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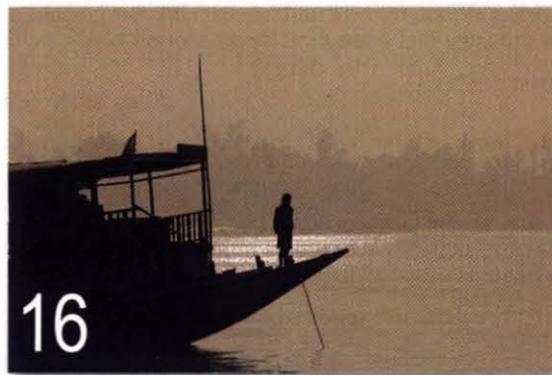
Anil Kumar

A high mountain pass, the Rohtang connects the Kullu valley with the Chandra valley in Lahaul and Spiti. Panoramic views of distant Himalayan peaks, diverse biodiversity, and much more awaits the visitor of this ancient trade route.

The 'Revolution' in Indian Bird Photography

Ranjit Manakadan

The pros and cons of Indian bird photography with the advent of social networking sites and digital photography discussed, read on ...



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Birdwatching in India

With nearly 1,300 species of birds in India, it is not merely a cliché that our country is a birdwatchers' paradise. To this, we can add that our religious-cultural tolerance allows birds to live amongst human-dominated landscapes and waterscapes much more easily than in many Asian countries, where almost every living thing is eaten. This is why we can see noisy breeding colonies of Painted Stork, egrets, herons, and cormorants in the middle of Bhavnagar town in Gujarat; Sarus Crane breeding in paddy fields in Uttar Pradesh; and Greater Adjutant nesting on tall trees in houses in Nagaon town in Assam. More than 640 protected areas, 466 Important Bird Areas (many PAs are also IBAs), and numerous community conservation areas provide safe habitats for birds.

Globally, birdwatching is a multi-billion dollar industry, providing pleasure to thousands of birdwatchers, some of whom travel to all corners of the world to see a particular species. It also creates jobs and gives economic incentives to local communities. In good birding areas such as Nameri and Eaglenest sanctuaries in Arunachal Pradesh, a mini tourism industry has been developed around birdwatching, with many young locals acting as tourist guides.

When we think of a birdwatching site, most of us home in on Keoladeo National Park in Bharatpur, Rajasthan. No doubt it is an extraordinary IBA, but there are many more gems that are wonderful birding areas. When we think of Corbett National Park in Uttarakhand, tigers and elephants come to mind, but not many people know that Corbett and its environs have reported more than 500 species of birds! There are very few places in the world where you can see 500 species – of course, this list includes many stray records and rare birds, which one may not be able to see easily. But it is not unusual to see 200 species in two or three days. Similarly, Kaziranga is my favourite birding area despite the fact that birding is not easy due to the lurking danger of an angry rhinoceros or wild buffalo.

Increasing participation in bird marathons and bird festivals shows that birdwatching is on the rise in India. During bird marathon, teams of birdwatchers try to see as many species of birds as possible from dawn to dusk. For nocturnal birds, some teams even start before day break! After sunset, all the teams get together at one place and in a jovial atmosphere exchange their experiences. I always get invigorated seeing the enthusiasm of young birdwatchers and the friendly banter that questions each others' birding ability. It is not mere fun, though. Very good scientific information can also be collected by bird



marathons. By visiting various sites regularly, we can also monitor the changes in the sites, as changing bird diversity is one of the best indicators of habitat quality changes.

Another good development is the organization of bird festivals. Bird festivals in India were started by Mr. Harsh Vardhan, Founder President of the Tourism and Wildlife Society of India, at Jaipur, nearly a decade ago, and now they have become one of the major outdoor nature activities of the Pink City. Two years ago, under the leadership of Mr. Vikram Singh, District Collector of Dungarpur, a similar bird festival was started, followed by one in Udaipur last year. The Gujarat government also organizes a bird festival in a different place every year. In February 2015, a bird festival was organized in Kaziranga. I hope every state of India will soon start bird festivals at least once a year. This reminds me of the British Bird Fair at Rutland in the United Kingdom that was started in 1989 as a small event, but is now hugely popular, and perhaps the best place to see fellow birdwatchers from around the world. It is particularly popular amongst bird tour guides as they can advertise their 'merchandise'.

BNHS Flamingo Festival in Mumbai is another example of the increasing popularity of birdwatching in India. It was started by the Indian Bird Conservation Network (IBCN) and BNHS in 2003 as a small activity to involve the general public to enjoy these 'pink beauties' that beautify the Sewri mudflats for six to seven months a year. In the first Flamingo Festival, nearly 2,000 people came. Last year, more than 10,000 people participated in the Festival. Such is the attraction of these birds that people visit the Sewri mudflats not only during the Festival but on other days on their own.

Birdwatching records can also contribute to gathering of data that can be used for short-term and long-term monitoring of our avian world. Your birding trip records may look trivial, but if we join thousands of such records, they make a lot of sense. This is exactly what the eBird programme is doing. It is collating birdwatching records in a specially-designed programme that is people friendly. You can enter all your bird records in eBird and see how your records help in mapping and monitoring bird distribution. I suggest that you visit www.ebird.org to know more about this citizen science activity that your Society is involved in.

It is heartening to see media advertisements by some state governments (Assam, Odisha, Tamil Nadu, and Gujarat) highlighting their birding areas. Let us hope that other states will also be proud of their avifaunal wealth. Bird tourism has a tremendous scope in our country, creating millions of jobs directly or indirectly. It is a type of 'economic development' that our government is committed to. Who told you that birds cannot provide you jobs – ask the numerous tourist guides in Bharatpur.

Asad R. Rahmani

Across the Rohtang

Text and Photographs: **Anil Kumar**

In my schooldays, when I went through the biography of Pandit Jawaharlal Nehru, the word Rohtang Pass mesmerized my mind and created a fantasy and a strong urge to see the Pass at least once in my lifetime. Decades passed, I completed my education, and one day, destiny, or should I say my profession (ornithology), brought me on a field survey to Spiti Valley via the Rohtang, a mountain pass that connects the Kullu Valley with the Chandra Valley, Lahaul and Spiti districts, in Himachal Pradesh.

On the evening of August 3, 2012, along with a small team of four members, I reached Manali. Unfortunately, we got stuck there owing to a massive cloudburst and the accompanying landslides that blocked the roads at many places. Finally,

after three nights, we got news that the route would be cleared – thanks to the day and night efforts of the Border Road Organization – by the 6th morning. So, we woke up very early that morning and started our onward journey at around 5:00 a.m., so as to be able to cross the difficult stretch in time to see and experience the height of the Rohtang. However, by the time we reached the base of Rohtang, we were stuck in traffic due to road repair work. We moved ahead slowly, and after 12 hours, reached the ridge of the Pass at around 7:00 p.m. In the misty dusk, we had a cup of tea with semi-cooked noodles (which could not be done better due to the low atmospheric pressure) at

a roadside *dhaba*, and descended to the north side of Rohtang. At Gramphu, a small settlement, we learnt that we could not travel in the night due to the increase in water levels in some of the rivulets that we would have to cross to reach Lossar, our first destination in Spiti Valley. It was a challenge to search for a place to spend the night, and on the advice of a local, we decided to go to Khoksar, and after much difficulty, finally managed to spend the night in an unused building of the Electricity Department. With a cooking kit and sleeping bags, we managed to spend the night quite comfortably.

On the morning of August 7, we started our journey in the splendid

Chandra Valley, enraptured by the vista of green shaded, brown-grey, naked mountains and sparkling streams. Crossing these, we reached Kunzum La, another high mountain pass at 4,500 msl the starting point of Spiti Valley. The flute-like sounds of the swift wind blended with the patter of intermittent drizzling rain. The food-begging calls of newly fledged young of finches and provisioning by their parents was alluring, and compelled us to watch and linger there. But, the anxiety of getting a comfortable night's stay forced us to move on. We started the descent and after crossing some narrow, rough, steep U and S turns, reached a lush green carpet of



Panorama of Spiti Valley near Pangmo village



A large herd of Blue Sheep near Tashigang village

vegetation known as Takcha, which is a camping ground. Here the snow-fed tributaries and streams meet to give a recognizable shape to the Spiti river. One stream from Kunzum La originates from the Dhar Sitikhud Glacier, while two others originate from the northern side of the mountains of Kunzum range west to Dhar Dinde. It is a very beautiful mountain in multiple shades of brown, green, and grey, usually capped with snow. The landscape of Spiti Valley with the shapes and colour of its different types of rocks, the growth of lichens and patches of grass, glacial moraines, river terraces, and accumulated snow, altogether form a unique panorama. And, as a result of differential erosion by wind, snow, and precipitation over the millennia, the landscape is an amazing structure that appears to be like the ruins of a fort, temple, or a dilapidated village.

After two days of birding in the Lossar area, we moved to Kaza on the morning of August 11. To experience the wildlife of high mountains, I

was keen to visit Kibber as early as possible. However, we could go to Kibber only on the 14th, as we had to carry out some fieldwork around Kaza, Rangrik, and Shego. While making general observations on birds adjacent to an agricultural field on the stretch from Kibber to Chicham, I saw first an individual and then a herd of Blue Sheep *Pseudois nayaur* on the ridge of a nearby cliff. I was very excited, took some photos, and moved towards them for a close view, but on seeing me, they disappeared into the cliffs. I carefully started climbing the steep slopes, hoping to find them again behind the hill, but they sighted me once I was on top of the ridge, and moved swiftly towards the precipitous rocks. I continued to follow them and came to a rock hanging downwards into a very narrow gorge. It was vertical, deep (~ 200 m) and breathtaking. After returning from the field and examining the photographs taken, I saw that the herd had seven individuals—a male, four females, and two young. Blue Sheep, or

Naabo as they are known in Spiti, is a common ungulate of the Himalaya. Sighting them is not easy owing to their shy nature, but if they sense no danger, an individual can often be approached up to about 100–200 m.

Blue Sheep is a medium-sized diurnal animal weighing between 35 to 75 kg; the male is slightly larger with larger horns. The coat is slate-grey with a bluish sheen. The underparts are white, the chest varies from dark grey to black. There is a black stripe from forelimbs to hind limbs, separating the white belly from the slate-grey upper coat. The front of the legs is black, with white patches on the knees and above the hooves. Blue Sheep move in herds of about 10 or more individuals, feeding on the bushes of *Caragana brevifolia*, *Artemisia maritima*, *Lactuca* sp. and *Ephedra intermedia*, among some others. In Spiti, they are known to damage crops, which often lead to human-wildlife conflict. Their usual habitat is grassy areas adjacent to bare and rocky, precipitous cliffs between



This stark landscape between Kiato and Pangmo villages has evolved due to differential erosion of rocks by wind, snow and precipitation

the tree- and snow-line at 4,000–6,500 m elevation. They are the main prey of Snow Leopard *Uncia uncia*. When approached by predators, they often stand motionless and exhibit remarkable camouflage ability by blending with the background. They run very fast, and if pursued, prefer to climb onto very sharp, fragile and vertical edges of rocks to deter predators.

In the next couple of days, we searched large areas of Langza, Tashigang, and Kaumic but did not see wildlife except for two species of rodents, Royle's Pika *Ochotona roylei* and a species we were not able to identify. On August 17, we moved to Tabo. Apart from sightings of over 26 bird species, we sighted a herd of six Blue Sheep near Poh. On the morning of August 21, we started our return journey via Kinnaur as we had heard that the Rohtang route was again blocked due to a landslide. Till Nako, it was smooth sailing, but we were again compelled to stay at Nako owing to a massive cloudburst that resulted in road blocks

at about five places. The efforts of the Border Roads Organization need to be greatly appreciated, as the workers clear up the stretch overnight, in spite of the terrain and the deposit of mud and soil. However, there were to be more such road blocks on the way, which caused further difficulties and delays.

