visit the website <https://cwamwaf.in/conference/> for registration. There





MADHUMITA PANIGRAHI

It is necessary that we recognize the key role wetlands play for life on earth

are now only 50 seats available for registration. Please do register if you have not already done so, to avoid disappointment.

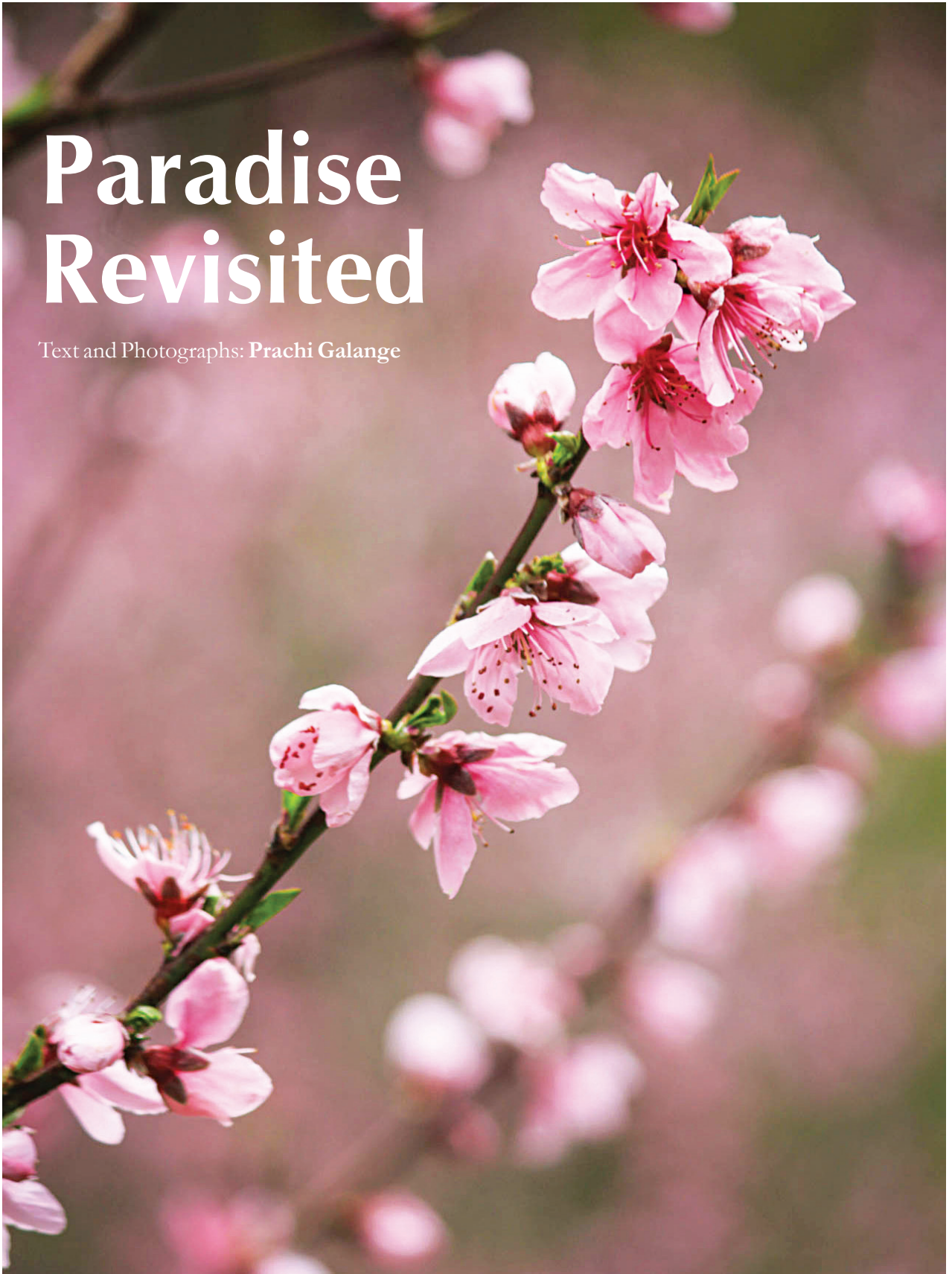
BHĀRATNĀ PAKSHIYO, our much awaited Gujarati translation of Sálím Ali's THE BOOK OF INDIAN BIRDS is now available for sale. Please visit this link https://shop.bnhs.org/public/product_details/143 on our website to order or gift a copy.

This quarter was laced with rather sad news. Our longstanding member and past Vice President Dr Pratap R. Saraiya passed away recently. The passing of Sally Walker and Dr P. Kannan has left a large void in the conservation community.

Deepak Apte

Paradise Revisited

Text and Photographs: Prachi Galange



Peach blossom in the orchards just outside Great Himalayan National Park



Himalayan griffons soared above us as we walked to the park gate

"The land north of Gangadwar is known to the wise as Paradise Ground. Apart from this land, the rest is called Earth elsewhere."

— *Kedarkhand Skanda Purana*

The Great Himalayan National Park (GHNP) is truly a paradise, as it offers something for everyone: birding, trekking, photography, or simply solitude for a nature lover. Encompassing an approximate area of 1,171 sq. km and surrounded by snow-capped peaks, GHNP comprises Pin Valley National Park, Rupin Bhabha Wildlife Sanctuary and Kanawar Wildlife Sanctuary. In 2014, it was accorded World Heritage Site status by UNESCO. Though this area maintains its close ties with nature and tradition, I could see gradual depredations, the impacts of a 'modern' lifestyle. I have been lucky, nay blessed, to have been given the opportunity to visit this area twice, so this is my story.

In 2014, as a group leader for a BNHS trek to GHNP, I took a group of 16 participants to this wonderful place. An overnight journey in a deluxe bus from Delhi brought us to Aut, and after another two-hour drive, we were at Sai Ropa. The group stayed in the dormitories of the Forest Rest

House at Sai Ropa. We spent a day acclimatizing at Ropa and its environs, where we walked to a local waterfall. For part of the way, we were accompanied by the Tirthan river. Tirthan and Sainj are the only rivers in this region which have not been dammed, thanks to the tireless efforts of the locals. The resulting pristine Himalayan landscape is rich with birdlife. Our short evening walk landed us yellow-billed blue magpie, a vividly blue verditer flycatcher, and the very cute-looking grey-headed canary-flycatcher. The blossoming apple, plum, and peach orchards surrounding the village gave us frequent sightings of russet sparrows, Himalayan bulbuls, and grey bushchats.

Our path led us through the middle of a village. While the villagers gawked at our sudden appearance, we were charmed by their traditional two-storey Himachali homes. These homes are constructed to warm up naturally. The lower levels house cattle and sheep, whose body heat warms up the entire building. At the end of the path we had to cross an icy cold stream. Even the brief immersion was enough to freeze our feet. After a short stop and many photographs of the waterfall, we started back. On the way back, we were greeted by slaty-headed parakeets getting ready to roost. They seemed to be expending the energy left over



The rhododendron blooms were a big draw for birds for their nectar

from the day, as they squawked to their friends and played rambunctiously in the pine tree.

A walk in the Park

On the third day, we began our trek to GHNP from Gushaini. This is a moderate walk of about 9 km to the main gate of the Park. Along the way, we saw more local houses that have retained their traditional charm. Their sloping slate roofs are designed for the rain, sleet and snow to slide off.



Russet sparrow enjoying plum blossom

And they were surrounded by flowering mustard and wheat fields ripening into two different shades of gold. The mountain people we encountered were very hardy compared to us who are city-spoilt; we saw women carrying loads of 30–40 kg effortlessly, walking along, chatting with each other. The village population gradually got sparse as we got closer to the Park, and shepherds grazing their sheep and huge Himalayan griffon circling above became a more common sight. Now we walked



The sign of Rolla camp was a relief for our tired feet



Grey bushchat, grey-headed canary-flycatcher, and plumbeous redstart (male) are gregarious birds in GHNP

under patches of rhododendron forests, decked out in bright crimson flowers. The flora attracts many birds, and so we sighted verditer flycatcher, grey-headed canary-flycatcher, black bulbul, and rufous-bellied niltava. We also stopped frequently to hear bird calls – a great barbet sitting on top of an oak tree filled the air with its reverberating call. While crossing a nullah we saw the barely discernible outlines of a little forktail. Little forktails, with black and white plumage of varying patterns, are often seen near mountain streams.

Once across the main gate, we crossed the Tirthan river on a quaint wooden bridge. We stopped at the middle of the bridge to enjoy the gushing river and were awarded with white-capped and plumbeous redstarts. Once across, we saw a orange-flanked bush-robin flitting in a fruiting bush. It quickly disappeared as a flock of black-throated tits descended on it. A lone grey-hooded warbler also foraged with them.

Another 2 km walk took us inside the gates of Rolla Camp, our home for the next two nights. Our guides and porters had already reached and set up camp, and the blue tents were a welcome sight for us tired walkers. This campsite is by the side of the Tirthan river and as it was still daylight when we reached, most ardent birders made their way down to the river to see white-capped redstart, plumbeous redstart, and brown dipper. Particularly the dipper, a

rotund bird with uniformly brown plumage, elicited an excited response. As we watched, the bird dove in the icy river and emerged some distance away with prey in its beak. Their mountain stream habitat is ideal hunting ground for aquatic larvae of mayfly, caddisfly, other invertebrates, and tiny fish.

Surrounded by beautiful snow-capped mountains, the camp was enchanting, the air crisp



Plumbeous water redstart (female)



The pristine Tirthan river flows through the Park

and cold. That night we had a simple but wholesome meal by a campfire near our tents. We retired early in preparation for the climb on the morrow.

Shilt Hut trek

Next morning, we were to go to Shilt Hut, a shepherd's hut on top of the mountain to the north of our camp; the hut is a relic of the days before the area was designated a national park. The day was bright and clear when we started the climb. It is a non-stop, three to four-hour climb along a path, initially through oak and birch forests which give way gradually to pines and other alpine trees. The guides are as agile as mountain goats while I plod along, my muscles aching and lungs bursting. I stop many times along the trail, not only to catch my breath but also to take in the breathtaking views of the snow-clad mountains all around me. A few participants make it to the hut, most don't, and regretfully I am among those. As evening draws closer, we make our way down, so that we reach our camp before dark. The silver lining is that we get to see and hear many birds in these forests, some unique to this area. We heard or saw koklass pheasant, Himalayan monal, and spotted nutcracker.

Our journey back the next day started a bit subdued, but a flight of snow pigeons and the spectacular natural vistas soon perked us up. I took it as a sign that one day I would be back to

complete the trek. We were also lucky to spook a herd of Himalayan goral, the hardy mountain goat. They stood stock still till we were quite close and then made a run uphill. Their brown pelage merged with the mountainside to make them almost invisible. Only their movement helped us sight them. We also crossed many nullahs on the path, and peering into their dim recesses saw little and spotted forktails.

Two years later ...

Now in much better shape, I decided to climb to where I had left off in my previous trip. So with a companion, we did the trek in early March 2016, but this time we stayed in the forest hut in Rolla as it was lashing rain and bitterly cold when we arrived. The next day dawned sharp and clear, when we began our climb. As soon as we crossed the oak forests, we realized that we had come too early in the season, unseasonal snow had frozen to slippery ice and it had become dangerous to continue climbing without specialized equipment. It was a heartbreaking decision to return without having reached Shilt and I found my second chance receding. About 15 minutes from Shilt Hut, we stopped under an overhanging rock, lit a fire and warmed our lunch and shared stories with our guide.