Having learnt lessons from the bad experiences of the 2012 trip, I started the planned trip in 2013 early (last week of May) and opted for the route via Kinnaur. On the way, near Narkanda, a beautiful place located about 65 km from Shimla, we saw and photographed a Red Giant Flying Squirrel *Petaurista petaurista* a species that is distributed from eastern Afghanistan to Southeast Asia. In Spiti Valley, our first stay point was Tabo. It was the season of bird song, and within a few days, I recorded the songs and calls of over 16 species – most of them new to my song and call collection. We spent a few days at Tabo and explored the nearby areas of Dhankar, Lari, Hurling, and Poh. On the morning of May 31, after

birding near Key Monastery, we moved towards Kibber. My colleagues undertook some general faunal collections, and I observed birdlife. Then, we moved toward Tashigang. The way was quite slippery due to melting snow and slushy mud, but we managed to reach near Tashigang. There, I heard and started to record the gentle chirpings of Plain Mountain Finch *Leucosticte nemoricola* foraging on the ground. Suddenly, I saw a large herd of animals coming down a distant hill slope, which appeared at first to be domestic sheep, and was awestruck to see that they were Blue Sheep. I never expected to see such a large group (about 56 individuals), comprising adult males, females, and young. We spent about an hour with them, and then moved towards Kibber. On the way, I saw two Himalayan Griffon *Gyps himalayensis* and an immature Bearded Vulture *Gypaetus barbatus* gliding between valleys due to the presence of a carcass, and later, watched their conflicts for food at the carcass.



Top (L): Woolly Hare *Lepus oiostolus*
(R): Chukar Partridge *Alectoris chukar*
Bottom: Red Giant Flying Squirrel *Petaurista petaurista*

In the afternoon, I saw 19 Blue Sheep scattered in two loose groups across the gorge near Chicham. While returning from Kibber, we saw some movements on the ridge across the gorge and were excited to see a herd of 24 Siberian Ibex *Capra sibirica* (the sub-species known as Himalayan Ibex *C. s. sakeen*). After some time, some of them started descending on a very steep and narrow cliff, which appeared to be their rest site. The Siberian Ibex is distributed in central, northern, and southern Asia. Its size ranges from 67 to 110 cm – the male is larger – and weighs from 35 to 130 kg (due to size differences in sexes). The colour is light tan with whitish undersides. During winter, mature males become much darker with white patches on the dorso-posterior area (hips) and neck. Both sexes sport a beard, the horns and beards of males are much larger than females. The anterior surface of the horns of males is segmented by transverse ridges. The Siberian Ibex lives in high altitude areas above the tree line, and forage on alpine grasses. The Snow Leopard and Tibetan Wolf *Canis lupus chanco* (and sometimes the fox) are the main predators of the species in Spiti.

Next day, my plan was to explore the Pin Valley. We reached Atargoo and took a right turn to enter the Valley. We had hardly moved 7 km when we saw that the road was closed for maintenance work. At this stretch, the left side was bordered by the mighty Pin river, and the right by steep hills. Suddenly, some stones started falling from the hill slope, and we saw a male Ibex close to us. I immediately took some photographs (sitting in



Top (L): Blue Sheep *Pseudois nayaur*
(R): Mountain Vole *Alticola* sp.
Bottom: Red Fox *Vulpes vulpes montana*

the vehicle). There were some more individuals – about 16 were seen, most licking the silt and some rocks. In Pin Valley, Ibex are reported to feed on a number of plant species, e.g., *Polygonum molle*, *Artemisia maritima*, *Astragalus prostratus*, *Astragalus rhizanthus candolleanus*, *Bupleurum falcatum*, *Cicer microphyllum*, *Hyssopus officinalis*, and *Nepeta podostachys*. While returning in the evening, a Red Fox *Vulpes vulpes montana* was seen on the river bed near the confluence of Pin and Spiti rivers. On the morning of June 3, in the last phase of the survey, we reached Lossar, and after lunch, rushed to Takcha to have a look at the area to chalk out the next day's programme. However, we decided that we should pack up and return as the melting snow would make the trip by jeep quite risky.

Recently, during August and September 2014, I undertook my third survey of Spiti Valley. Apart from sightings of birds and other wildlife, the most interesting was of the Woolly Hare *Lepus oiostolus*. It is a rare and endangered, grey-brown animal with a restricted range distribution in India. It has excellent ability of camouflage owing to its coloration and boulder like appearance when still. After about two weeks, we returned, but the memories of Spiti Valley often compel me to make yet another trip – via the Rohtang Pass! ■



Anil Kumar is a scientist in the Zoological Survey of India. Over two decades, he has been working on songs and calls of birds and mammals of the Himalaya.

The 'Revolution' in Indian Bird Photography

Text: Ranjit Manakadan

Besides being a wildlife biologist, I am also a *Facebookian*! No, not of the addict kind, who surfs the site throughout the day and night, but one who does it occasionally to keep in touch with fellow *Facebookians*, friends, colleagues, and loved ones to know of the happenings in their lives and other related news. It is one of the first things I do on the net before office starts (when based at headquarters), other than scanning the prices of scripts in the share market to count 'the millions' I have made (or lost) in the few opening minutes of trade!

Another major reason why I access the site is to check on new postings of bird images uploaded onto the bird groups in Facebook, primarily Indian Birds and Birdwatchers of India. At the time of writing this (May 1, 2014), these two sites have 33,411 and 6,897

members respectively, with requests for membership coming in on a daily basis. There are also a few region/city based sites, e.g., Birds of Mumbai with 2,695 members, and many more can be expected to come up with the passing years. Most of the postings, and they are sizeable each day, are of photographs of birds taken by the members, spread out throughout the length and breadth of India and comprising, among others, birdwatchers, ornithologists, wildlife biologists, nature lovers, wildlife photographers, students, teachers, doctors, lawyers, software professionals, and those with businesses of their own.

The images largely provide information on the identity of the species, besides the date and locality of sighting, these being mandatory as per the sites' guidelines. Some members





SURESH KAMATH

Emerald Dove *Chalcophaps indica*



AMISH PATEL

Great White Pelican *Pelecanus onocrotalus*

make requests for help in identifying the images uploaded, which in difficult groups like waders, warblers, and raptors, can lead to debates on their identities and the reasons for stating so. Among the members of Indian Birds is Divesh Kumar Saini, who has taken up the exercise of uploading paired images of confusing species (such as warblers and waders) with pointers to morphological features that help separate them – kudos to this gentleman. The availability of all these images and information have been a boon for me, as they serve as a source of reference material for the Society's upcoming second edition of the field guide to Indian birds.

Another useful site to view images of Indian birds is that of the Oriental Bird Club, which has images of most Indian bird species. Earlier, bird artists for field guides had to largely rely on preserved bird skins, some of which are almost a century old now, plus jaded and faded. Now we have the good fortune to view umpteen clear images of live birds on our computers. My identification

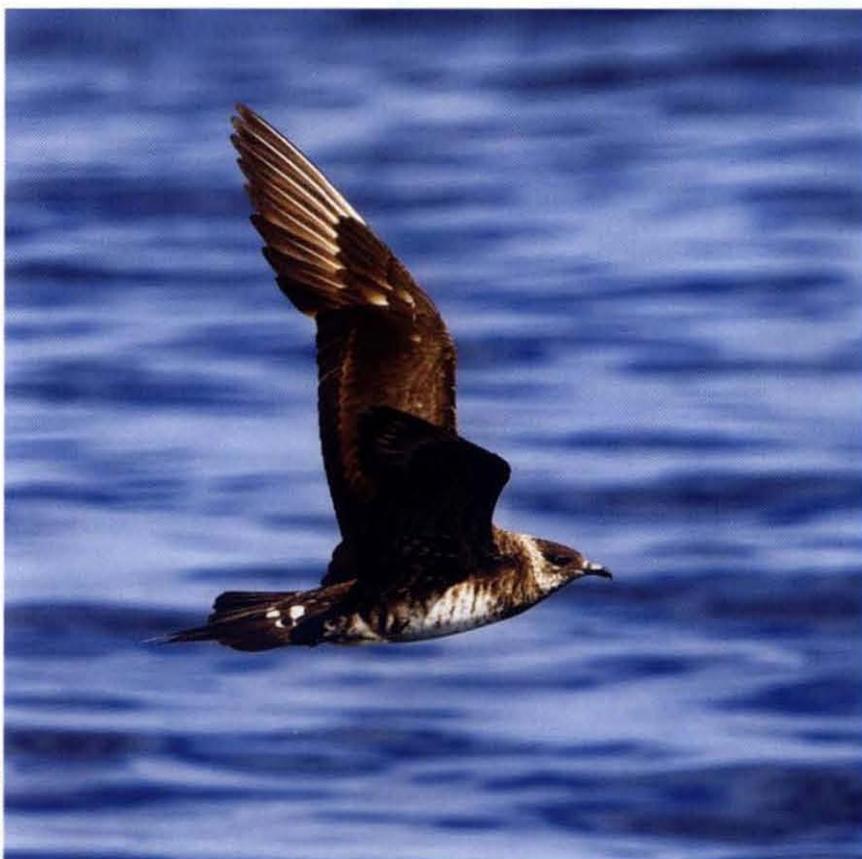


SWETHADRI DORAIWAMY

Yellow-browed Bulbul *Iole indica*



KALLOL MUKHERJEE

Ruddy Shelduck *Tadorna ferruginea*

SHIVA SHANKAR

Parasitic Jaeger *Stercorarius parasiticus*

skills and knowledge of Indian birds have improved considerably through these portals. I also get updates of species distribution in India through the mention of locality details, besides help to improve my geography through checking out the locations in the atlas. On studying these images, I also realise the need to include illustrations of morphologically distinct races/subspecies of a species, or the plumage of immature or breeding birds.

The birding portals and the flood of photographs of birds on the net are helping to popularize bird watching/photography as a hobby. Some of the younger members, due to these experiences, may later opt to choose ornithology as a profession. Birds of the hill states of northeast India and the Himalaya, which we 'plains people' never get to see (and vice versa for the *pabadis*) – except in field guides – are now all there for us to view with a click of the mouse – thanks to these ardent photographers. Some of these photographer-birders have made significant contributions to Indian ornithology. Just before starting to write this article, I saw an image of a Black-browed Tit in Arunachal Pradesh taken by Porag Jyothi Phukan, which is a new record in the Indian Subcontinent. The species occurs in the adjoining areas of China and Myanmar. There have been other significant records of sightings by these photographer-birders, validated through the photographic evidence uploaded on birding portals, such as the record of Red-breasted Goose in Bijnor in Uttar Pradesh (its occurrence in India was treated as hypothetical by Pamela Rasmussen in the Ripley Guide) by Rajesh Panwar, and the sighting of the Whooper Swan in Pong Dam in Himachal Pradesh by D.S. Dhadwal, a record of the species in India after a gap of 115 years. The assumed ranges of quite a few species are undergoing

change by the photographs of birds clicked from new areas, and judging from the frenzied activities of the birder-photographers and the frequency of new records, the distribution maps of many species will soon have to be redrawn! These new records tend to now first get 'published' in Facebook before being forwarded to journals or newsletters – its fast, and gets much more congratulatory comments and 'likes'!

A 'bycatch' from the bird images is that they occasionally provide additional information on a species, such as the habitat, the prey it was devouring, and some interesting activity the bird was engaged in while being photographed. For example, I brought out an article on anting in one of the recent issues of Hornbill after seeing an image of anting by the Indian Roller on Facebook. My interest in ichthyology makes me examine closely images of the fish species being gulped by waterbirds. The majority of such photographs show exotic fish species being taken, comprising largely of the tilapias of Africa and the sucker-catfishes of South America. This is alarming, as it reveals that Indian waters are being taken over by alien fish species, thus affecting native species. In fact, I become happy when I see a native species being gulped down by a bird as it assures me that some of our more hardy native species are still around!

Overall, the flood of postings of bird images on these and other sites confirms that there is a growing interest in birds and other wildlife among Indians. The rise of the educated younger generation, who are more into travelling and the outdoors, and the significant increase in the numbers of the middle-rich class with finances and vehicles of their own for use during the outings, are major contributory factors. Another important reason is the advent

of digital photography. Earlier, wildlife photography was difficult and costly. One had to buy the film rolls from a shop, place a roll in the camera, manually rewind the film (till auto-rewind cameras arrived), click one picture at a time, and ponder on whether to click again, considering that there were only 36 images to a roll – by which time the bird would have flown away or the elephant would have trampled you! After all that, there was the trip back to the studio, the processing and printing costs, besides the additional trip to collect the results. And the results on D-day were, once and for all, final! Great, good, okay, bad,

of cost to publishers of books and magazines – as long as photo-credits are given. Gone are the days when one could even sell an image for a few thousand rupees. The 'revolution' in Indian bird photography has arrived!

There is a dark side to almost everything in life. A serious cause of concern is when one sees frequent photographs of species that are on the verge of extinction. The survival of such species is precarious, and the last remaining birds should not be disturbed in any way. I had about two years back seen an image of a magnificent, adult male Great Indian Bustard in flight in a



Bronze-winged Jacana *Metopidius indicus*

or sometimes ending up with a blank roll for whatever reason! Now, with the arrival of digital cameras, it is just click, click, and click without any botheration, and one can see the results immediately on one's own camera. And which bird on earth would have a chance to escape from the eyes of the bazooka-like cameras of these paparazzi bird-photographers! And with all these, there is the 'god', Photoshop, to 'doctor' the images! With so many images being posted on a daily basis, photographers are willing to give their images free

sanctuary, where there are now no signs of any breeding males. We all know of the bad behaviour and lengths to which unscrupulous photographers go, to get rare pictures of wildlife. For this reason, besides the ban on uploading pictures of birds at the nest and their young on the birding groups, there has also to be a similar ban on posting images of critically endangered species. I heard that unscrupulous birders, knowing that nest photography is frowned upon, shoot a little off the nest site (thereby still harassing the nesting pair). Some

DEVKI NANDAN



River Lapwing *Vanellus duvaucelii*

BIJOY K.I.



Common Greenshank *Tringa nebularia*

SARWANDEEP SINGH



Horned Lark *Eremophila alpestris*

SAMYUKTH SRIDHARAN



Bar-tailed Treecreeper *Certhia himalayana*

even clear the bushes near the nest to force the parents to perch at the 'shooting spot' or on a strategically placed 'driftwood'—a bird holding a prey in its bill on such a perch may indicate such a case of photography, though not always. Playback of the species calls and putting out bait (for raptors) are other ways in which photographers get their pictures. Chasing birds by jeeps to flush them for 'action shots' is yet another. Fortunately, the Indian Government has woken up to the issue of disturbances to endangered birds by photographers, and the Ministry of Environment, Forests, and Climate

Change has banned the photography of the Great Indian Bustard under its Species Recovery Programme during the breeding season. The ruling reads "*Unethical photography during breeding season often acts as a constant source of disturbance to the bustards and disturbs breeding patterns. A person found photographing these birds during the said period will be prosecuted under the Wildlife Act 1972 and may face a jail sentence.*" In fact, this ruling should not have been confined to the breeding season, but applicable throughout the year. Even when not breeding, birds need to forage for food and attend to other activities to stay alive, and frequent

disturbances will impact their survival. With the rapid decline of bird species in India (and throughout the world), there could be a situation in the future where there would be more photographers than birds to photograph, which is already the case now with some species in some protected areas. ■

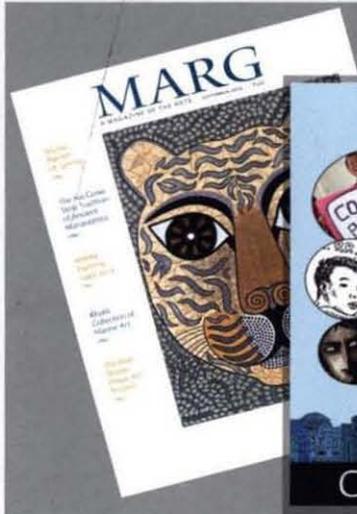


Ranjit Manakadan is presently an Assistant Director at the Society, and is on the editorial board of *JBNHS* and *Hornbill*. He has worked on grassland birds, waterbirds, forest birds, mammals and fish, and is one of the authors of a BNHS field guide to Indian birds.

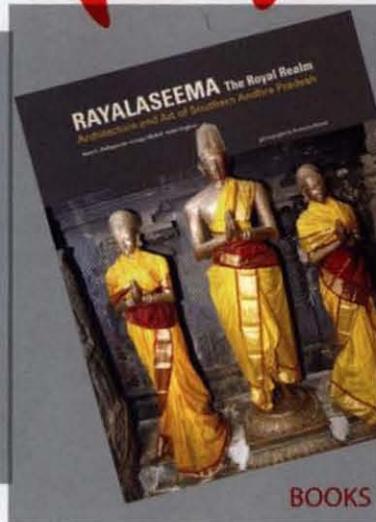
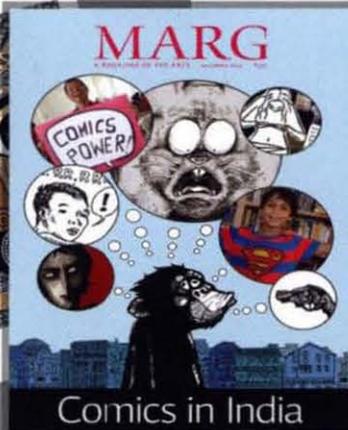
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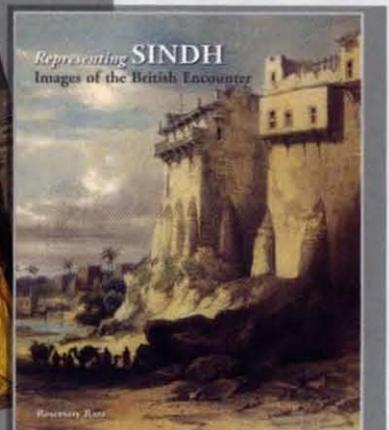
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The Magical Sunderbans

Text and Photographs: Kartik Jindgar



Known to grow over six metres, the Saltwater Crocodile *Crocodylus porosus* is a formidable predator

On 2nd January 2014, we set off for the Sunderbans on a school trip under the guidance of expert photographers Bharat Goel and Ankit Goyal. Sunderbans is the world's largest delta, rich in biodiversity and home to the Royal Bengal Tiger. The road trip from Kolkata to Godkhali was truly an experience in itself; a single lane road with canals running on both sides and villages dotting the way. The picturesque beauty was truly mesmerizing.

We boarded boats at Godkhali and entered Sunderbans – it was the first boat ride for many of us in our lives! Rays of the setting sun enhanced the beauty of the mangroves, bouncing off the water around us, creating dazzling images as darkness engulfed us. We reached the resort by late evening.

We set off early next morning, hoping to explore and experience what the Sunderbans had to offer. Our first stop was at the Sojnakhali Interpretation Centre. It was interesting to know that the One-horned Rhino used to be resident in Sunderbans. At the Centre, we got to know about some major threats to Sunderbans like illegal fishing, poaching, and cutting of trees. It is really sad that we humans, driven by greed and probably some by the need to survive, are destroying such a beautiful ecosystem. Having learnt about the Sunderbans and the dangers it faces, all of us vowed to be Green Ambassadors

spreading knowledge and awareness about the need to preserve not only the Sunderbans, but the Earth's environment.

By lunch time, we headed into the narrower creeks by boat. Suddenly something came floating towards us. It wasn't a log of wood as we presumed first, but a massive crocodile more than 10 feet long! It was the first time in my life that I had seen a Saltwater Crocodile *Crocodylus porosus*. Before we could take some pictures, it went underwater. Though disappointed at the missed photo opportunity, the sighting set off a buzz of excitement in the boat. Each one had a different perception of the size of the crocodile. As we moved on, our guide spotted a highly camouflaged lizard near the banks amidst the roots of a mangrove tree. It was a Water Monitor *Varanus salvator*. Experience, as they say, always helps and it sure did. Soon the sun began to set and the tide was also at its lowest. These were perfect conditions to spot wildlife. Contrary to our expectations, we did not see a tiger or any other wildlife. However, we spotted a number of species of kingfisher. The mangroves are a favourite hunting ground for these most efficient hunters, the water being rich with fish and other amphibious creatures such as crabs. These small colourful birds are a pleasure to watch, and the way they catch their prey is magical. That one hour just before dusk will remain imprinted in my memories.



The next day, we set out for the boat safari just before sunrise so that we would be the first to enter the forest. The light of the rising sun made the moist shores glow, which was a beautiful sight. The different kinds of mangroves and their roots fascinated me. I could discern four colours on a single tree: whitish-green due to the brackish water during high tide, the light green of new leaves, the dark green of older leaves, and the red of leaves that were about to fall.

Soon we reached the Dobanki watch tower, and on embarking from the boat, saw small red and yellow dots on the shore – on going closer we realised that those were crabs. These little creatures were constantly searching for food in the vicinity of their burrows, to which they retreated at great speed when disturbed. They almost always seemed to be in a sort of frenzy, yet I managed to click some pictures. While we were just starting lunch, somebody shouted “tiger cubs”, which everyone thought was possibly a prank. However, when one of the guides screamed “leopard cat!” – this was the feline *Prionailurus bengalensis* – it resulted in chaos on the boat. We left our food on the table

and rushed to the side of the boat with our cameras. Finally all of us saw the beautiful cat, sitting peacefully in the sun on the shore, which we were later told is rarer to spot than even the tiger. One could only hear the clicking of camera shutters till the animal gracefully walked back into the jungle. Later in the day, we saw a gigantic crocodile basking in the sun, completely ignoring our presence. Again, there was the sound of a flurry of camera shutters at work! It was a climax that we never dreamt of, since we had all come with the image of a tiger in our minds. None of us wanted to get off the boat! Maybe that is the power of nature. Unarguably it was an experience of a lifetime. The noise level of the excited bunch of students reached those witnessed in rock concerts! Everyone had something to say about the animals we had seen during the day. Whatever happened to lunch? We returned to the camp around sunset.

Next, we visited a village called Dayapur. Strikingly, in today’s modern driven world this village does not have electricity and continuous water supply. Despite all this, the people of the village live a very peaceful but tough life, living



Varanus salvator is possibly the only monitor capable of catching fish in deep water



A UNESCO World Heritage site, Sunderbans has a rich diversity of flora and fauna



The locals depend a lot on the Sunderbans for their livelihood



Leopard Cat *Prionailurus bengalensis* – a rare sighting at Sunderbans



Coexistence with nature is possibly the secret of the peaceful life that the locals lead



The Black-hooded Oriole *Oriolus xanthornus* feeds on fruits as well as insects

in perfect harmony with nature. They know that coexistence is the key to their survival. They respect nature and more often than not, nature takes care of them. The village sets an example for all, as it efficiently harvests rainwater and uses solar energy. The villagers are focused on preventing damage to the forest and have also minimized the use of plastics. The villagers

send their children to school despite financial problems. The peaceful environment of the village was an eye opener for us city dwellers, who tend to be aggressive or impatient with others.