On our way there and back, we added more birds to our checklist. On this trip the bird gods seem to be pleased with us. We saw a spotted nutcracker and a Himalayan monal, which I had missed on the earlier trip. Along with glimpses of black-and-yellow grosbeaks, accentors, black-throated tit, whiskered yuhina and orange-flanked bush-robin. We were also lucky to have a quick glimpse of a Himalayan goral again.

Maybe I will be third time lucky? But I often ask myself the question, is it really the goal that matters or the journey there? On both my trips I have wonderful memories of mountains, birds, and solitude. Maybe just being there is the reward. ■

"The best view comes after the hardest climb."



Prachi Galange is a nature interpreter with eight years experience. She has worked for the BNHS and is now a freelancer. Presently, she is part of a nature education project with RVES School, Goregaon, Mumbai.



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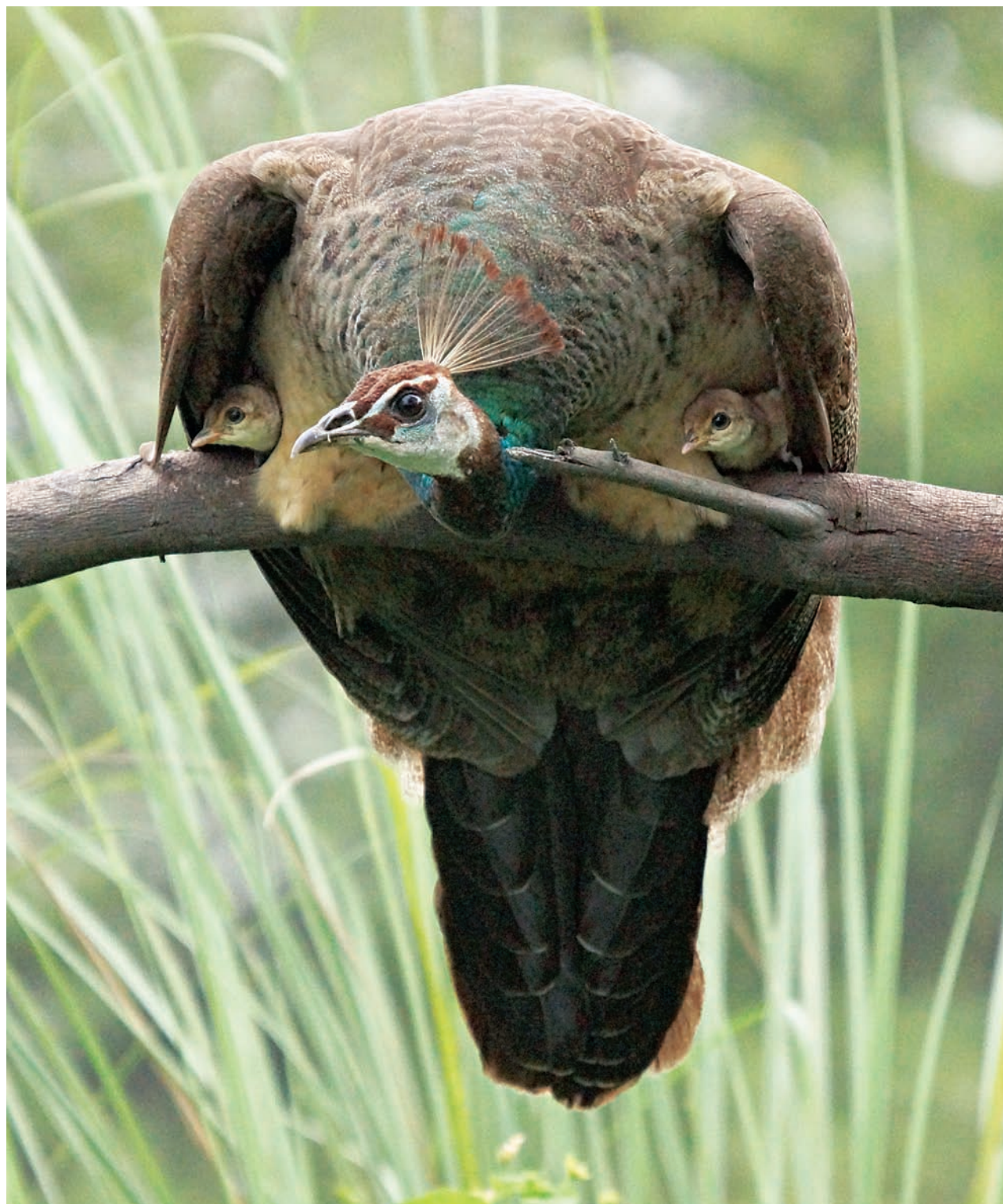
Unity



Responsibility

Birding in the Countryside

Text and Photographs: Dheerendra Singh



Indian peahen and chicks

Every morning, as I drink my cup of tea around 7:00 am, I am greeted by two Asian pied starling. They are perched on the same wire every day, close together, singing their morning song. They don't get disturbed when the white-throated kingfisher shows up, calling out in a loud rattling laugh. At the same time, a family of jungle babblers makes its appearance, but not before one among them has ensured that it is safe to approach my balcony. The group then settles on a tap or near the bucket of water for a drink. My morning is complete when the beautiful common hoopoe settles on its favourite place in the neem tree. On a few occasions, it produces its wonderful repetitive *bud-bud* call, but mostly it only preens its feathers before moving on to other tasks for the day. All this while, an Indian peacock draws my attention with its impressive display, on the roof opposite my house.

Nahchani is a small village of around 1,600 people, mostly farmers. It is situated 25 km from Agra, in Uttar Pradesh. 80% of the land around Nahchani is used for agriculture, the rest is covered by planted trees along a small river called Khari. There is no industry and no protected area around the village.

I begin birding from my house and continue as I walk from the village to a point at the river. During my walk through the village, I add more birds to my daily list. Everywhere in our village one can see the rock pigeon, house sparrow, house crow, and common myna. Bank mynas are seen catching flies, where buffaloes are also present. I choose a small path on the edge of the village, which leads to the Khari river. I always walk slowly along this path shaded by trees like neem *Azadirachta indica*, sheesham *Dalbergia sissoo*, babul *Acacia nilotica*, faras *Tamarix aphylla*, and nishoda *Cordia dichotoma*,



The banks of Khari river are covered by trees and tall *Saccharum* grass post monsoon, which serve as suitable habitats for birds to hide, shelter, and breed

where I spot many birds active in the morning. The alarm call of a black francolin draws my attention to a female peafowl that has spent the night with her chicks. Here I get the chance to photograph the peahen with her chicks, a great start to my daily bird walk. I continue walking till I reach a small waterhole where a pied bushchat male is drinking and allows me to approach close.

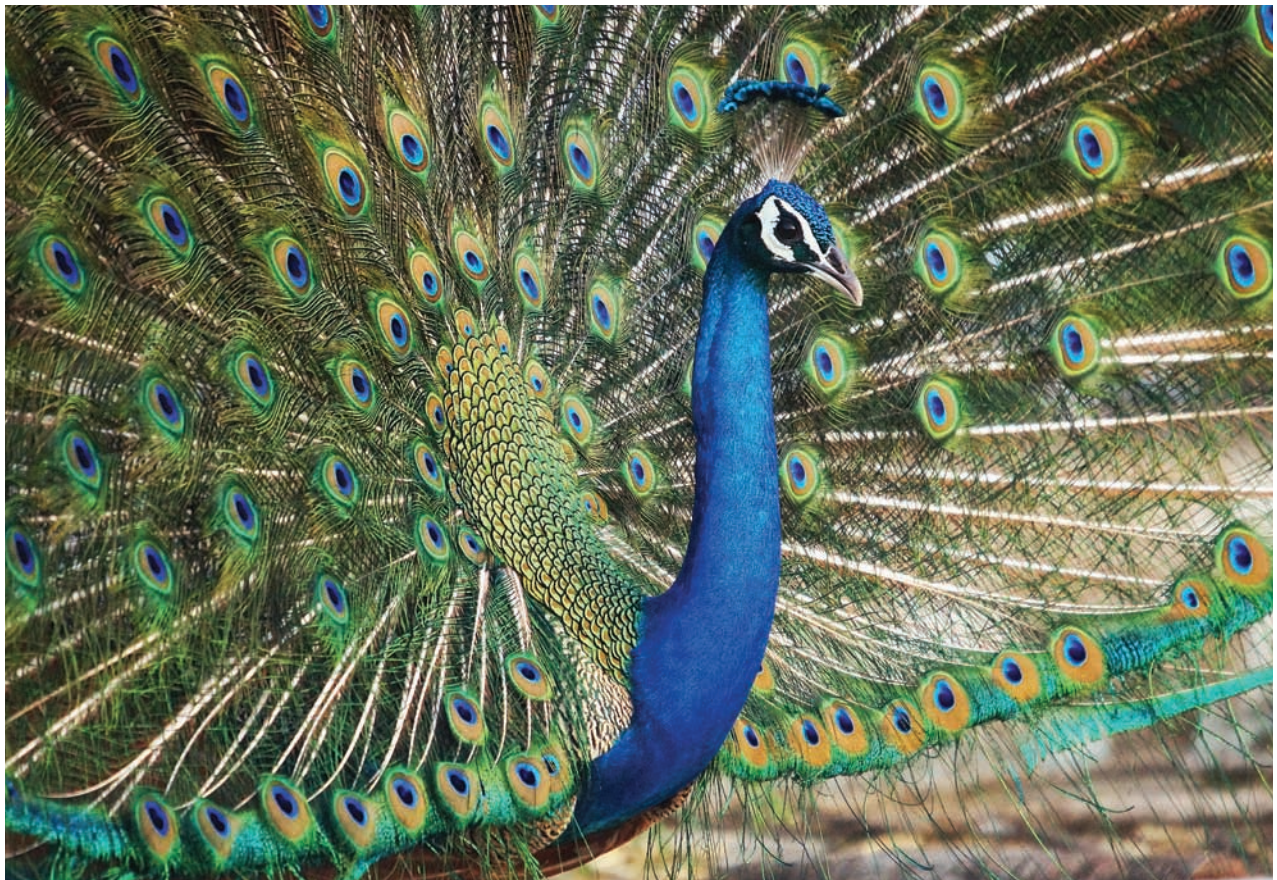
The path cuts through agricultural fields, a manmade landscape of terraces, before it ends at Khari river. Sections of the land are separated by small dykes on which some trees have been planted. Khari river is almost dry in May, not only because of the hot summer but also because farmers are continuously pumping up water from the river to irrigate their land. I reach the Khari at a



Shikra, always on the watch for a careless lizard, mouse or small bird



Weaverbirds like the baya are known for their incredible weaving skills



Every morning in April and May the peacock demonstrates its fascinating display on several rooftops in Nahchani

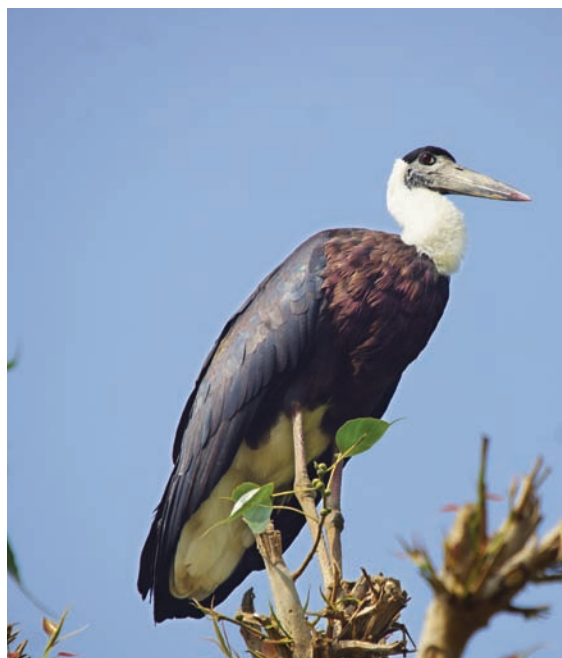
small, shallow part where in former times people crossed the river. Now a simple bridge has been constructed. Water collects in small ponds near the bridge, where I observe some white-breasted waterhens searching for aquatic insects and small fish. Asian green bee-eaters have grouped together in the neighbouring trees. They take advantage of the numerous honeybees that come to drink here. One by one, the bees are caught in flight and eaten at a favourite perch. It is amazing to see how skilled these bee-eaters are in catching the bees.

Khari river is not only bordered by trees but also huge tussocks of *Saccharum* grass. There are two species, *S. munja* and *S. spontaneum*. The latter is a favourite of baya weavers during their breeding season. From the leaves they strip off small strands to build their beautiful nests. I walk a little ahead along the river, and among these grasses I spot a greater coucal. It is a rather shy bird; it skulks in the undergrowth, walking in little hops.

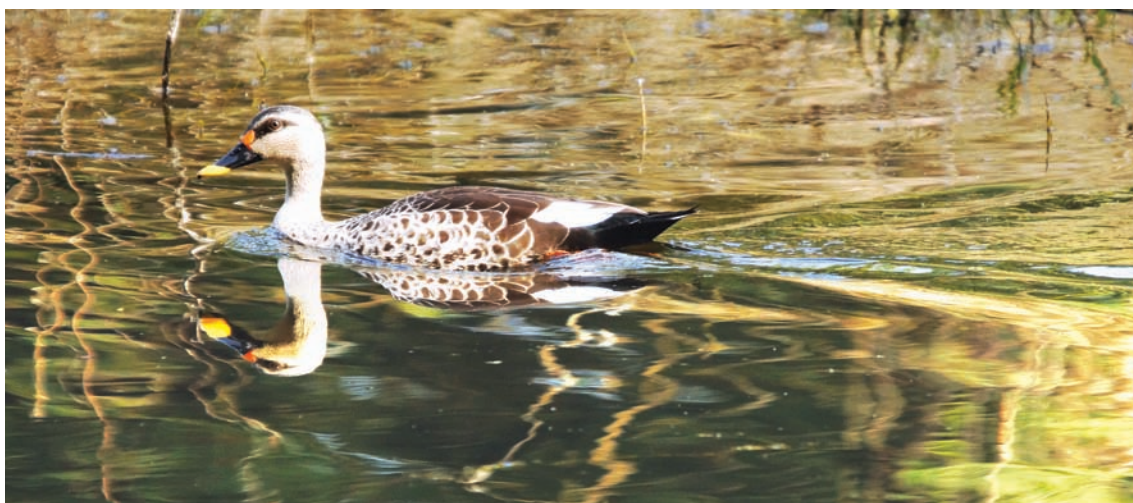
I see several wetland birds gathered around some pools – great egret, cattle egret, grey heron,



During harvest, this pair of sarus crane is in a festive mood, shouting their characteristic calls from time to time



The woolly-necked stork has a remarkable neck that looks like it is made of cotton



The Indian spot-billed duck is one of the most beautiful ducks, very shy and not easy to spot



Pied kingfisher taking a short rest during a warm day in the shade of a babul tree near Khari river

and little cormorant. If you are lucky, you can also see woolly-necked stork, purple heron, and sometimes glossy and black ibises. Sarus cranes are sighted every year in the paddy areas near Nahchani during harvest time, where they feed on *Scirpus* bulbs or fallen grains. The sarus crane is one of my favourite birds, and watching this State Bird of Uttar Pradesh completes my day. It is threatened because of the increasing use of chemical fertilizers and pesticides on agricultural land.

On my way home I spot a red-vented bulbul nest. Flocks of rose-ringed parakeets fly from Khari river to the village, where they roost in old neem trees. Before entering the village I see a spotted owlet, which is also active during the day. Around noon I reach home, where I spot a shikra perched on the electric wire in front of my house. It is here almost every day, probably hoping to spot a careless mouse or house sparrow.



The glossy ibis is an attractive bird with its metallic green and brown feathers. Its curved long bill is well shaped to catch aquatic snails, frogs, or small fishes



Asian green bee-eater known for their agile flights, leave no dragonfly, bee or wasp safe during their presence at Khari river



The striking black-white combination of a male pied bushchat is in sharp contrast to the more dull brown female



Owls are known as nocturnal birds, however, spotted owllets are also active during the day



The white-breasted waterhen feeds on aquatic insects and small fish

I feel privileged to live in a village where it is still easy to do a bird walk every morning and list more than 40 species per day. However, I have concerns about the future as the increasing use of chemicals has decreased insect populations, which will eventually affect insectivorous birds. Other problems are the uncontrolled cutting of trees for firewood and the numerous pumps along Khari river that deplete groundwater sources, which may permanently dry the river one day. Nevertheless, till

then, tomorrow is another day, with opportunities to sight more species, maybe a purple sunbird or an Indian grey hornbill! ■



Dheerendra Singh is a naturalist and wildlife photographer interested in documenting birds, mammals, herpetofauna, insects, especially dragonflies, and plants.

Birding in Bhutan

Text and Photographs: Suchitra Ambudipudi



Blood pheasant atop a tall tree stump



Black-faced laughingthrush was our companion in Jigme Dorji National Park



The elusive black-tailed crane showed off its vibrant colours, before vanishing in the foliage

It was early in the afternoon on 23rd April, 2016, that we flew to Bhutan. Our Drukair flight to Paro from Kolkata was short but exciting, with the highlight being the view of Mount Everest from above. As we began our descent, we could witness the natural beauty of Bhutan. Tree cover stretched for miles uninterrupted against the jagged mountains slopes. Clouds floated above the valleys, protecting them from the rays of the sun. The land seemed peaceful and inviting.

As I took my first step out of the plane, I was overcome by a sense of awe. The entire landscape was enveloped by flora that circulated truly “fresh” air. It is astonishing how rejuvenated one feels after breathing in such pristine air for just a few minutes.

Joining our group leader, Mr Isaac Kehimkar, we made our way out of the airport. Our local guide, Tashi Namgay, was waiting for us. After a brief introduction, we set off for Thimphu where we checked into our hotel and prepared for our first day of birding.

A short drive to Begana set the ball rolling; our first species was the yellow-rumped honeyguide. The BirdLife database states that “this scarce and poorly known species is thought to have a

moderately small global population size as a result of its narrow habitat requirements and strong association with giant honey bee *Apis dorsata* colonies. It is likely to be declining as a result of habitat loss and honey extraction by humans, and is therefore considered Near Threatened.” The other species we spotted include the blue whistling thrush, brown dipper, plumbeous water-redstart, white-capped water-redstart, common kingfisher, and crested kingfisher. Dusk began setting in and we returned to the hotel for an early night.

The next day we visited Dochula Pass (3,100 m above msl), characterized by the presence of 108 stupas signifying good luck. Known as Druk Wangyal chortens, or “chortens of victory,” the stupas are a memorial for the 108 Bhutanese soldiers who lost their lives during a rebel insurgency in 2003. Their construction was commissioned by Queen Ashi Dorji Wangmo Wangchuk.

Hiding in the dense undergrowth of this mountain pass was the chestnut-crowned laughingthrush. The bird hopped from one obscure branch to the next, taunting and inspiring us with its exuberance. As we proceeded along the trail, we came across plain mountain finches, grey-backed wagtails and russet sparrows.



The melodious calls of the blue whistling thrush are etched on my mind



Brown parrotbill navigating dense bushes



An individual from a flock of rufous-winged fulvetta that moved skittishly next to our bus



Russet sparrow at Dochula Pass

The following day, we started off early for Punakha, driving through dense deciduous forests which are home to the striated laughingthrush, grey treepie, golden-throated barbet, great barbet, and verditer flycatcher. Along the way, we visited the Royal Botanical Park where we saw the long-tailed minivet, green-tailed sunbird, Eurasian jay, and speckled wood pigeon. After a good hour of birding, we continued on our journey to Punakha.

After reaching Punakha, we dropped off our luggage at the hotel and headed out to look for the rare white-bellied heron. With less than 200 surviving individuals, the white-bellied heron is Critically Endangered. According to the International Union for Conservation of Nature (IUCN), a species that is Critically Endangered

faces an extremely high risk of extinction in the wild. We scanned the banks of the Pho Chhu river to no avail. We waited until nightfall, but had to retrace our steps to the hotel, disappointed.

The following day, we explored Punakha Dzong, the site of the coronation of all past and present kings of Bhutan. The Punakha Dzong is a 17th-century fortress standing at the juncture of the Pho Chhu (father) and Mo Chhu (mother) rivers. It features tremendous gold statues of the Buddha and Guru Rinpoche, the latter of whom envisioned its erection as a sanctum for Buddhist traditions and relics.

We crossed over to the other side of the Pho Chhu river by navigating a long suspension bridge. Our driver, Calden, re-instilled our hopes by taking us to a location where the white-bellied heron had previously been spotted. However, luck was not on our side; we had to pack our bags and call it a day.

The next day, we headed to Trongsa, stopping by at Jigme Dorji National Park. As we traversed the broadleaf forest, several unique species came into view: red-billed leiothrix, Mrs Gould's sunbird, whiskered yuhina, and Blyth's warbler.

While in the National Park, I was eagerly marching forward, trying to scan every inch of my surroundings. Soon, I had separated myself from the pack. I remained quiet and took diminutive

steps until I reached a sunlit section of the jungle. I stood still. For a good thirty seconds, I felt like the only person on earth. Then, a light flickered behind a rocky outcrop. All of a sudden, a black-faced laughingthrush hopped onto a craggy mound, displaying its feathers in all its glory. In that moment, I experienced a multitude of rapid emotions: surprise, shock, and excitement. I began photographing the bird as if it was a matter of life and death.

Soon, we were driving on to Trongsa, reaching the resort after nightfall. The following morning, we began our long drive back to Thimphu. During a brief birding session in the morning, we sighted rufous-bellied woodpecker, grey bushchat, a few rufous-winged fulvettas, and many rufous sibilas. While we were having breakfast, a spotted forktail came into view in a nearby creek. It hopped about and disappeared from our sight in less than a minute. On the way, we stopped by the Mangde river to observe birds. We sighted the orange-bellied leafbird, mountain bulbul, and several raptors such as the mountain hawk-eagle, black eagle, Oriental honey buzzard, and Himalayan griffon. During our drive to Thimphu, we saw the yellow-rumped honeyguide again, and in addition, observed the spot-winged grosbeak, yellow-billed blue magpie, Bhutan laughingthrush and brown parrotbill. We



The golden-throated barbet was well camouflaged in the forest foliage



We observed the carefree flight of the grey bushchat almost every day of the trip

reached Thimphu late in the evening. The next day, we hit the road again for Paro.