As all good things do, our stay in the Sunderbans came to an end. We bid goodbye to the camp staff, boarded the bus to Kolkata, and eventually took a train for Delhi. For some time, everyone was in a daze, with so many images, sounds, and memories of Sunderbans with us. The rustle of the leaves, the wind blowing gently in the forests, the shimmering light of the sun bouncing off the water, and the birds, the reptiles sighted. Then fatigue set in, we fell asleep only to wake up to find that city life was waiting for us!

I express my heartfelt gratitude to our school, Principal, Bharat and Ankit sirs for giving me an opportunity to participate in what has turned out to be yet another memorable experience. ■



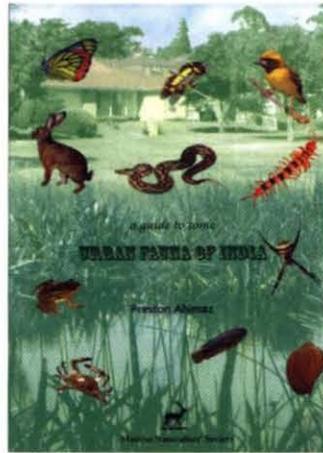
Kartik Jindgar is a student of Class XI of Modern School, Delhi. He is an Executive Member of Kids for Tigers Club and Photography Club in his school. He likes spending time with wildlife and working for wildlife protection.

Reviewed by: Atul Sathe

India's rich biodiversity is to be found not only in its forests, grasslands, wetlands, seas, mountains and rural farmlands, but also in many small habitat pockets in urban areas, amidst some of the densest human populations. These urban habitats may range from a tree-lined avenue or a municipal garden to a city forest, and often support an amazing range of fauna. This can be partly attributed to the adaptability of the species found and partly to the still surviving (but gradually dwindling) spirit of coexistence with nature among Indians.

The importance of fauna, including that in urban areas, is evident from the point of view of maintaining the balance of nature, ecosystem services received, food security, and aesthetic appeal. The author, while highlighting the focus of the book, rightly points out that it is important to understand and appreciate our natural world, which could then lead to better conservation efforts.

The style of writing is simple and reader friendly, providing information on the taxonomy of each species, its physical characteristics, distributional range (in India), habits and habitat, and



A Guide to Some Urban Fauna of India

by: Preston Ahimaz

Published by: Madras Naturalists' Society, Chennai. 2014

Size: 19 x 13 cm

Pages: 347

Price: Rs. 600/-

Paperback

also useful pointers to differentiate similar looking species from each other. The presence of good photographs has made their identification easier, and the book visually appealing. The list of references contains the names of many useful field guides, including several BNHS titles. The glossary of terms commonly used in the study of nature would also be handy for the beginner.

The book, with a foreword by Romulus Whitaker, contains 480 species of mammals, birds, reptiles, amphibians, fishes, insects, arachnids, and other invertebrates, which the author feels are representative of India's urban wildlife.

As for the drawbacks of the publication, the cover is quite dull and could have been made more attractive. The intermingling of common and scientific names in the index is confusing, and these should have been kept separate under different sections. Some species that do represent the pan-India urban fauna, especially those that inhabit habitats that abut urban areas, have not been included – as also acknowledged by the author. For instance, the mammals section could have included Wild Pig, Nilgai, Blackbuck, Spotted Deer, and possibly even the Leopard. Similarly, the birds section could have included the Lesser and Greater Flamingo, Black-headed Ibis, Clamorous Reed-Warbler, Black-hooded Oriole, Great Cormorant, Osprey, and Painted Stork.

Nevertheless, the book would be of interest to students, parents, teachers, and the general public interested in nature and wildlife. It would surely arouse greater interest about the vibrant life forms that live around us. ■



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Dying Neems!

Over the last two months I have seen a disturbing phenomenon in the Madurai area and between Palni town and Coimbatore, and am wondering if anyone has an idea as to what is happening.

I often drive from Kodaikanal in Tamil Nadu to both Madurai and Coimbatore, and have observed in the last few months that Neem trees *Azadirachta indica* are dying at an incredibly fast rate. The entire tree seems to die, although some of the larger specimens are still green above, but completely brown below. Some appear to be spared, but the majority are dying. Unfortunately, I did not have the chance to photograph some of the trees as I was timebound, and was not sure if I was just imagining this.

I was wondering if the drought of the last few years had weakened the trees and they could not recover even after good rains in the last six months. But that is only a theory and others may have noticed the same thing and may have a better idea. It might also be that lying close to main roads, pollution is affecting them.

Since Neem is such an important tree with nearly every part of it used: I use Neem cake in my garden, put Neem leaves in all my drawers to keep away insects, but do not clean my teeth with Neem as so many villagers do. If there is a disease affecting the trees, it seems important that some tests should be done to identify the culprit and then a solution found as soon as possible. ■

Pippa Mukherjee, Tamil Nadu

Stoliczka's Bushchat in Kachchh

It was a sunny morning on March 18, 2002. My friends and I were heading from Naliya grasslands towards the westernmost tip, Jakhau, the last bit of coastal, arid, biodiversity-rich landscape on the fringe of Kachchh. At Jakhau, we spotted a bird that resembled the male of Siberian Stonechat *Saxicola maurus* perched on a wire close to a patch of uncultivated land, delimited by a hedge. On closer inspection with binoculars, we saw that the sandy-brown (winter plumage) bird had a faint and slender white patch on its supercilium tapering towards its nape, and a long and fine bill. The tail had white edges to the sides. Based on this, we identified it as Stoliczka's Bushchat *Saxicola macrorhynchus*, also known as the White-browed Bushchat.

As we approached the bird, it flew upside down into the adjacent fallow land. It kept solely to the tertiary branches of shrubs like *Capparis decidua*, *Ziziphus nummularia*, *Prosopis juliflora*, and *P. cineraria* bordering the hedges, occasionally flying onto the ground to pick up food items or took to aerial sallies to capture insects. During our survey, 17 individuals were recorded mainly in flat terrain with diverse habitats such as grassland with scattered bushes,

dry-farmed agriculture with hedges, and fallow land and grasslands with native tree elements. Of the 17 birds, nine were males and the rest females. The female differed from the female Siberian Stonechat in having a longer bill and tail, a more prominent supercilium, and in showing broad buff tips to the tail feathers. All the birds were sighted in a small, unprotected area of about 10 sq. km, where we also sighted the Siberian Stonechat, Desert Wheatear, Variable Wheatear, Common Sandgrouse, Indian Collared-Dove, and Indian Robin.

The bird had an upright stance, it exhibited a most peculiar habit while on the ground, puffing its breast and swaying it sideways, exposing its whitish breast and belly. This puff was exhibited by sudden erect posture, and puffing-out of the underparts from throat down to the belly and vent. This gave the bird a ball-like appearance, and in this posture, it was gradually swaying its body sideways. This behaviour did not last more than a minute.

Later, on browsing through literature, I learnt that the species is endemic to the north-west Indian subcontinent, with former or current records from Punjab, Haryana, Uttar Pradesh,

Rajasthan, and Gujarat in India, the adjacent parts of Punjab and Sind, Pakistan, and Afghanistan. In Gujarat, besides our record, it has been recorded in the adjacent areas of Deesa forest (north Gujarat), the Banni grasslands of Kachchh, Little Rann of Kachchh, and Velavadar National Park. Recently, the species was sighted in Naliya grasslands (Kachchh).

However, not much is known about the species which appears to have declined, and is presumed to be extinct in Pakistan and Afghanistan. So far, surveys to determine its distribution and population have been carried out by Dr. Asad R. Rahmani (Director, BNHS), but little is still known about the behaviour and general ecology of the species. Most interestingly, unlike most other birds, there are no definite breeding records of Stoliczka's Bushchat till now – no nests have been located so far! It could be termed as one of the 'mystery birds' of India, and hence, is a species where more surveys and studies need to be taken up at sites where it has been reported earlier and in potential habitats, so that conservation initiatives can be taken up to save the species. ■

Hiren B. Soni, Gujarat

Mouse-Tailed Bats in Ratanmahal

The eastern forest belt of Gujarat starts from Ambaji in the north and ends in Dang in the south. Four mountain ranges cover this belt: Aravallis, Vindhya, Satpuras, and Western Ghats. The Jessore Sloth Bear Sanctuary, Polo-Vijaynagar Forests, Ratanmahal Sloth Bear Sanctuary, Jambughoda Wildlife Sanctuary, Shoolpaneshwar Wildlife Sanctuary, Forests of Ukai and Tapi, Purna Wildlife Sanctuary, and Vansda National Park are situated here. The major mammals of this tract are the Leopard, Striped Hyena, Sloth Bear, Honey Badger, Indian Giant Flying Squirrel, Porcupine, Pangolin, Indian Fox, Golden Jackal, and Four-horned Antelope.



In May 2012, I along with three of my friends (Meet Agrawal, Ketansinh Chauhan, and Vipulsinh Chauhan), were on one of our regular visits to Ratanmahal Sloth Bear Sanctuary. During this trip, we decided to first visit a few ancient temples, step-wells, and forts of the surrounding areas to check on the wildlife that dwell there. Among these was an abandoned old fort near Santrampur in Panchmahal district.

While looking through a hole in an ancient sewage system in the fort, we were startled to see that the walls were covered by thousands of mouse-tailed bats *Rhinopoma* sp. I quickly got down to photographing the colony to record it (see image). The hole through which the image was taken was barely a foot wide, and it took much patience to get photographs, especially considering the mind-numbing stench of bat droppings and the fear of being hit by bats that were flying out from the hole, disturbed by the flash of the camera with each click. After getting some photographs, we quickly left the site so as to not disturb the colony any further.

I wonder how many such biodiversity-rich places exist, and these, like the one we had discovered, need to be identified and protected, before they are lost forever. ■

Vickey Chauhan, Gujarat

ABOUT THE POSTER

The only ape found in India the Hoolock Gibbon *Hoolock hoolock* has the distinctive build of an ape, primarily arms much longer than the legs and a tailless body. Males and young females are dark; on reaching maturity at the age of 5 or 6, the female's coat fades to a yellowish-grey. A newly born Hoolock has yellow-tinted greyish-white hair.

The Hoolock Gibbon is found in northeastern India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura), eastern Bangladesh, and northwestern Myanmar (west of the Chindwin River). It might possibly occur in China (extreme southeastern Tibet). Its distribution in India is restricted to points south of the Brahmaputra and east of the Dibang (Dingba Qu) rivers.

Hoolocks live in hill forests. Normally, each family lives separately, parents and young forming a group seldom more than six in number. Abundance of food or other factors may cause a number of families to congregate together in a more or less limited area. The network of paths made by gibbons through treetops can be traced by the worn condition of the branches, which the gibbon grasps as it makes its daily way through. They eat fruits, leaves, also insects, grubs, and spiders. Dew is sipped from the leaves or cupped in the hand.

The Hoolock Gibbon is listed on CITES Appendix I, and on Schedule I of the Indian Wildlife (Protection) Act of 1972. It is listed as Endangered under the IUCN Red List as there is reason to believe that the species has declined by at least 50% over the past 40 years (approximately three generations), primarily due to hunting and habitat loss. Over the coming 40 years, this decline is expected to likely reach similar proportions due to continuing habitat loss. ■



Hoolock Gibbon *Hoolock hoolock*

Hoolock Gibbon *Hoolock hoolock*



ADITYA SINGH

BIRDS ON TREES AND TRACKS

Text and Photographs: V. Gopi Naidu

In the summer of 2014, I noticed a strange reduction in the number and kinds of birds that were commonly seen in my society garden in Kalyan. I tried to figure out why this was happening and came to the conclusion that a number of youngsters had started playing boisterous and noisy games in the garden, which probably drove off the birds. The games were not so objectionable as the outsiders who came in and messed up the garden, and deterred smaller children from their play. Along with other residents we decided to put a stop to this, even approaching our local corporator. Finally by restricting the playground to children aged three to ten years, and

putting a stop to rough games, an end was put to the problem, and to my great relief the birds started coming again.

Around October, I was walking down the rail bridge that I cross daily on my way to Kalyan railway station. In the huge old trees on either side of the rail bridge, I have often seen avifauna among the dense branches. Below the rail bridge are tracks where trains are halted and shunting also happens. The road along the shunting track is quite lonely, and even a soft bird call can be heard. There is a huge Peepal tree *Ficus religiosa* which attracts many birds due to its fruit. There are Tamarind *Tamarindus indica*, Jambhul *Syzygium cumini*, Gular *Ficus glomerata*, and Bor *Ziziphus*

mauritiana trees in this dense patch of greenery. On my way to the station, I noticed that the whole area was quite unusually silent and no birds were seen. I reached the bridge and walked down some steps which are used only by the railway employees and reached the track down to the shunting yard and goods cabin. On the track below the towering Peepal and Gular, there was a thick growth of shrubs. The huge Peepal tree was covered with a flock of Yellow-legged Green-Pigeon *Treron phoenicopterus* which were busily feeding on the fruit.

Just then, an engine driver came out of the shed, pulling on his shirt and looking quite aggressive. He shouted



Yellow-footed Green-Pigeon
Treron phoenicopterus

at me, asking if I was a reporter. Quickly, I showed the pictures in the camera to convince him that I was only birdwatching and not up to mischief. He was totally surprised to see the flock of five birds which I pointed out to him, as he said he had never noticed them. The fact that the Yellow-footed Green-Pigeon is the State Bird of Maharashtra came as a surprise to him. Anyway, he calmed down and began to see the pictures I had taken of these and other birds, and then left me to do my birdwatching.

On a nearby Gular tree I saw a Grey-headed Starling *Sturnia malabarica*. The birds flew about restlessly, and though there were many of them, I got only one at a time in my frame. It was a good day for bird clicks, and I went back home satisfied.

The next week I came back to the same spot, and was startled to see a female Koel *Eudynamis scolopacea* so close up for the first time. The red eye shone beadily, and the typical brown and cream colouring confirmed my identification. This drab looking female does not have the glossy black colouring of the male, nor does she have the beautiful call which is well-known.

There were several other birds to see that day. Next to the Peepal, Gular, and Vilaiti Chinch *Pithecellobium dulce*, on which sat a Coppersmith Barbet *Megalaima haemacephala*, feeding on the pods. A Black Kite *Milvus migrans* was sitting on the tree waiting for its prey, the smaller bird species that come to feed on the tree. Walking further I came across a bush that was covered with a monsoon growing Cucurbit climber, whose fruit was probably what attracted a male Koel. The glistening black bird sat crouched inside the greenery, quite unlike the bold Common Crow *Corvus splendens*, whose nest it uses to lay its eggs.

Further on, in another shrub of the

same kind, there was a pair of White-eared Bulbul *Pycnonotus leucotis*, another first sighting in my growing birdlist. I remained seated on the ground in the same place, taking care not to cross over onto the tracks, and relished the calm which was the reason why birds come there. No wonder, I soon saw a brown bird with a bright red eye, hopping down from the shrubs. This was the Greater Coucal *Centropus sinensis* or Bharadwaj as they are locally known. It fought with an adversary of the same species on the ground, and it was finally driven off across the track to the side of the road. I followed the Coucal across the track to the roadside and remained there, watching for more birds.

Among the shrubs was a warbler species which I could identify only after comparing my photograph with a field guide. Further down the same road, perched on a shrub was the Oriental Magpie-Robin *Copsychus saularis*, which I had often heard but not seen. I have heard at least three different calls – makes me wonder if there is more than one species in the area.

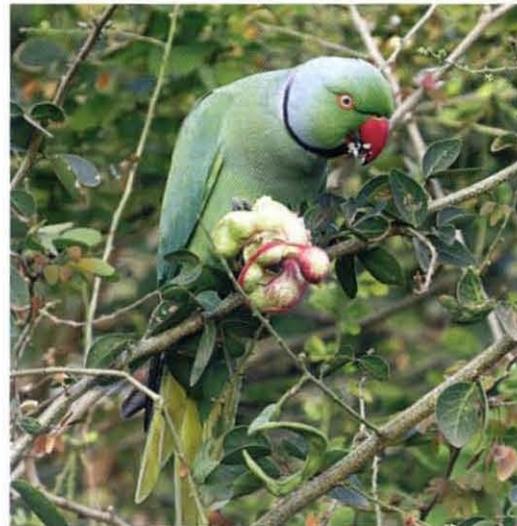
Soon I came across a Yellow-eyed Babbler *Chrysomma sinense*, which hopped about in front of my camera. I quickly shot a series of pictures showing it preening itself and ruffling its feathers. I was so enchanted by these birds that I kept going further down the road, not caring that it was so lonely and unsafe. I was greeted by a flock of noisy Rose-ringed Parakeet *Psittacula krameri*. The Peepal next to the track had a flock of them feeding on the fruit. Suddenly, they took off in a flurry of wings, and I followed the flock, which landed on the corrugated iron roof of a railway goods cabin. I was taking pictures and in my excitement I did not realise that a signalman in the cabin was viewing me with suspicion. He marched out of



Coppersmith Barbet *Megalaima haemacephala*



Grey-headed Starling *Sturnia malabarica*



Rose-ringed Parakeet *Psittacula krameri*



Greater Coucal *Centropus sinensis*



Asian Koel (female) *Eudynamys scolopaceus*



Asian Koel (Male) *Eudynamys scolopaceus*



Yellow-eyed Babbler *Chrysomma sinense*



Spotted Dove *Streptopelia chinensis*



Oriental Magpie-Robin *Copsychus saularis*

the cabin and accosted me, demanding to know what I was doing. "These are railway premises, why are you taking pictures, where have you come from!" he said threateningly. Before he got more furious, I quickly showed him my pictures of the parakeets. I explained that I was there only because I was watching birds and I work in a nature conservation organization. He was still suspicious, but when he saw the pictures his irritation turned to curiosity and then joy. I pointed to the roof of the cabin and showed him the parakeet flock. Then I pointed to the tree in which I had seen the parakeets first. This time there was a Indian Golden Oriole *Oriolus kundoo* sitting on a branch, and an Asian Pied Starling *Gracupica contra* too. I remained in the area, hoping to see more. By now it was 9:30 am, and just before deciding to leave, I saw yet another bird that was new to me. The cables above the

track had a number of avian visitors. Long-tailed Shrike *Lanius schach* and Spotted Dove *Streptopelia chinensis* were two more species that gave me a chance to snap them, but they soon flew off on seeing a human being where there were usually none. The Jungle Crow *Corvus macrorhynchos*, with its dark jet black feathers, heavy beak, and shiny black eyes sat on the cable briefly, cawed raucously, and flew off.

On my way back, I left the track and walked along a mud path, past a patch of grassland. Here again I had to stop because there was more in store for me. At first from a distance I saw a small brown bird. Thinking it was a sparrow, I just hung around a while. The bird came closer, and to my joy I discovered that it was a Scaly-breasted Munia *Lonchura punctulata*. A little girl playing at a temple called out to me. She pointed out one bird at a time in her excitement,

calling me to take more pictures, including one of the Ashy Prinia *Prinia socialis*.

The grass had been cut in a patch of unoccupied land near this place. Here was an Indian Black Ibis *Pseudibis papillosa* feeding on the insects and small frogs exposed by cutting of the grass. In flight, the extended beak and black body were visible, but according to the description there is also red on the crown and legs.

As I am narrating my experiences, today itself they are going to cut down 1,100 trees in Mulund area to lay pipelines. Figures reported in the media earlier suggest that 21,000 trees have been cut down in Mumbai in the name of development. Today a reader might think that these birds that I described and photographed and found so exciting, are just common. But when 1,100 trees get cut in just one suburb, how many will get cut in the whole



Long-tailed Shrike
Lanius schach



Indian Golden Oriole
Oriolus kundoo



Scaly-breasted Munia
Lonchura punctulata

city, how many habitats will be lost, and then these arboreal and grassland birds will no longer have habitats to live in. Then will they remain common, or even become rare? If you say the forest is there for them, the question

is, how much forest remains, and for how long?

The railway premises are undisturbed and densely covered with the numerous huge trees that I have mentioned, that attract these birds. Loss of habitat, loss

of food, loss of nesting space are the threats looming over these so-called common birds.

Now when I see a Shikra *Accipiter badius* sitting just 10–15 feet away in a Casuarina tree, I realise that we were not wrong in bringing back nature to our colony. The small children still play in the grounds but the rough, outside elements are eliminated, and the return of the birds ensured.

I once read somewhere: "Come to my home, enjoy nature, take photographs, leave only your footsteps." Not only did the birds give me pleasure, but taught me the meaning of these lines.

I thank Dr. Gayatri Ugra, Consultant Editor, BNHS, for penning my experiences into beautifully worded stories. ■



V. Gopi Naidu joined BNHS in 1993, after working for 18 years in various magazines and newspapers. He is currently Manager (Designing), and works in the Publications Department of the Society.



Railway yards are good habitat for birds

Wild Intimacy!

Text and Photographs: Shreyas Shrirang Yadav

As the monsoon of 2014 was on its way and many plants were in bloom, my father and I decided to make a botanical trip to a rocky, scrub forest habitat near Sutgatte in Belgaum district of Karnataka. After we crossed the village, we entered a scrub forest that encompassed the whole landscape. The pre-monsoon showers made the forest look green and beautiful. We stopped in the middle of the forest to photograph some plants. I, however, was more interested in reptiles, as after the monsoon showers reptile activity is quite significant. I entered a small opening in the forest and was looking around for vipers, when a running lizard caught my attention. Within the blink of an eye, the lizard was on a rock and displaying. Whooooow – a Fan-throated Lizard! It was displaying for a mate with energy and confidence. What a way to start the morning! The next surprise was when he came directly towards me, climbed a nearby scrub bush, and started displaying his beautiful yellowish-white fan-throat in all its glory. I was busy taking backlit images of this lizard in a very awkward sitting position with all muscles cramping the hell out me, but after I saw the images, I said to myself “This is what wildlife photography is all about – no pain, no gain!”





“*Khya khya kbaykkkk*” the alarm calls of a langur suggesting the possibility of the presence of a leopard made me nervous, and we left the place. Around 4 km ahead, we entered a similar forest patch. We sighted another Lizard displaying on a rock. Again, the colour of the fan-throat was yellowish-white. Earlier, I have seen another colour combination of blue, red, and black fan throat in a different area. The Sitana was checking every possible rock or other high elevation site (shrubs, tree stumps) where he could be clearly seen by females when displaying. Another interesting observation was that it was so focused in its one goal to mate that it was oblivious to the ants, butterflies, and other insects that were passing by, thereby missing on a potential meal. After almost an hour, its efforts paid off and its most anticipated moment was in sight! A female approached, and the two soon began to mate, the intimate moment lasting for about two minutes. I was fortunate to photograph



The courting male displays a multi-coloured throat-fan to the female hidden nearby

this moment at very close range without disturbing them – so engrossed were they in their act of ‘wild intimacy’!