At Paro, we freshened up and headed out to a marshy field nearby. We waited with bated breath for the black-tailed crane. The bird called a few times: “two hoarse croaks, followed by a clattering descending trill.” Like most cranes, it is generally shy and prefers thick vegetation, but does at times venture into the open during dawn and dusk. The bird appeared and disappeared at the speed of lightning! It reappeared a few more times before deciding to remain concealed. We headed back, slightly disappointed. It was essential that we went to bed early that night, for we were to leave for Chalela Pass (3,880 m above msl) at 3:00 a.m. the following morning.

Our target species that day was the blood pheasant, an iconic red, grey, and white bird (the male) with prominent streaking and a “blood” red face, feet, and tail. The blood pheasant tends to forage on the forest floor during dawn and dusk, making it essential that we be present during the narrow time window. Early birds do catch the worm, it seems, as we not only obtained good

images of the blood pheasant, but also witnessed the magnificent Himalayan monal! According to the Cornell Lab of Ornithology on their portal *eBird*, the Himalayan monal is “decked out in all the colours of the rainbow. The male is the image of iridescence; green crested head, red neck, green shoulders, blue back, orange tail, and black underparts. When displaying or flushed, it flashes a bright white patch on the back.”

As we gained elevation, frost started settling in, creating a glistening shine across the vibrant rhododendron forest. The forest was alive with the cacophonic calls of the spotted nutcracker, and the carefree flight of the blue-fronted redstart, spot-winged rosefinch, white-winged grosbeak, and rufous-vented tit. As noon approached, we returned to the hotel for lunch.

After lunch, we headed back to the place where we had initially seen the crane. This time, we were fortunate that the crane came out in the open and walked across the rocky riverbed. Unfortunately, feral dogs from the neighbourhood also surfaced upon hearing its calls, threatening it. Thankfully, they were scared away, and the crane became



A rufous sibia that suddenly appeared from underneath a bush to perch before us



The lively cackle of the spotted nutcracker in the rhododendron forest kept us enthralled



Yellow-billed blue magpie has a long, patterned tail and rapid flight

invisible once more. We moved towards the riverside, where we viewed the ibisbill from a close range. Yet, we were more engrossed in our local guide's rescue of a red-billed chough.

Tashi noticed a bird struggling in a thorny bush on the opposite bank of the river. He promptly took off his shoes and waded through the surging waters. The bird struggled in his hands. Calming it down, Tashi untied the string trapping its foot. The bird lifted off the ground and we celebrated with joy as it flew into the distance. We returned to our hotel for one last time.

As I went to bed that night, I thought about how fortunate I was to share in the joys of nature and learn from some extremely knowledgeable people.

A quote popped up in my mind "Take nothing but memories. Leave nothing but footsteps" – the same sign that is posted all along the way to Jigme Dorji National Park. This is a profound notion that resonates with me. Coexistence is paramount in sustaining our future. From the abundance of birdlife that I beheld during this trip, it was amply clear that Bhutan has set one such example, by respecting and conserving its biodiversity. ■



Suchitra Ambudipudi is a 17-year-old wildlife photographer and student of Grade 12. She loves hiking, swimming, and kayaking.

Migratory Birds of Ousteri Lake



Ousteri Lake is the most important freshwater lake of Puducherry. This century old man-made Lake – also referred to as Osudu Lake – is situated about 10 km from Puducherry town and has been recognized as one of the important wetlands of Asia by the International Union for Conservation of Nature and Natural Resources (IUCN). The structure of the lake is complex – consisting of wetlands, marsh and mudflats; it acts as the single largest catchment of fresh water in Puducherry. Identified as an Important Bird Area (IBA) by BNHS, it provides habitats for a large number of migratory and native birds. The lake has rich flora of over 200 species, and a fish diversity that attracts migratory birds to the lake. Flamingos, about 12 to 20 of them,

arrive in the first week of July and by the end of July their number increases to about 50. In the first week of August, the gathering of thousands of flamingos attracts birdwatchers to Ousteri.

A large number of other migratory birds also visit Ousteri lake, especially after the Government of Puducherry took action to maintain the water level of the lake. The forest department has banned fishing activities in the lake, fencing around the lake has reduced garbage accumulation, and frequent monitoring to prevent poaching has resulted in increase in the bird populations.

The efforts made by the Puducherry government to promote the lake since 2008 have not yielded the desired results due to its geographical and political anomaly, as a major part of the lake is located in Tamil Nadu, where the jurisdiction of the Puducherry government does not hold sway. Poaching of birds was also rampant in the Tamil Nadu part of the lake. Even though the Tamil Nadu government declared Ousteri a bird sanctuary in 2014, the lake is facing enormous threats due to encroachment by agriculture. The increasing number of industries and real estate businesses that pollute the water channels of the lake is another cause for worry. One can only hope that Ousteri will remain a safe haven for migratory birds. ■

R. Alexandar, *Puducherry*

Sale of Baya Weaver Nests

Ganesh Chaturthi brings an advent of tough times for the baya weaver; the peak nesting season of this bird unfortunately coincides with the festival. For the past few years, the North Karnataka Birders Network (NKBN) has been observing the sale and use of these nests as decorative material, sometimes complete with unhatched eggs, in Hubli and Dharwad.

NKBN approached the vendors and counselled them on the ill-effects of collection of live nests of breeding baya weavers, and requested them to refrain from carrying out this inhumane and illegal practice. The requests fell on deaf ears, and the vendors were back to selling their wares. We realized that more

aggressive and direct action was required, and approached the police to inform them about the illegal sale of live nests.

Once the authorities were aware of the issue, they provided full cooperation and extended the necessary assistance. The media was also informed about the course of action being adopted. Along with members of NKBN, Gurunath Desai, S.M. Patil, and Anto Christy, accompanied by the police, I scouted for the known points of sale in the market. The suspected vendors were approached under cover. Once the hawkers were convinced that they had a prospective buyer, they took the nests out of their bags. At this point, the police and NKBN members

immediately surrounded the vendors and confiscated the nests. This was repeated in other markets of Hubli and around 300 nests, some of them 'live' (with eggs), were confiscated during the operation.

Photographs and video footage along with a message to create awareness among the public were run in the print media and on local cable TV. Banners highlighting the negative impacts of removal of live nests on the breeding cycle of the baya weaver were displayed. This created a lot of public interest. For the last five years, NKBN has been on a mission to travel to the villages surrounding the twin cities of Hubli-Dharwad to educate the public. ■

Pawan Miskin, *Karnataka*

BIRD BUSINESS



by Rohan Chakravarty



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ABOUT THE POSTER

Whiptail scorpions or vinegaroons (also spelt vinegarones) are lesser-known relatives of spiders and scorpions (Class Arachnida). They belong to the Order Thelyphonida, which has hardly 110 species, and can be found in tropical and subtropical regions. These arachnids look like scorpions in most regards except for the long whip-like tail. The mouthparts, especially, look just like those of a scorpion, so an unexpected encounter can be frightening, but unlike true scorpions they do not have a venomous sting. To defend themselves when threatened or cornered, they spray a noxious liquid from the tip of the whip-like tail, which contains acetic acid, i.e. vinegar, from which they get their common name. Predatory in nature, they use their specialized teeth to crush their prey, which includes insects, millipedes, and other arachnids too. Whiptail scorpions are nocturnal; during the day they hide under debris or wood piles on the soil. Like true scorpions, the mother whiptail scorpion too carries her babies on her back till they are of an age to defend themselves.



Whiptail scorpion

ZEESHAN MIRZA

This *Uroproctus assamensis* raised its whip-like tail when I approached it with my camera in Jampui hills on the border of Tripura and Mizoram. This species is common across northeast India, especially at about 600 m elevation. Of the 16 known genera, India is home to four genera.



Whiptail scorpion



Romeos of the Indian Grasslands

Text: **Mandar Sawant and Sanchit More**

Photographs: **Mandar Sawant**

While pondering upon reptiles, the image that comes to the minds of most people can vary from snakes slithering through the grass to gigantic dinosaurs that once roamed the Earth. Most people get scared when they encounter these “creepy” creatures. Very few would say at first glance, “Oh wow, so beautiful.” How do you react when you see a gecko inside your home – look for slippers, broom, stick, or whatever you can get hold of to catch it, kill it, and throw it out?

If you believe that reptiles cannot be beautiful, then you should visit grasslands and scrublands during the months of April and May. Now, you may wonder what is so special about grasslands – those bare, almost barren lands, with no shrubs or trees. Grasslands may not look as beautiful as evergreen forests, and some people might think that there is no wildlife in those barren lands, but if they would just visit these landscapes, they would come across snakes, geckos, lizards, birds, and many other



beautiful animals. They would see the struggle of these animals to survive, just like we humans do in our habitats that we call city, town, or village.

If you visit the grasslands and scrublands around Kolhapur, Satara, Sangli, Solapur, Pune, and Ahmednagar during April and May, you

will be mesmerized by these unusually beautiful lizards which are the subject of our story! In the scorching heat of summer, these agamids are pitted against each other to woo and win a mate. These 'guys' remind us of the days when we struggled to find our life partners and the sacrifices we made to achieve that.



Sarada superba

Fan-throated lizards are small, ground-dwelling agamids found in a diverse set of habitats, like scrubland, plateaus, and sandy beaches of India, Nepal, Sri Lanka, and Pakistan, with sparse vegetation. In India, they have been recorded from Maharashtra, Karnataka, Tamil Nadu, Gujarat, Haryana, Madhya Pradesh, Rajasthan, Odisha, Himachal Pradesh, and Andhra Pradesh. In many parts of the country, they breed before the beginning of the monsoon. The most striking feature of these lizards is the brightly coloured extendable dewlap on the throat of the male, which it uses during its ritual mating display, hence the name fan-throated lizard. Males use this prominent dewlap in intraspecific communication during the breeding season. The dewlap is absent in the female.

The first fan-throated lizard species to be named, *Sitana ponticeriana*, was described by the French naturalist and father of Palaeontology, Georges Cuvier in 1829 from Puducherry, India. Yet, fan-throated lizards were among the least studied and highly neglected groups of vertebrates, until recently. Over the last two decades, researchers and scientists have focused their efforts on this unique group of lizards, resulting in many new discoveries. Most of these studies are concentrated in the biodiversity-rich regions of the Western Ghats and the Northeast in India. However, surveys in the barren arid zones of India also resulted in the discovery of one new genus and some new species of fan-throated lizards. These landscapes, which were traditionally thought to be poor in species richness, are now known to be home to a vast diversity of less-studied reptiles, especially lizards.

One of the remarkable results of the study was the description of a new genus *Sarada*, a distinct sister group of genus *Sitana*. The absence of enlarged scales on the thighs and the lateral body in combination with body ratios and dewlap colour patterns in *Sarada* can be used to differentiate it from *Sitana*. The generic epithet is derived from ‘*sarada*’, the Marathi word for agamid lizards.

We have observed *Sitana laticeps* (left) and *Sarada darwini* (right) basking on the same rock, showing coexistence between these two species



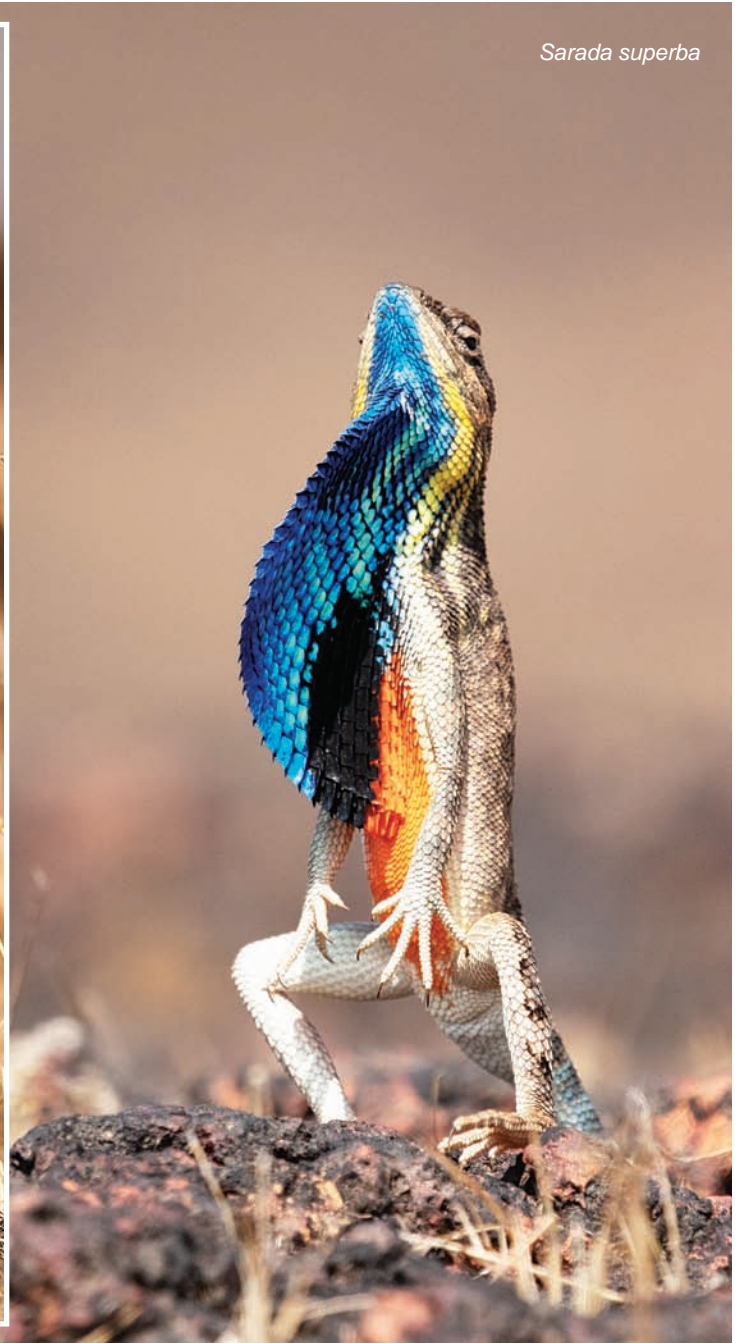
Fan-throated lizards breed during April-May in most parts of the country. These lizards have a thin flap of loose skin, the dewlap, between their throat and abdomen, which they can flap/flash at will. A courting male will use his dewlap to woo a prospective partner by puffing it into a fan. This is made possible by extending a cartilaginous structure underneath the skin. It is interesting that during the breeding season – mainly March to June – the males develop wonderful coloration ranging through blue-black-orange in *Sarada*, and whitish or creamish in *Sitana*. These lizards are territorial and move around their territory displaying their dewlap. The male finds an elevated position on a rock or shrub where it perches and displays to attract females. On spotting a female, the male rushes towards her and increases the intensity of display.

As the temperature rises and the sun becomes unbearable, the male stands on his hind legs, supported by the tail to avoid greater belly contact with the hot rock, or he climbs onto a small bush, continuing to show his colourful dewlap and belly to convince the female that he is the perfect choice for her.

Sarada deccanensis



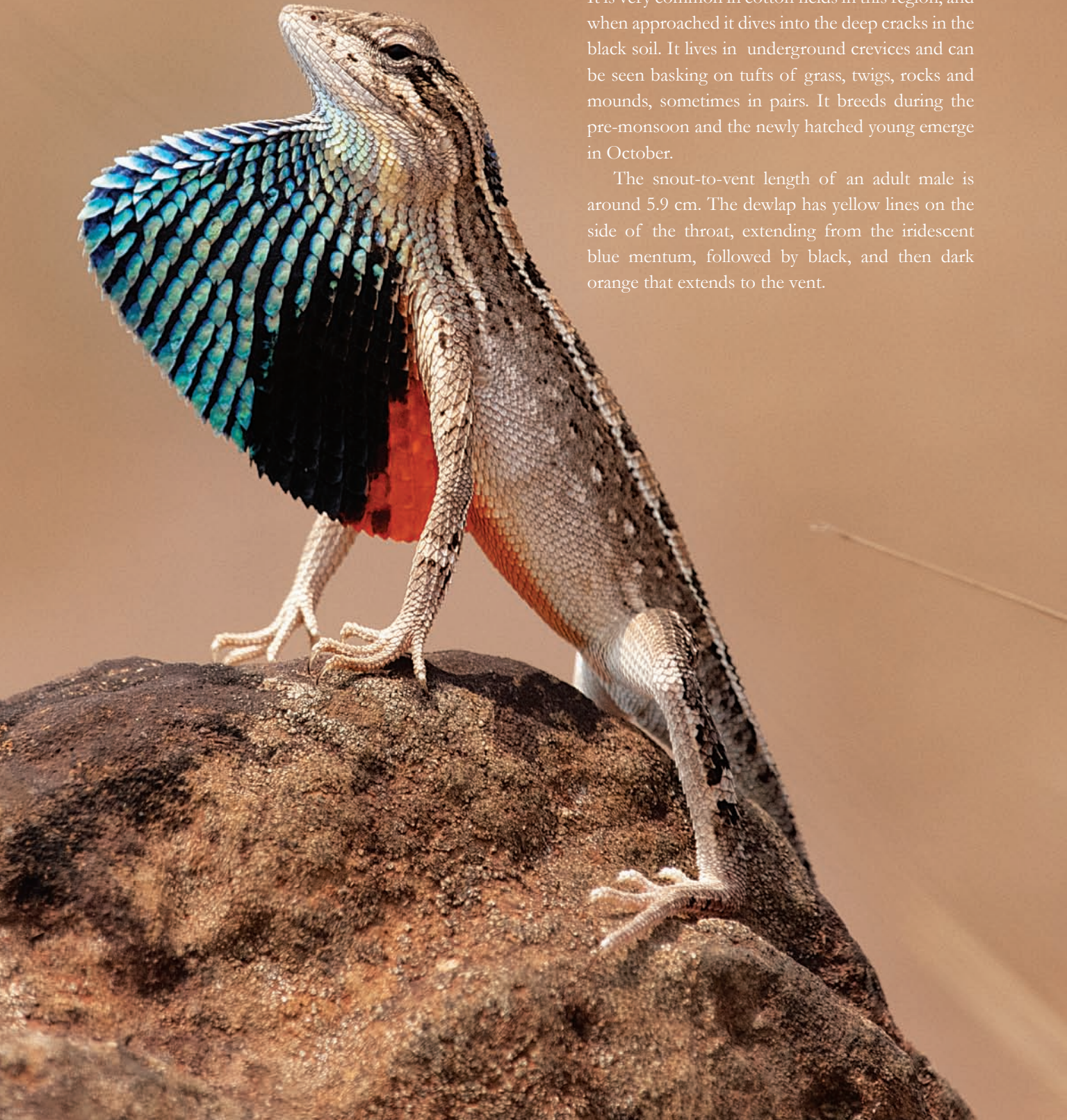
Sarada superba



Darwin's large fan-throated lizard *Sarada darwini*

The species is named after Charles Darwin, who referred to the “throat-pouch” of a fan-throated lizard in his book *THE DESCENT OF MAN, AND SELECTION IN RELATION TO SEX*, to illustrate secondary sexual traits in reptiles. *Sarada darwini* is found only in southern Maharashtra and northern Karnataka. It is reported from Kolhapur and Sangli districts of Maharashtra, at altitudes ranging from 550 to 680 m, and also in the plains of southern Maharashtra. It is very common in cotton fields in this region, and when approached it dives into the deep cracks in the black soil. It lives in underground crevices and can be seen basking on tufts of grass, twigs, rocks and mounds, sometimes in pairs. It breeds during the pre-monsoon and the newly hatched young emerge in October.

The snout-to-vent length of an adult male is around 5.9 cm. The dewlap has yellow lines on the side of the throat, extending from the iridescent blue mentum, followed by black, and then dark orange that extends to the vent.



Broad-headed fan-throated lizard *Sitana laticeps*

Sitana laticeps is named after its broad head. In Latin, *latus* means broad and *ceps* relates to the head. The species has a limited distribution in the hilly tracts of western Maharashtra, and is reported from Pune and Solapur districts. *Sitana laticeps* is found in rocky terrain with patches of grasses and sparse scrub, at altitudes ranging from 513 to 930 m. It has a very small dewlap compared to *Sitana spinaecephalus*, but both have similar dewlap colours.

The snout-to-vent length of an adult male is around 4.3 cm. The dewlap is slightly serrated, medium-sized, and off-white with a single blue streak on the mentum, extending to the middle with brown patches or spots on the individual scales of the dewlap.



Superb large fan-throated lizard *Sarada superba*

Do you know why this species is called *superba*? It is mainly because of the brilliantly coloured dewlap in the male. *Sarada superba* is presently known only from Chalkewadi, a high elevation (1,100 to 1,300 m) plateau in Satara district, Maharashtra. These lizards breed during the pre-monsoon. They are very common on Chalkewadi plateau and take shelter in the cracks in the lateritic substrate when approached. They are as brightly coloured as *Sarada deccanensis*. The males are highly territorial. When one of them spots a rival nearby, he warns it off by raising his crest: an additional flap that runs all the way down from the nape of the neck to the animal's rear.