After mating, the female was seen opening and closing her mouth few times. She was also shaking her body and moving in a circular pattern, this behaviour was repeated for almost 20 minutes. The male just stood around the female, scanning the area. After the female disappeared into the bushes, the male started to display again, choosing new vantage points. There was a funny moment when he approached my camera backpack to display on it! I was able to click some pictures of this.

The sun was right on top, and I

realised that we had to cover more areas to get photographs of wild plants and flowers, and drove off to get this done. On the way back and on recalling how the day had been, I realized that nature offers us its beautiful creations in various forms, such as flowers, landscapes, reptiles, mammals, and birds. We should rejoice in whatever nature has to offer and also expect some surprises, as I had of the ‘wild intimacy’ of the Fan-throated Lizard. ■



Shreyas Shirang Yadav is a Mechanical Engineer by profession and currently works on engine development. He is passionate about nature photography.

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The stem-borer larva had cut passages in the bark of the Cassia as it ate through



The larva of the stem-borer was the reason behind the tree dying

Nature's cycle

Text and Photographs:
Vrutika Balsara

Passing a garden near my place had never been interesting until I came across a weird smelling tree. The tree, which was dying, smelled as if someone had poured beer on it. I was surprised to see plenty of butterflies swarming mainly on the bark of the tree. The unusual gathering of butterflies drew my attention and I started visiting the garden to photograph the butterflies, this being a good photo opportunity as the butterflies were sitting motionless on the bark for hours! The tree was *Cassia siamea*, the food plant of the Common Emigrant butterfly, and I also observed eggs and caterpillars of this species on the tree. Other species recorded were the Nawab, Common Baron, Black Rajah, and Common Palmfly.

The smell of the tree was a mystery, and everytime I visited the site, the alcoholic smell was getting stronger, which was accompanied by an increase in the number of butterflies visiting the tree. I then realised that the tree was oozing sap, and its smell was luring the butterflies. Other than butterflies, the tree had numerous visitors, mainly predators of butterflies such as spiders, bark mantis, praying mantis, and garden lizards, and later also ants.

As the days passed, the smell of the sap reduced and the tree was also drying up. So, the gardeners trimmed the tree and sprayed insecticides on



The dying tree had become a source of food for many insects (L): Common Nawab; (R): Praying Mantis

the other plants in the garden, to control the insect pests that could be responsible for the bad health of the tree. Trimming a few portion of the tree did not affect the number of butterflies visiting the tree, but the smell of the sap was reducing day by day. After closer observations, I saw some wet sticky areas with a few cracks and holes on the bark, and I thought this could be the passage through which the sap was oozing. I also saw some yellowish-

white web-like clusters bordering the holes. The tree was dying, but it was still oozing sap. As the days passed, the number of butterflies visiting the tree became fewer.

After a few days, new leaflets were seen growing at the lower bark, which gave some hope of survival for the tree. However, along the holes and web-like clusters, I saw ominous fresh cuts on the trunk. On a visit after a few days, I observed that the clusters

had increased in numbers and the new leaflets were drying up. The next day, I saw the affected part of tree missing and on enquiring with the gardeners was told that they had cut it off. Keen to check the contents of the chopped off portion, I, along with the gardeners, cut and probed into it till we finally got the culprit. It was the stem borer larva. I then realised that the hanging clusters were the excreta of the larvae and the cuts noticed on the bark were the passages it had made as it ate through.

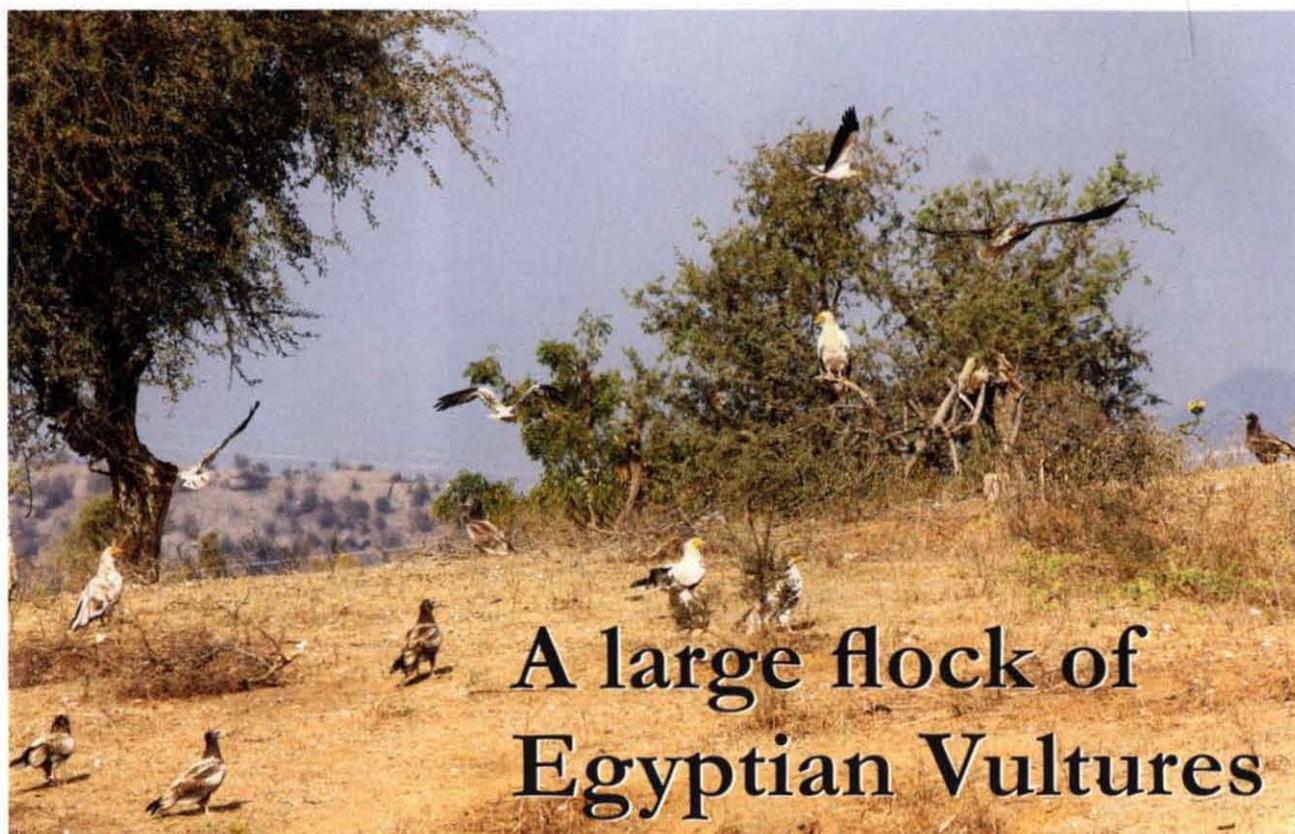
Can we term the stem-borer a culprit? Its larvae had damaged or may have been responsible for the death of the tree, but it was beneficial to butterflies as it was responsible for the flow of sap from the tree. This in turn also benefited the predators of the butterflies that found easy prey in the 'drunken' butterflies. This was part and parcel of nature's cycle. ■



(L): Black Rajah; (R): Common Palmfly



Vrutika Balsara is pursuing her second year degree in Bachelor of Science from Bhavan's College, Mumbai.



A large flock of Egyptian Vultures

Text and Photographs: Acharya Parikshit

Gujarat is known for its tradition of care towards all forms of life. Due to the non-persecution of wildlife, and because of the many inland and coastal wetlands of the state, Gujarat is an important refuge for a large number of birds, both migratory and resident.

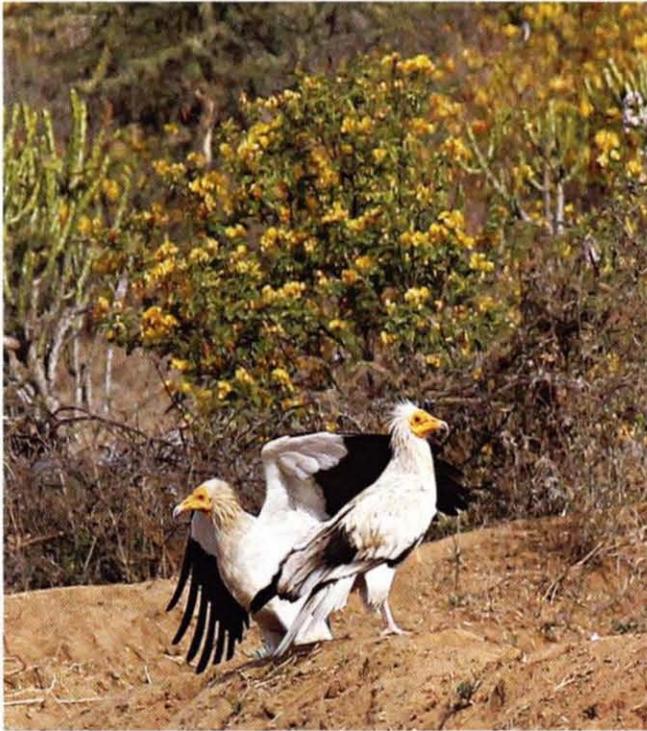
On January 25, 2014, I got news that Egyptian Vultures had arrived in large numbers at the Bajothia Temple area near Palanpur city. I immediately called up my friend Kailash Jani, and two days later we reached the place in the early morning. Without much effort, we sighted two adult Egyptian Vultures sitting on a dry branch of a neem tree, and later saw four more sitting on the ground in a farm, which I photographed. As they flew off on being disturbed, more of them flew which we had not noticed till then,



Besides the Egyptian Vulture, many other animals were seen feeding on the carcasses

and then we saw that the place was a “world of Egyptian Vultures”, adults, immatures, and juveniles – what a sight! They were flying in the open sky, on

the ground, and a neem tree was totally covered by them! There were still some more surprises waiting for us! As we climbed up a small hillock on hearing



A useful scavenger, the Egyptian Vulture is invariably seen in the neighbourhood of human habitations

the barking of dogs and calls of birds, we understood the reason for the large congregation of vultures – there were a lot of corpses of animals lying close to a slaughter house. Besides the Egyptian Vultures and dogs, we recorded Cattle Egrets, crows and mynas feeding on the carcasses.

It is well-known that the present status of our once numerous vultures is alarming. Some of the species are now critically endangered, mainly due to the effects of the veterinary drug diclofenac, which they ingest while feeding on carcasses of cattle treated with the drug. Being aware of the decline of vultures, the sighting of this huge flock of the Egyptian Vulture, numbering around 350–400, was reassuring, a good sign and good news for nature lovers and conservationists. We sat there till noon, watching every small activity of the birds, and especially enjoying seeing the comical, waddling gait that the species is known for. ■

Editors' Note: There is no evidence, so far, to suggest that the Egyptian Vulture is also susceptible to diclofenac poisoning.



Acharya Parikshit loves to spend time in jungles and is involved in bird conservation. He is currently working as a Medical Representative with Cadila Healthcare Ltd.

EDITORS' CHOICE...



Courtesy: Earth Mirth / by Jonathon Porritt and Robin Maynard

"The fact is that no species has ever had such wholesale control over everything on earth, living or dead, as we now have. That lays upon us, whether we like it or not, an awesome responsibility. In our hands now lies not only our own future, but that of all other living creatures with whom we share the earth."