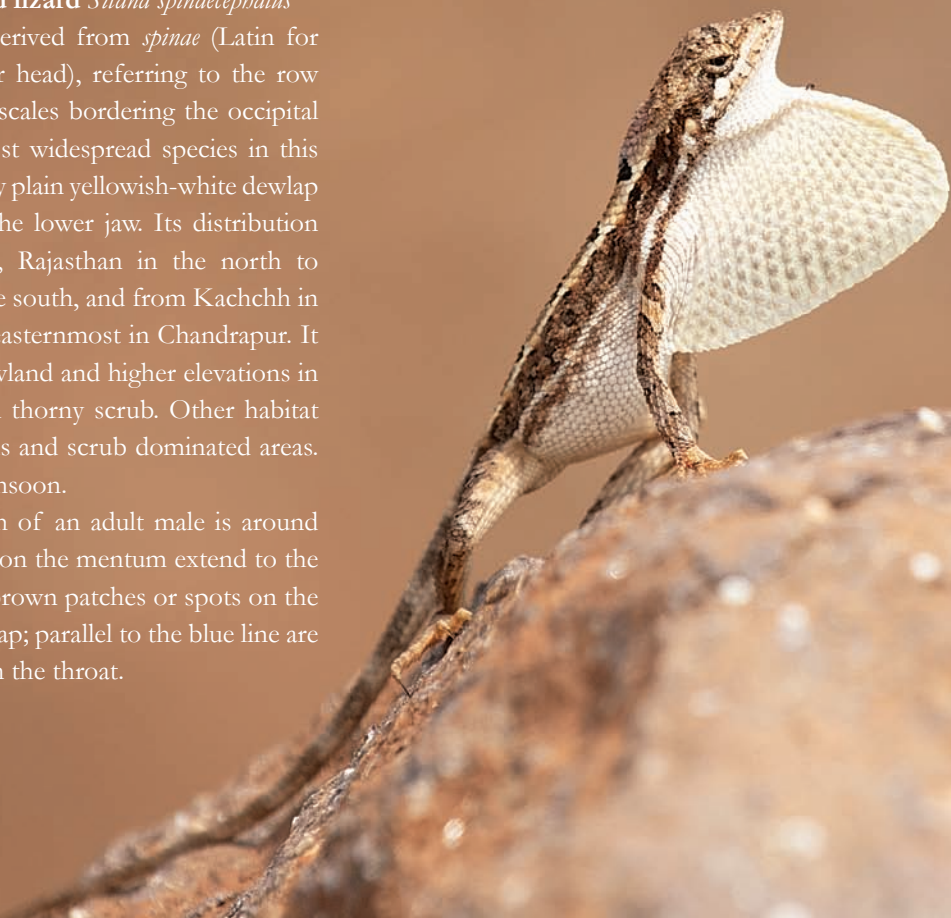
The snout-to-vent length of an adult male is around 7.5 cm. The dewlap has yellow lines from the side of the throat, extending from the iridescent blue mentum, followed by a black patch, and then by dark orange that extends all the way to the vent.



Spiny-headed fan-throated lizard *Sitana spinaecephalus*

The species epithet is derived from *spinae* (Latin for spine) + *cephalus* (Greek for head), referring to the row of four spine-like enlarged scales bordering the occipital region. It is one of the most widespread species in this genus, characterized by a very plain yellowish-white dewlap with a single blue line on the lower jaw. Its distribution records range from Ajmer, Rajasthan in the north to Badlapur, Maharashtra to the south, and from Kachchh in Gujarat to the west, to the easternmost in Chandrapur. It is adapted to live in both lowland and higher elevations in grasslands interspersed with thorny scrub. Other habitat types include rocky riverbeds and scrub dominated areas. It breeds during the pre-monsoon.

The snout-to-vent length of an adult male is around 4.8 cm. A single blue streak on the mentum extend to the middle of the dewlap with brown patches or spots on the individual scales of the dewlap; parallel to the blue line are multiple dark brown lines on the throat.

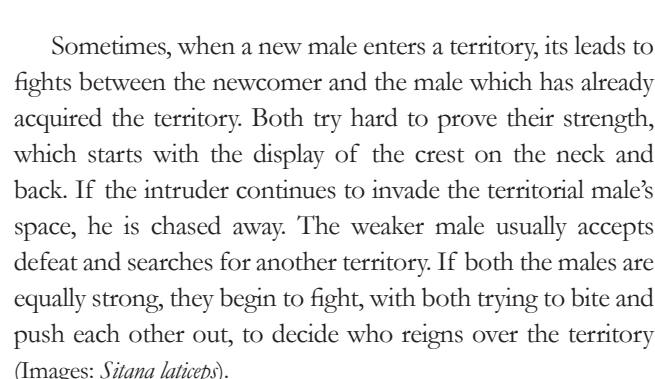


Deccan fan-throated lizard *Sarada deccanensis*

Sarada deccanensis is found in grasslands, agriculture fields, and on lateritic terrain in the northern hill ranges and north-eastern plains of the Deccan. The northernmost records from Nashik and the easternmost records from Chandrapur in Maharashtra. Based on available records, it appears that the species is not found in the lowlands and coastal plateaus in the western part of the distribution of the genus.

The snout-to-vent length of an adult male is around 6.57 cm. Its dewlap has yellow lines on the side of the throat, extending from the iridescent blue mentum – a projection of the lower jaw – followed by black and then dark orange, which extends to the vent.





Sometimes, when a new male enters a territory, it leads to fights between the newcomer and the male which has already acquired the territory. Both try hard to prove their strength, which starts with the display of the crest on the neck and back. If the intruder continues to invade the territorial male's space, he is chased away. The weaker male usually accepts defeat and searches for another territory. If both the males are equally strong, they begin to fight, with both trying to bite and push each other out, to decide who reigns over the territory (Images: *Sitana laticeps*).

Sitana spinaecephalus (male and female)



Sarada superba (male and female)



During display, the *Sitana* male often bobs its head up and down, while the *Sarada* male shakes the head sideways. If the female is not ready for mating or is not impressed by the approaching male, she arches her body to signal rejection. The female mates with the strongest male. After a few days, when she is ready, she finds a good and safe place to dig a small pit to deposit her eggs, and then covers the pit. After the incubation process, the eggs hatch at the onset of monsoon.

Sarada superba (female)





HITESH OBERAI

The female mates with the strongest and most eligible male. After a few days, when she is ready, she finds a good and safe place, digs a small pit, lays her eggs in it and then covers this pit

Conservation

Most of the grasslands in the northern Western Ghats are slowly disappearing due to human intervention such as urbanization, industrialization, small scale mining, and conversion to agricultural land. Development is crucial to human civilization, however, it should be in tune with nature. Grasslands were not considered to be natural habitats when such regions were first classified in India, hence there has been a bias towards forest-centric conservation. In fact, large expanses of grassland have been converted to monoculture plantations at the behest of the Forest Departments. It is high time that grasslands are recognized as unique, biodiversity-rich habitats that require urgent conservation attention. ■



Mandar Sawant is a naturalist explorer with the BNHS. He is interested in travel, macro photography, and wildlife.



Sanchit More is a nature enthusiast, wildlife photographer, and trekker. Presently, he is working with General Mills as a Sr Executive-AR & Trade.



The heart-spotted woodpecker frequently joins the mixed hunting parties of insectivorous birds

Thattekad — Birders' Paradise

Text and Photographs: **Vikas Mahajan**

The Conservation Education Centre (CEC) of BNHS organizes several online courses for nature enthusiasts, the Basic Course in Ornithology being one of them. The programme provides excellent information about birds and birding through its course material and through field trips. I was a student of the ornithology course of the 2014–15 batch. I had attended the field camps at Point Calimere in Tamil Nadu, Bhigwan in Maharashtra, and my ardent desire to explore Thattekad, the birding paradise of Kerala, became a reality through a camp held there in

February 2015. Each of the three camps was well organized, enjoyable, and educative.

I had looked up the Kerala tourism website for Thattekad prior to the trip. My reading revealed that Thattekad Bird Sanctuary is situated at the base of the Western Ghats. The forest was raised to its current status of a sanctuary in 1983 on the recommendation of Dr Sálím Ali, hence, the official name Sálím Ali Bird Sanctuary. In his report on the avifauna on the region, Sálím Ali described Thattekad as the richest bird habitat in peninsular India; however, this sanctuary is still unknown to

many Indian birders. *Thattekadu* means a flat forest, and the sanctuary encompasses over 25 sq. km on the northern side of Periyar river. Labelling Thattekad as a birder's paradise would not be an exaggeration as the sanctuary holds close to 250 species of birds. The region is home to several endemic species/subspecies like Malabar grey hornbill, Malabar pied hornbill, Malabar parakeet, Malabar trogon, Malabar barbet, Malabar whistling-thrush, Sri Lanka frogmouth, flame-throated bulbul, Nilgiri wood-pigeon, white-bellied treepie,

Nilgiri flycatcher, grey-headed bulbul, southern hill myna, and rufous babbler. Apart from birds, the sanctuary is also home to around 28 species of mammals. These include elephant, tiger, leopard, civet cat, jungle cat, sloth bear, Malabar giant squirrel, porcupine, Indian rock python, and king cobra.

As we left Kochi and travelled towards Thattekad, I could see a drastic change in the habitat; in a few hours I was in the midst of a dense forest with a river flowing by. The forest has



Southern hill myna is an accomplished mimic



Green imperial-pigeon has a swift and powerful flight



Malabar trogon is a brilliantly coloured arboreal forest bird



Malabar grey hornbill is endemic to the Western Ghats



A pair of Sri Lanka frogmouth



Cotton pygmy-geese is found in waterbodies with good aquatic vegetation

tropical evergreen, semi-evergreen, and deciduous forests, and small patches of grasslands and rocky areas, supporting a diverse mix of avifauna.

I was fortunate to meet Dr R. Sugathan, an eminent ornithologist working in Thattekad Bird Sanctuary since the past few decades; he was associated with Dr Sálím Ali and BNHS in the bird banding projects during his earlier days. Dr Sugathan narrated to us the efforts of Dr Sálím Ali in getting Thattekad declared as a bird sanctuary.

An area in the sanctuary is called Cuckoo Paradise as it supports many species of cuckoos. The fork-tailed drongo-cuckoo, easily mistaken for a drongo, is one among them! The bird that topped my 'to spot' list was the Sri Lanka frogmouth, a nocturnal bird that camouflages itself so well on the branches of trees that it appears as a part of the tree! It is named so for its large flattened hooked bill and huge frog-like gape. Frogmouth is rarely seen during the day, except at roost sites or when flushed. It is known to use the same roost site for months. When alarmed, it slowly moves its head, pointing the bill upward, and can be mistaken for a broken branch. It relies on this crypsis and often sits still for a long time before making an escape. It may open its mouth wide in a threat display.

Early next morning, we trekked to especially sight the endemic birds in Thattekad. With the help of a local resource person, we spotted a pair

of Sri Lanka frogmouth cozying up together. They sat still, almost glued to each other, taking turns to gaze at us. We lost track of time and do not remember how long we stood there watching these birds. Later, we spotted a lone female and I was fortunate to photograph this elusive bird with its open gape! It was my 'lifer' moment. Among the other birds sighted by us were Oriental dollarbird, Malabar trogon, Malabar grey hornbill, Malabar pied hornbill, heart-spotted woodpecker, Malabar parakeet, fork-tailed drongo-cuckoo, Malabar barbet, Malabar whistling-thrush, Sri Lanka frogmouth, flame-throated bulbul, black baza, white-bellied treepie, Nilgiri flycatcher, grey-headed bulbul, southern hill myna, brown-breasted flycatcher, rusty-tailed flycatcher, chestnut-headed bee-eater, brown-backed needletail, Asian fairy-bluebird, and green imperial-pigeon. Among the mammals, I was fortunate to sight Malabar giant squirrel. Its call can be heard from a distance of 300 to 400 m.

Thattekad is a must visit place for every birder. It offers more than one can really imagine. This is the most memorable trip of my life till now! ■



Vikas Mahajan, a businessman by profession, is passionate about travelling to wildlife reserves and forests, wildlife photography, and nature conservation.



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Killer Roads and Wildlife

Text and Photographs: **Abhishek Srivastava**

Road networks are important for a country's economy, and people increasingly rely on cars for transportation. The dramatic increase in road networks in India has cut into and altered the landscape of many forest tracts, impacting wildlife in a number of ways. To understand how roads adversely impact wildlife and their habitats, we decided to undertake a study

on this issue and this article reports roadkills on National Highway-74, which cuts across protected areas in and around Rajaji Tiger Reserve (RTR), Uttarakhand, and which has been posing a serious threat to mammalian fauna in recent years. Our study primarily looked into impact of the highway on mammalian fauna in Shivalik foothills in Rajaji Tiger Reserve.



Speeding vehicles pose a great threat to wildlife



Carcass of a five-year old male tiger run over by speeding vehicle

It was late April, and my colleague and I made preparations for a wildlife survey in Shyampur and Rashiyavad forest range of Haridwar Forest Division. Starting at 9:30 p.m., we travelled through the forest and arrived at a place where there was silence all around. The weather was very pleasant, with a cold breeze blowing.

As we continued walking, we came across a stretch of the highway that cut through the dense forest patch. And we found our movement blocked by a long pile up of vehicles, stretching for about two kilometres or more. The reason for the traffic jam was a five-year-old male tiger that had been crushed by a speeding vehicle. The animal was in the middle of the highway, blood oozing out from his mouth and with a serious injury to the head.

NH-74 – A death trap for wildlife

Rajaji Tiger Reserve in Uttarakhand constitutes an important repository of the mammalian fauna of the State and perhaps is the last refuge for a number of threatened mammal species in the lesser Himalayan zone and upper Gangetic tract. However, cutting through the Rajaji Tiger Reserve

in the Shyampur and Chidiyapur ranges of Haridwar Forest Division is the Haridwar-Najibabad Highway, National Highway-74, which sees a continuous stream of speeding vehicles. NH-74 is nothing short of a “death chasm” for wildlife. The 255.63 sq. km Shyampur forest range of Haridwar Forest Division (HFD), which was merged into Rajaji Tiger Reserve in 2015, is well connected with Rajaji Tiger Reserve and Lansdowne Forest Division, these holding a diverse mammalian assemblage.

The Haridwar-Najibabad highway experiences heavy traffic every day, and the traffic usually rises during the commencement of the Chardham Yatra. A total of 72 wild animals (head count of animals crushed to death) were recorded killed by speeding vehicles on this NH from January to June 2016, including leopard *Panthera pardus*, tiger *Panthera tigris*, spotted deer *Axis axis*, rhesus macaque *Macaca mulatta*, common mongoose *Herpestes edwardsii*, small Indian civet *Viverricula indica*, wild pig *Sus scrofa*, and wild cat *Felis chaus*. Apart from these species and domesticated animals, a diversity of species of squirrels and birds figure in the road kills.



Warning signs for drivers at strategic points, where wild animals cross the road or known wildlife corridors, could help to reduce the number of roadkills

Another day, we started our morning survey at 4 a.m. from Jhilmil Jheel Conservation Reserve in Haridwar forest division. It had rained the previous evening, the air was cool and misty. Soon we sighted three adult elephants and a calf about 40 m away, masticating and flapping their ears as they crossed the highway. This stretch in Shyampur Forest Range is an important elephant's right of way. There are several locations from where elephants move to and from the reserves on the eastern side of NH-74 towards the East Ganga Canal area. Elephants can be seen crossing near the Anjani forest checkpoint on NH-74 at Shyampur Forest Range in the morning and evening for water and green fodder in the adjoining reserve forests. High-speed vehicular traffic on NH-74 poses a great threat to the elephants that cross this point.

Future threat to wildlife – Highway Expansion to four-lane

NH-74 is important because it connects the state capital of Uttar Pradesh, Lucknow, to Dehradun, the state capital of Uttarakhand. There is also heavy movement of vehicles on this highway to Haridwar, one of the seven holiest sites for Hindus. The number of vehicles increases during religious events such as Mahakumbh Mela. The highway will see heavier and faster traffic with the upcoming project for upgradation of 2-lane to 4-lane traffic, as proposed by the National Highway Authority of India.

According to information obtained through the Right to Information Act, from Haridwar Forest Division in July 2017, a total of 27 leopards and 19 spotted deer, besides other wild animals, were recorded in roadkills during the past 10 years. In these past ten years, traffic volume was lower and fewer roadkills could be expected. State forest departments do not take roadkills seriously unless scheduled species are reported. Widening of roads and unregulated, ill-planned tourist influx with the years has made matters worse. An article in *Times of India* reported kills of 15 wild animals in two months in 2016.

Monitoring of wildlife mortalities from vehicular collision, and intensive studies to understand the impacts of vehicular traffic on wild animals need to be taken up. Construction of speed breakers in sensitive areas, clearing of *Lantana* and other bushes growing at the margins of the highway up to a distance of 50 metres, and putting up warning signs at wildlife crossing areas and corridors are some of the mitigation measures that need to be implemented. ■



Abhishek Srivastava is passionate about nature; his research interests include ecology, and species-habitat relationships. Trekking and wildlife photography are his other interests.

Had he not joined Government service as Deputy Director (Wildlife Protection), Mr Parthasarathy Kannan would have been, today, one the finest ornithologists of our country, having done his Masters under Dr Sálím Ali on Ornithophily, the study of pollination of flowering plants by birds to ravel the association of bird-flowers and flower-birds. Dr Robert Grubh, former Assistant Director, BNHS recalls "I met him for the first time in 1964 at White House on Malabar Hill, where the BNHS was located then. He was a student of Dr Sálím Ali, doing field and lab experiments on the colour preferences and other behavioural aspects of nectar feeding birds, in relation to Ornithophily. I found him to be a man of great scientific integrity and intellectual honesty; and I learned much from him with regard to meticulous observation of bird behaviour."

He was an expert in bird calls and was even able to attract forest birds by imitating their call notes. As Mrs Kannan recalls, he could induce birds to come out of the foliage by whistling their specific calls. He would lie still on the forest floor and whistle away. His efforts would often be rewarded by the bird answering his calls, then flying out and sometimes even sitting on him, as it searched all around for the source of the call!

Daya, Mr Kannan's daughter, recalls an interesting incident that her mother had related to her. Once during a birdwatching session, Dr Sálím Ali described to his students (one of whom was my father), the call of a certain bird that they had identified. Unlike the others, he did not take notes and was pretty relaxed. A while later, my father accompanied Dr Sálím Ali and his friends Dr S. Dillon Ripley and Mrs Mary Ripley to the outskirts of Bombay (now Mumbai) on a birdwatching trip. Dr Sálím Ali was telling them about the bird identified earlier and described its call to Mrs Ripley. When my father joined the conversation, Dr Sálím Ali remarked, "That is all very well, but I didn't see you take notes earlier," to which he replied "Why should I take notes, Sir, when I can remember the call clearly?" "You may remember it clearly – but what if you wanted to describe the call to someone else? How would you do it then?" was the question to that. "I would do this," said my father, and whistled the call of the bird in question so perfectly that Dr Ripley, who had gone a few steps ahead, turned back and said "That's the bird! That's the call of the bird we were talking about!" My father told us this anecdote several times later on, and he would always laugh and say



Parthasarathy Kannan

June 01, 1942 – April 09, 2019

how his teacher had said "Aha! So there is a method to the madness!"

Daya recalls another incident that happened during her father's interview for the job with the Central Government, where Dr Sálím Ali was on the interview panel. While the other members of the panel asked him tough questions, Dr Sálím Ali didn't say much, but smilingly looked on. When asked why he wasn't asking any questions, the Birdman of India said "I don't need to ask him questions because I know that he's extremely qualified for the job. He is my student." His teacher's

obvious pride in him and the warmth in his voice was something that stayed extremely close to her father's heart.

P. Kannan, as he was known, joined the Ministry of Environment and Forests, where he served as Deputy Director (Wildlife Protection), Western Region, for many years and later as Deputy Director (Wildlife Protection), Southern Region, at Chennai. He was responsible for some of the large hauls of snake skins at Colaba (Mumbai) and later at Mamallapuram and Pondicherry. BNHS was very close to his heart, and he was always ready to coordinate some of the liaison work with the government. He helped BNHS as the backdoor diplomat for the final paperwork during the transfer of the Goregaon land for the BNHS Conservation Education Centre, which was given by the Government of Maharashtra in 1983.

Mr Kannan was respected for his strictness and simple tastes. His simplicity bordered on austerity as his daughter Daya recalls. "His clothes were always perfectly pressed and looked new – but almost every single piece of his clothing was at least 30–35 years old! According to him, wasting resources was the worst thing one could do, and this he had imbibed from his teacher Dr Sálím Ali. He was so averse to wastage that he once wrote an entire official letter on a *bus ticket* and gave it to his stenographer (my mother) to type. She had to use a magnifying glass to somehow decipher the minuscule writing, and so the practice of using bus tickets to draft letters went on." Daya recalls that her father was happy that he was "not wasting the taxpayer's money by using up sheet after sheet of paper" and my mother was happy that she could handle any strange situation that my father created. With this extreme simplicity (though disliked by her and her brother, especially during their teenage years), her mother could run the house in a surprisingly small amount of money.

P. Kannan was known for his sting operations. In Mumbai, I had often posed undercover as a "customer" to help Mr Kannan raid pet shops in Crawford Market. After his transfer to the Southern Regional Office, wildlife smugglers

tried several times to frame him to get him out of the way (he could not be corrupted with money, so smugglers tried to get him sacked), as his daughter recalls. His meticulous record-keeping and analytical skills helped demolish all the charges levelled against him, and he emerged from every problem completely vindicated – but the strain and struggle involved had taken a toll on his health. His simplicity and his overconfidence in his indestructibility worked against him

at this point, because he refused to go to a doctor and get it treated. P. Kannan passed away on Tuesday April 9, 2019 in Chennai.

His last contribution to Ornithology was “Ornithophily: Interdependency between Plants and Nectar-feeding Birds in Western India – A Monograph.” It was published by the Institute for Restoration of Natural Environment in 2018. ■

– Isaac Kehimkar

Sally Raulston Walker (1944–2019) came to India in the early 1970s to study yoga and Sanskrit. A graduate of Duke University, North Carolina, USA, her short stay in India soon turned into a life-long love of the country, its people and animals. Her stay in Mysore (Mysuru), where she was studying Sanskrit, brought her to Sri Chamarajendra Zoological Gardens where she saw the pathetic condition where animals were kept in small cages. Soon she was devoting a lot of time at the zoo, talking to zoo keepers and volunteering to improve the zoo's condition. She established the Friends of Mysore Zoo in 1981, which is now called 'Mysuru Youth Club'. “Interference by a foreigner” was not liked by the zoo authorities, resulting her being hounded out of Mysore and Karnataka. After eight years in Karnataka, she shifted to Coimbatore, Tamil Nadu, where she continued her pioneering work for Indian zoos. She first established *Zoo Zen* and then *Zoo's Print* journal, which continues to be published till date. Not many people know that Sally was instrumental in establishing Wildlife Information Liaison Development Society.

It would not be wrong to accept that her tireless work in Indian zoos resulted in the creation of the Central Zoo Authority by the Government of India. She was not only a friend of captive animals but a wonderful person, a great conversationalist, a good teacher, and an outstanding nature educator. In her nearly 40 years in India, Sally organized hundreds of workshops, meetings, and discussions for zoo officials, foresters, researchers, teachers, and students. In 1985, she established the Zoo Outreach Organization (ZOO), which conducted Population and Habitat Viability Assessment (PHVA) workshops for many species, including Manipur dancing deer, lion-tailed macaque, and Asiatic lion, to give a few



Sally Raulston Walker

October 12, 1944 – August 22, 2019

examples. The PHVA workshops helped wildlife conservationists and managers to understand the threats that influence wildlife populations. Sally conducted PHVA workshops even on beetles, butterflies, frogs, snakes – taxa that were generally neglected by conservationists then; such was her passion for lesser known species and habitats.