David Attenborough, *Life on Earth*

POISONED VULTURES, AMUR FALCON CONSERVATION AND CLEAN ENERGY ISSUES

Text: Neha Sinha

Poisoned Food

All the Gyps vultures of India are threatened, having seen alarming population declines in the last two decades. In Assam, the only known *breeding* colony of Gyps vultures is in Sivsagar in upper Assam. And tragically, recently, a single poisoned carcass led to the death of 55 vultures in Sivsagar. The villagers discovered the affected vultures on January 24, lying all over the grass, most of them dead, and some just about to die. Of the 55 counted, 22 were the Critically Endangered White-backed Vulture, four were the Critically Endangered Slender-billed Vulture, and the rest were the Vulnerable Himalayan Griffon Vulture. Also found was a carcass of a cow, which had been laced with poison, presumably to kill stray dogs. The vultures fed on this single carcass and died.

With the world's last few Gyps vultures struggling for survival, breeding colonies are precious. Disturbance, electrocution, or poisoning deals a staggering blow to the already teetering populations. Breeding sites are their last bastions, and here, battles are mounted to avoid poison entering

their food chain. And like any other animal, vultures will also die if fed other poisonous chemicals. Vultures die with time after consuming diclofenac, a banned veterinary drug. Diclofenac for veterinary use is banned but diclofenac meant for humans is diverted for cattle, at the cost of the Gyps vultures.

Following the incident, a team from BNHS visited the site, and held awareness camps for the locals. This episode shows us how a single poisoned carcass, presumably put out for dogs, can kill so many vultures at a time since they are community feeders. And this is not the first time that vultures have died *en masse*, after innocuously feeding on poisoned carcasses. Carcasses are poisoned because of various reasons: to kill carnivores like tigers and leopards that predate on livestock, and sometimes to eliminate dogs.

In the Sivsagar case, the bottom-line is that poisoning carcasses can lead to the death of unintended species. But there is a second bottom-line: a range of poisoning methods are killing species all over India, and this has completely escaped enforcement attention. There are at least three main points on my wish list for consideration.



A range of poisoning methods are killing unintended wildlife species, which has completely escaped enforcement attention

Poisoning is poaching: India is a country with serious poaching issues. Tigers and rhinos are poached with regularity, and the battles are bloody, messy, and with hardened criminal networks involved. Poaching of rhinos for the illegal trade in rhino horn is so severe that the Assam government was considering de-horning rhinos at one point. This sort of poaching is fuelled by international trade, and contraband is smuggled out of the country.

But other forms of poaching are gaining ground. In simple terms, poaching refers to the killing of a protected animal. Poisoning cases

are not part of an organised industry. They are still sporadic, and sometimes unintended. But they are happening with alarming regularity. In earlier cases, mass poisoning of vultures and peacocks was reported. Even in cases of non-target killing, the culprits need to be convicted. It is now time for the law – in this case the Wildlife Protection Act – to recognise poisoning as a *poaching* offence. Till now, poisoning cases have been looked at with laxity by law enforcers. They need much more seriousness, and conviction. Poisons such as pesticide are being misused for killing endangered species for trade or

those considered as pests/nuisance. How long can this be allowed?

Poisoning is a public health hazard: The idea of poison being used in carcasses or other ways to kill animals – whether domestic, feral, or wild – is a disturbing one, and a health hazard. Any form of poison is a threat to not just animals, but also people. Increasingly, migratory birds are being killed using poison. These are then sold for human consumption in local markets. What would toxicology reports of consumption of poisoned meat show? This is not a sustainable practice and needs to be weeded out on priority.

Poisoning is killing critically endangered species: Incidences of carcass poisoning such as in Sivsagar, and reported in other parts of Assam, are one-off events which can have devastating impacts on an already imperiled species. Gyps vultures die after consuming diclofenac, which is still illegally used as a cattle drug. This is the single most important driver of vulture death and near extinction. Events of poisoning, where poisoned carcasses are laid out to target dogs, leopards or tigers, are also harming vultures. It is high time that these cases be booked as poaching cases. ■

No mass-hunting of Amur Falcons in Doyang for a second year



ASAD R. RAHMANI



ZUTHUNGLO PATTON

Song campaigns help in popularising the message of Amur Falcon conservation

A multi-pronged approach to the problem of mass-hunting of falcons in Doyang reservoir has resulted in a stunning conservation success. In 2012, mass-hunting of migratory Amur Falcons in Doyang reservoir was reported: as *Hornbill* informed readers earlier, more than 150,000 falcons were killed in a little over the week.

Organised conservation has never really been tried out in Nagaland, so whatever we and others did was going to be a trend-setter, or a make-or-break attempt. Working with a local NGO Nagaland Wildlife and Biodiversity Conservation Trust, the problem of seasonal falcon hunt was

tackled holistically. Advocacy appeals were made through the church and village councils. A comprehensive education plan engages young students and some adults throughout the year. The genuine needs of the people are listened to, and put forward to the district administration. BNHS supports the eco-clubs, and last year we also attempted to bring in eco-tourism into the area. We were clear about what we wanted to communicate. Firstly, we wanted to advocate a form of eco-tourism which did not entail creating mammoth buildings or infrastructure. Secondly, we did not want to disturb the ongoing activities of villagers such as agriculture, and wanted to help create a form of tourism which was both ecologically and culturally sensitive.

Happily, birdwatchers and nature lovers have been making their way to villages around Doyang reservoir. This season, the villages had more than 2,500 visitors, of which 100 included home stays by tourists in the locals' homes. Nagaland's villages are picturesque, and the people speak English with fluency and flair, making communication with the bird-watching community easy. We hope that birdwatchers who want to support real conservation visit this area each year. We also hope that tourism is sustained through the year. Once the eco-clubs become more firmly established within the community, bird and butterfly tourism can also be conducted throughout the year. Home stays in these charming villages do not promise luxury comfort, or even western commodes. But they do promise full meals of fragrant, ethnic food, a charm that does not have an iota of pretentiousness, and a front seat in witnessing a hunting community on the way towards massive change. ■

Is clean energy also green?



NEHA SINHA

It is necessary that we ask, "how green is clean?"

The Union Budget is out, and it has declared ambitious targets for renewable energy. This is in keeping with the promises made by Prime Minister Narendra Modi, who had said on many platforms that creating more renewable energy in India will be an important focus for 'Make in India' as well as a means of tackling climate change. The figures announced in the Union Budget speech comprise 1,00,000 MW solar power, 60,000 MW wind power, 10,000 MW energy from biomass, and 5,000 MW from small hydroelectric projects.

While all environment-lovers will celebrate reducing dependence on coal and other polluting fossil fuel energy sources, there is a caveat. Wildlife has been suffering in the production of 'clean' energy. In the most direct form, birds and bats have been crushed by windmills, off-shore in the sea or on land. There is now evidence that birds are getting 'fried' mid-air by radiation and heat from solar panels. There are indirect threats: since these projects are perceived as green, there are often proposals of setting up renewable

energy facilities, chiefly wind and solar, in forest areas. These proposals entail massive cutting down of trees not only for the energy production, but also for ancillary reasons like making roads. It is clear that India needs to have more renewable energy, but the location of the site needs consideration. Areas that are *jungle* or green need not be the areas chosen for green energy projects. Rather, answers can come from setting up solar energy in areas closer to people, such as government buildings, as suggested by Railway Minister Suresh Prabhu. For windmills, areas frequented by migratory birds, including migratory bird flyways, congregation areas, and Important Bird Areas should be avoided. These projects may be clean, but they are not necessarily green. In the Environment Impact Assessment (EIA) for these projects, impacts on wildlife also need to be included. ■



Neha Sinha is Policy and Advocacy Officer with the Bombay Natural History Society. She works on securing sites with a special emphasis on Important Bird Areas.



Flamingo Festival

The Sewri-Mahul mudflats located in Central Mumbai is an unprotected site, some areas being declared prohibited under a notification by Mumbai Port Trust (MbPT) and Bhabha Atomic Research Centre (BARC), along the Arabian Sea. This 10 km long and 3 km wide mudflat has mangrove forest at its fringes, with industries in the background, and is a winter refuge for more than 20,000 migratory birds such as sandpipers, plovers, gulls, terns, egrets, and flamingos, among others.

The sprawling Sewri-Mahul mudflats were designated as an Important Bird and Biodiversity Area (IBA) by BNHS and UK-based BirdLife International. BNHS and MbPT organised the first Flamingo Watch Programme in 2003, with support from the Indian Bird Conservation Network (IBCN). The Fest since then been organised annually to create awareness about birds and the conservation of their habitats.



This year the Flamingo Festival was organised by the BNHS in association with MbPT on February 28, 2015. The event was inaugurated by Shri D. Nayak, Traffic Manager, MbPT



The BNHS has undertaken a project funded by MbPT. This interdisciplinary project includes bird studies, mangrove restoration and conservation education. Shri D. Nayak visited the mangrove plantation site to monitor the progress



Certain patches are being used by the locals for their fishing activity affecting the success of plantation. BNHS team explained these concerns and the work completed so far. Shri D. Nayak instructed his staff to co-operate with BNHS and resolve the concerns raised



The event exhibited informative panels on flamingos



Various departments of the BNHS had put up stalls to disseminate the message of conservation

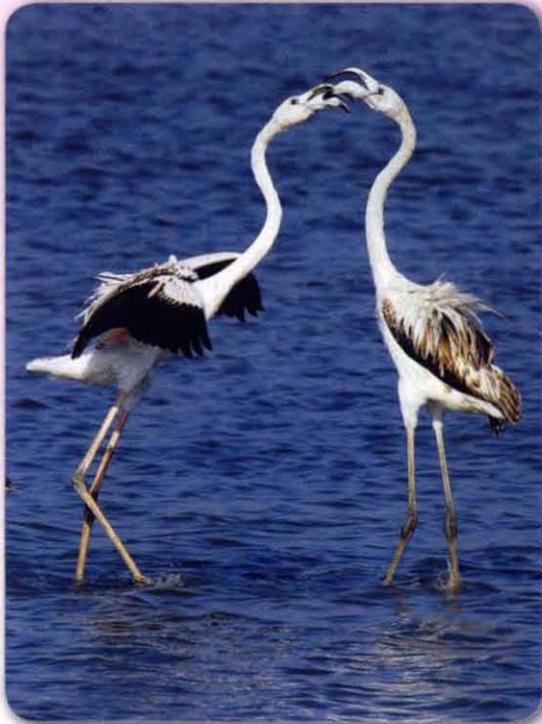
Flamingo Festival



A week prior to the fest an awareness drive – Flamathon – was organised from February 23–27, 2015. More than 10,000 individuals followed a series of activities on the BNHS website conducted by the Conservation Education Centre (CEC) – Mumbai.



Flamingo picathon – people shared their flamingo images with details of the place and date it was taken on. This image by Avinash Sant won the first prize.



AVINASH BHAGAT, 2nd prize – Flamingo Picathon

An informative virtual exhibition on flamingos helped the participants prepare for Flam-a-Quiz. The winners were crowned FlamQueen and FlamKing.



Poonam Kamble submitted this lovely entry for the Flam-a-Toon and Flam-a-Phrase contest

Painting, poetry and slogan writing competitions were organised for children of 5th to 8th standards residing in the Mumbai Metropolitan region, in English, Marathi and Hindi. In all, 224 entries from 25 schools were received for painting, and 38 for English and 37 for Marathi poem and slogan writing.