Sally's work was recognized by the IUCN's Conservation Breeding Specialist Group. She received numerous awards and recognitions such as the U.S. Seal Award for Innovation and Wildlife Conservation Efforts in South Asia, Scientific Fellow of the North of England Zoological Society, Heini Hediger Award for Outstanding and Dedicated Service to Zoos, and the Menon Award for Contribution to Welfare of Captive Wild Animals in India, but her greatest awards, she told me, were her students, younger colleagues, dedicated zoo officials, and the staff of Zoo Outreach Organization. She was a very friendly and affable person, a cordial host, and a genial teacher. Whenever I visited Coimbatore, I would go to her office where her infectious enthusiasm was reflected in her staff.

Sally was a wonderful personal friend, and a devoted child to her parents. Whenever we met, she would speak about her parents who lived far from her. Sometime in the late 2010s, she left for her hometown to take care of her parents. We remained in touch for many years by email, but more recently she fell silent. I learnt much later that she was suffering from Alzheimer's. Sally now rests in peace, with her tireless work recognized not only in India, but all across the world. She not only changed the conditions of Indian zoos, but changed many people who came under her influence. ■

– Asad R. Rahmani

We are grateful to

SETH PURSHOTAMDAS THAKURDAS & DIVALIBA CHARITABLE TRUST

for a generous donation to the

Pratap Saraiya Hornbill Fund

to support the publication of *Hornbill*

It was indeed a sad day for us when we came to know of the passing of a precious friend of BNHS, Dr Pratap R. Saraiya. Born in a family of traders from Navsari, Gujarat, Dr Saraiya was the son of R.G. Saraiya, one of the Founders of the Reserve Bank of India. His keen interest in scientific research and nature conservation brought him to BNHS, which remained his enduring interest, to which he generously gave his invaluable time.

As an EC Member (1987 – 1996) and Vice President (1993 – 1996) of BNHS, his numerous contributions in the form of donations, sponsorships, and technical support, are well recorded at this organization with which he had such a long and altruistic association. His close personal friendships with several office bearers of the BNHS Executive Committee enabled this association, particularly with the late Mr J.C. Daniel, who could always call upon Dr Saraiya to extend a helping hand to the Society.

As a Trustee of the Purshotamdas Thakurdas & Divaliba Charitable Trust and the Mehta Scientific Research and Education Trust, Dr Pratap Saraiya personally secured support for such BNHS projects as the first Indian Birdcall cassettes, which he not only financed but helped BNHS staff in production and marketing of this new venture.

His financial support to *Hornbill* magazine helped set up the Pratap Saraiya Hornbill Fund through a generous donation from Seth Purshotamdas Thakurdas & Divaliba Charitable Trust, which also funded other projects of the Publications Department such as the commemorative *JBNHS* Centenary Journal, 2003, *THE BOOK OF REPTILES AND AMPHIBIANS*, *CASSANDRA*: a collection of editorials from *Hornbill*, and *BIRDS OF WETLANDS AND GRASSLANDS*, a commemorative issue of *JBNHS* on Salim Ali Centenary Seminar, July 25, 2002, and the comprehensive *IMPORTANT BIRD AREAS OF INDIA*, 2004. His financial support to these publications demonstrated his keen interest in furthering BNHS as an academic scientific publisher. The Salim Ali Nature Conservation Fund (SANCF) also benefited from his expertise and financial support.

Through the Mehta Scientific Research and Education Trust, Dr Saraiya secured financial support by way of small grants and sponsorships for deserving young researchers. It was Dr Saraiya who brought Oxford University Press aboard as a



Pratap R. Saraiya

October 4, 1926 – June 13, 2019

Co-Publisher, and enabled national and export sales of BNHS books as an economically viable undertaking.

Though he completed his term as member of the BNHS Executive Committee in December 1996, and quit Chairmanship of the SANCF and membership of the Personnel and Products Subcommittees, he continued to be associated with BNHS Publications and SANCF for many years thereafter. He supported a number of other charitable organizations such as Yusuf Meherally Centre and Sir Hurkisondas

Nurottamdas Hospital and Research Centre, of which he was a member of the managing council, to name but two.

As I write this, I turn away from my computer screen and marshal my thoughts. I go back to my beginnings at BNHS. I first met Dr Saraiya when, in 1994, I appeared for an interview for the post of Publications Officer. It was quite unlike any interview I had faced earlier, being relaxed and with an apparent informality that put me at ease, yet all the while my abilities were being carefully assessed.

It was a turning point in many ways for me. Dr Saraiya had taken on the task of putting the Publications Department in order when I was recruited, and I had the privilege of working under him and being guided by him. A stickler for order, systems, and adherence to the set agenda at a meeting, his presence ensured that not a moment was wasted. His academic qualifications spanned Oxford (his thesis *SYNTHESIS RELATED TO THE BIOGENESIS OF ALKALOIDS AND POLYNUCLEAR HETEROCYCLIC COMPOUNDS* was published by the University of Oxford, 1952) and Stanford, where he studied finance.

I remember during a meeting while working out the estimates for *SALIM ALI'S INDIA*, a prestigious BNHS publication, he impatiently swept aside the electronic calculator I proffered, and came up with the figures on his fingertips, quite literally. We had his valuable inputs entirely pro bono, and that was a privilege that some people failed to appreciate, which they might have realized if ever they were faced with a bill for professional services of the order of his unstinting contributions to BNHS.

He passed away on 13th June after a brief illness. He is survived by his wife Mrs Indu Saraiya and a son and daughter. ■

– Gayatri Ugra

CONTRIBUTE TOWARDS CONSERVATION OF NATURE



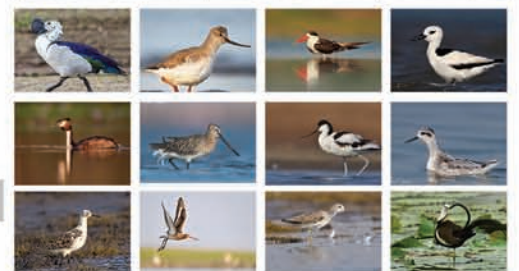
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7 SHEETER SPIRAL BOUND
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DESK CALENDAR 2020
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SIZE 7" x 5.5" | RATE ₹ 120 EACH



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National Moth Week at BNHS-CEC, Delhi

The BNHS-Conservation Education Centre in Delhi reached out to 500 people from July 20–28, 2019 during the National Moth Week. The programme, with support from the Department of Forests and Wildlife GNCT of Delhi, focused on creating awareness and gathering information through citizen science.

The week-long celebrations highlighted the importance of moths in our ecosystem, and there were discussions on how to protect moths, generate awareness, and change people's mindset about these winged creatures. More than 50 species, including some rare species of moths, were recorded during the activities in the week.

The month of July was also celebrated as Vana Mahotsava by BNHS-CEC, Delhi, by planting native saplings with the help of school students.

BNHS will be organizing Delhi Butterfly Month from September 8–28, 2019, where people can join various activities like Breakfast with Butterflies, Walk like a Caterpillar, Butterfly Gardening, Big Butterfly Count,



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Nightwatch for moths at CEC, Delhi

Butterfly Origami, Butterfly Photography Workshop, and Butterfly Walk. All the programmes are free of cost.

For registration, please email cecbnhsdelhi@bnhs.org or call us at 8800741864. ■

Developing Skills



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Participants of the Skill Development Programme in Shahapur, Maharashtra

BNHS-ENVIS organized 'Certificate Course in Development and successfully conducted, in association with the Maharashtra State Biodiversity Board, a month long training programme of People's Biodiversity Register (PBR) and Management of Biodiversity Management Committees (BMCs). This course was organised

under Biodiversity Act 2002 of MoEF&CC Green Skill Development Programme, at the Forest Guard Training School, Shahapur, Maharashtra. This technical training course was designed for the youth of communities which are heavily dependent on natural bio-resources. A total of 25 students were selected and trained during this course, in various techniques like village mapping, interviewing people, and other community conservation skills required for a successful PBR.

The course was aimed at training youth to develop a comprehensive and good quality PBR at the *gram panchayat* (village council) level, which can be used for the sustainable development of local communities. ■

Published on September 26, 2019, by Mr Debi Goenka for Bombay Natural History Society, Hornbill House, Dr Sálim Ali Chowk, Shaheed Bhagat Singh Road, Mumbai 400 001, Maharashtra, India.

Programmes

2019–2020

NATURE TRAILS 2019

- | | |
|-------------|------------------------------|
| October 27 | Nagla Block Trail – SGNP |
| November 10 | Bird Identification Workshop |
| November 17 | Karnala Bird Sanctuary |



NATIONAL CAMPS 2019–20

November

- Pachmarhi, Pench and Satpuda National Park
Date: November 23–28, 2019



December

- Golden Triangle – Ranthambore, Keoladeo and Chambal
Date: December 17–22, 2019



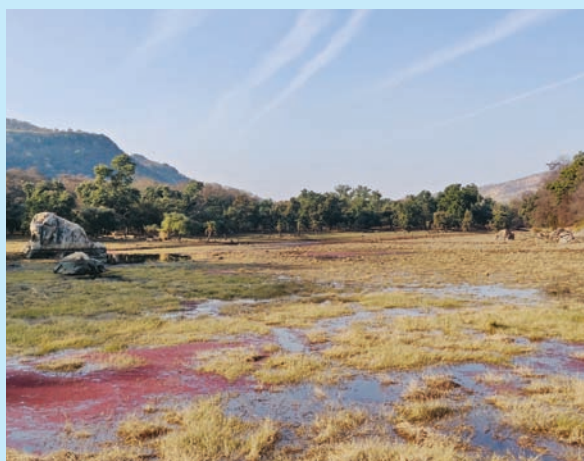
January

- Lakshadweep
Date: January 11–14, 2020

INTERNATIONAL CAMP 2020

February

- Sri Lanka: Emerald Island
Date: February 1–8, 2020



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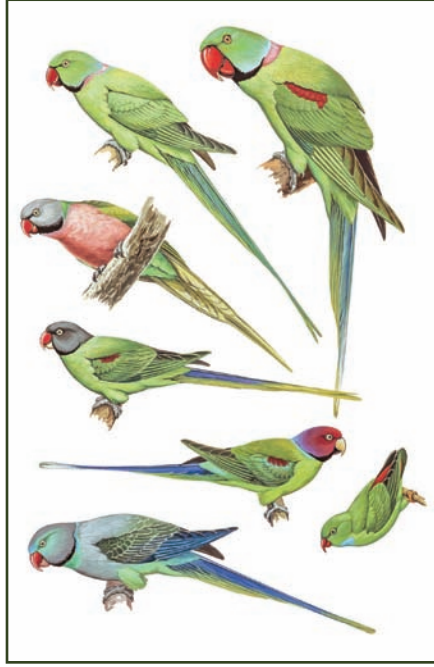
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Translated by Ashok Kothari

One of the most popular publications of the BNHS with over a million copies sold since it was first published in 1941, 'The Book of Indian Birds' is now available in Gujarati. The book succinctly describes the habits and habitats of 538 birds (illustrated in colour) of the plains and foothills, and of the wetlands and sea-coast, along with accounts of nests and nesting behaviour, flight, bird migration, and birdwatching, among others.

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