The winning entries of the painting, poetry and slogan writing contest were displayed during the Fest. The winners were felicitated by Mr. Homi R. Khusrokhani, President, Dr. A.M. Bhagwat, Honorary Secretary, and Mr. Divyesh Parikh, Deputy Director (Marketing)



(L-R): Dr. A.M. Bhagwat, Honorary Secretary, Mr. Homi R. Khusrokhani, President, and Mr. Divyesh Parikh, Deputy Director (Marketing) with the winners of the painting, poetry and slogan writing contest

The prize distribution ceremony was attended by the parents and teachers of the participants of the competitions





◀ Span your Wings is a very popular activity during the Flamingo Festival. Interested individuals measure their arm width to see which bird they match

Thousands of Mumbaikars congregate to get a glimpse and learn more about the migrant and resident birds of the Sewri-Mahul mudflats from the BNHS experts ▶



◀ Getting a tattoo of the flamingo is popular not just amongst children, but also the adults

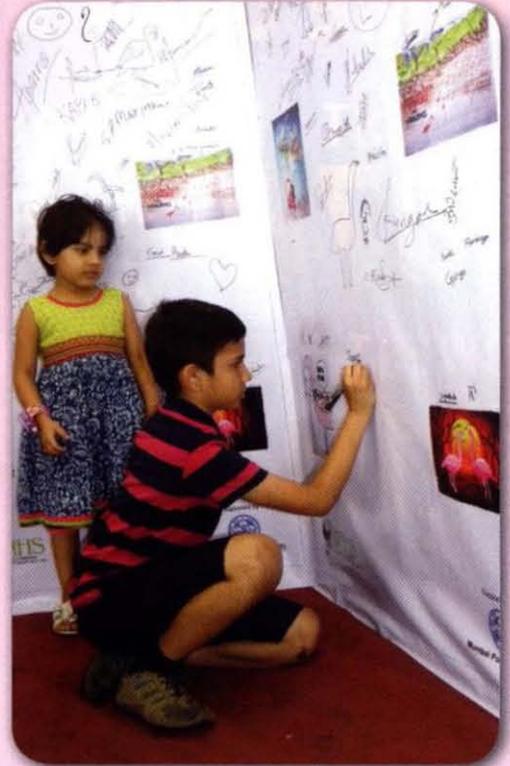
A group of young students recited and danced on a song that they had prepared on protecting mangroves ▶





▲ Attraction and empathy for flamingos and other water birds in the hearts of Mumbaikars is a clear achievement of this festival. This success could act as a stepping stone for similar initiatives for various species and habitats across India

Every year Mumbaikars pledge their support to BNHS for recommending ► realignment of the proposed Mumbai Trans Harbour Link (MTHL)



Flamingos and more – the way forward

For nearly a decade now, the Flamingo Festival has remained a prominent platform for BNHS to spread the word about conservation of not just flamingos and coastal habitats, but also about all aspects of nature in general. It serves as an effective mode of nature education and public awareness for people from different walks of life and from different age groups. It has rightly gained a special place in the Green Calendar of Mumbaikars.

The idea is to not just continue with this favourite event of Mumbaikars, but also add new aspects to its menu that will bring novelty and leisure, coupled with knowledge sharing. ■



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Action at BNHS ENVIS

The Environmental Information System (ENVIS) Centre on Avian Ecology at BNHS plays a vital role in disseminating information on India's birdlife and its habitats to users across different backgrounds. ENVIS Centre has recently uploaded databases on Evolutionarily Distinct and Globally Endangered (EDGE) bird species, based on their Evolutionary Distinctiveness (ED) score from India. The aim of the programme is to highlight these unique species on a map and catalyze conservation action to secure their future. Each year, a number of poorly known and neglected EDGE species are selected for conservation attention and action. The ultimate goal of the EDGE programme is to ensure that local stakeholders take ownership of these neglected species and get committed to ensuring their survival with cooperation from governments, NGOs, and international conservation organizations.

ENVIS staff actively participated in the Students' Conference on Conservation Science at Indian Institute of Science, Bengaluru, in September 2014, for the promotion



BNHS PHOTO LIBRARY

The BNHS team promoted the activities of the ENVIS Centre to the participants at Indian Institute of Science

of its activities among relevant audiences. The BNHS stall at the Conference evoked a good response and researchers were keen to learn about its activities; many subscribed to *Buceros* – the newsletter of the BNHS ENVIS Centre. ■

Book Launch at Hornbill House

BNHS hosted the Mumbai launch of *THE SONG OF THE MAGPIE ROBIN – A MEMOIR*, which portrays the life and times of Zafar Futehally – birder, naturalist, and writer – written by Ms. Shanthi Chandola and Mr. Ashish Chandola. Mr. Futehally was a former Vice President of BNHS, a Padma Shri awardee and the founder editor of *Newsletter for Birdwatchers*. The event organised on December 12, 2014, included a talk by Mr. Murad Futehally (son of Mr. Zafar Futehally), the launch of the book, and a panel discussion by Ms. Dilnavaz Variava, Mr. Bittu Sahgal, and Mr. Rishad Naoroji on Mr. Futehally's views on conservation. The book, written with thought and wit, dwells on Mr. Futehally's work as one of the pioneers of the conservation movement in India in modern times and the crucial role he played in transforming concern for nature from a topic of the classes to that of the masses, at the



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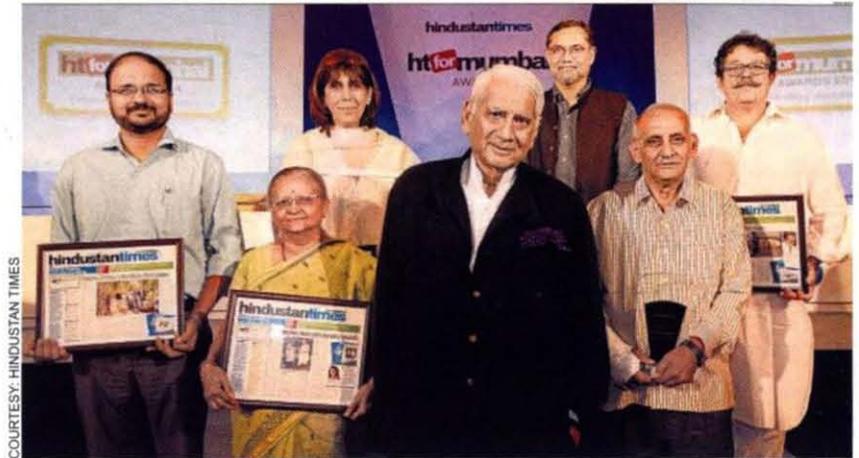
(L-R): Rishad Naoroji, Dilnavaz Variava, Murad Futehally at the launch of the book

national level. It is a vibrant portrait of a man of principle who spent his entire life striving to find a balance between

development and nature conservation. The event was well-attended by book lovers, nature lovers, and the media. ■

BNHS receives 'HT for Mumbai Award-2014'

BNHS was awarded the 'HT for Mumbai Award 2014' in the Organizations category in a glittering ceremony in Mumbai on January 09, 2015. The awards are given annually by Hindustan Times to individuals and organizations to honour them for their contribution to the city. The award was received by Mr. Divyesh Parikh, Deputy Director (Marketing) and Mr. Atul Sathe, Manager (Communications) on behalf of the BNHS. This award is in recognition of the sustained and pioneering work being done by BNHS in the areas of field research on species and habitats, multi-disciplinary conservation programmes,



COURTESY: HINDUSTAN TIMES

BNHS received the HT for Mumbai Award for its pioneering work in wildlife and innovative nature education. BNHS was featured in the newspaper activities. A detailed profile story on the in the run-up to the event. ■

Research and Outreach for Specimen Collection

The natural history specimen collection of BNHS is a unique national treasure. Ongoing field research and outreach activities are an integral part of its agenda. The collection team has been monitoring bats at selected sites in Maharashtra, such as Amboli in Sindhudurg district and the caves at Kanheri and Elephanta near Mumbai. Surveys of the caves in Amboli revealed the presence of over 1,000 bats of the species *Rousettus leschenaulti* (nectar feeding bats). Unmonitored tourist visits in recent years pose a threat to this population. Surveys at Kanheri caves recorded the presence of only one individual of *Taphozous* sp. in Cave no. 1, as against the previously listed seven species. Five species of bats were earlier reported from five caves on Elephanta (Gharapuri) Island. Recent monitoring revealed the presence of *Scotophilus kuhlii*, *Hipposideros fulvus*, and *Megaderma hyra*. Spot surveys in Chhattisgarh revealed only four species,



BNHS PHOTO LIBRARY

Bandana Aul Arora conducting a bat awareness programme at Jijamata Udyan, Mumbai

namely *Megaderma hyra*, *Hipposideros* sp., *Taphozous melanopogon*, and *Rhinopoma hardwickii*, along with colonies of *Pteropus giganteus* (largest bat in India) sighted in Chitrakoot. Educational seminars were conducted in universities in Maharashtra. Several bat and bird walk events were conducted on Elephanta Island and in Jijamata Udyan Zoo, Mumbai. ■

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Real-life case studies drawn from
Impact Assessment reports

Peer Learning through discussion forums

Regular assessment with feedback

Who is the course for?

Practicing as well as aspiring EIA professionals who wish to specialize in Biodiversity-inclusive Impact Assessment

Minimum Eligibility: Science or Engineering graduate in Environment, Management, Planning, Economics or a related field

Course Benefits: Successful candidates improve their chances for employment in EIA consultancies and as environmental managers in companies

Course Outline

- The Problem of Biodiversity Loss
- Drivers of Biodiversity Loss: Case Studies from India
- Biodiversity Impact and Business Risk
- Response to Biodiversity Impact: Biodiversity-related Governance in India
- Analytics of Impact Assessment: How EIA is carried out
- Biodiversity-inclusive Impact Assessment
- Biodiversity Assessment Techniques – Fieldwork

Course Faculty

Dr. Deepak Apte

Chief Operating Officer, Bombay Natural History Society

Dr. Prasad Modak

Director, Ekonnnect Knowledge Foundation

Dr. S.B. Chaphekar

Director, Environmental Conservation(Water), IEM, Mumbai

Ms. Divya Narain

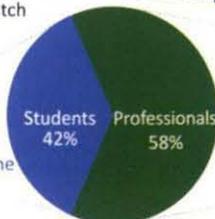
Learning Manager, Ekonnnect Knowledge Foundation

First Batch Snapshot

- Launched - 7th Nov. 2014
- Number of Participants - 19
- 7 participants completed 1st fieldtrip in Gulf of Kutch
- Next fieldtrip in Pench Tiger Reserve

- MSc. Environmental Science, Mumbai University
- MSc. Environmental Science, Pune University
- B.Tech. Bioinformatics, D Y Patil University, Mumbai
- B.Sc. Environmental Science, Fergusson College, Pune

Participant Profile



64% Senior Management

36% Middle Management and Entry-level

- Tata Asset Management Ltd
- Municipal Corporation of Greater Mumbai
- Yokogawa Pvt. Ltd.
- Exact Importers Pvt. Ltd.
- Troupe7 Consultants Pvt. Ltd.
- Indradhanushya Environment Centre, Pune Municipal Corporation

"The curriculum and faculty are excellent and I found it inspiring to be surrounded by academically strong minds. The professors and advising staff have been very accessible and enthusiastic and you can clearly see this in their comments and recommendations when they correct your answer sheets."

Subodh Narayan Juwatkar

Assistant Vice President - Human Resources, Tata Asset Management Ltd

Register at ekolearning.ekonnnect.net

For more information, contact: **Divya Narain**, divya.narain@ekonnnect.net, M: (+91) 8879963575





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