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Published and printed quarterly by Ms. Sumaira Abdulali for the Bombay Natural History Society, Printed at Parth Enterprise, Goregaon, Mumbai.

Reg. No. RN 35749/79, ISSN 0441-2370.

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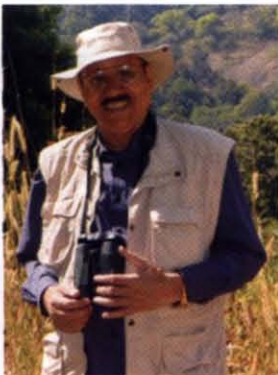
Will corporates show responsibility towards the environment?

Corporate Social Responsibility, or CSR in short, is a new buzzword among corporates, decision makers, and NGOs, thanks to the amendments in the Companies Act, 2013, through a gazette notification to include new rules that may be called Companies (Corporate Social Responsibility Policy) Rules, 2014, that shall come into force from April 1, 2014. According to these rules, all Indian companies or corporates that fall under the Companies Act, 2013, have to spend 2% of their average net profit for the preceding three years on CSR activities. These rules apply to any company that has a net profit of Rs. 5 crores or more, or a net worth of Rs. 500 crores or more, or a turnover of Rs. 1000 crores or more.

Like any government rule, it is full of verbose language, and 'ifs' and 'buts', but I have tried to pick up some points that are important for us to know. Earlier, some companies were passing off normal human resource activities as CSR, so the rule says "Provided that the CSR activities do not include the activities undertaken in pursuance of the normal course of business of a company." Secondly, "The CSR Policy of the company shall specify that the surplus arising out of the CSR projects or programs or activities shall not form part of the business profit of a company."

Funds provided to political parties will also not come under CSR. The rules say "Contribution of any amount directly or indirectly to any political party under Section 182 of the Act, shall not be considered as CSR activity". Another interesting point that I noticed is "Companies may build CSR capacities of their own personnel as well as those of their implementing agencies through institutions with established track records of at least three financial years but such expenditure shall not exceed 5% of total CSR expenditure of the company in one financial year."

In order to allow transparency, CSR activities have to be displayed on the company's website. The rules also mention "In case the company has failed to spend the 2% of the average net profit of the last three financial years or any part thereof, the company shall provide the reasons for not spending the amount in its Board report." Every company will form a CSR Committee. The Committee will include its board of directors: even if it has only two directors on the board, they shall be in the Committee. The Committee must have a minimum of three members, at least one of whom must be an independent director. The CSR Committee shall institute a transparent monitoring mechanism for implementation of the CSR projects or programmes or activities undertaken by the company.



As the name of the rules implies, most of the activities that come under CSR are human related, but fortunately environment and wildlife conservation have been included in the activities that can be funded.

Another notification called The Gazette of India, Extraordinary, Part II, Section 3, Subsection (i) lists the items that can be initiated under the CSR rules. Besides eradicating hunger, malnutrition, promoting education, combating disease, providing gender equality, and empowering women, it also lists “ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining the quality of soil, air and water”. If followed strictly and ‘responsibly’, these rules can be game changers for our struggle to save the environment.

Some of the interesting points identified by Dr. V. Shubhalaxmi, Dy. Director, Conservation Education, with whom many of our members, particularly those residing in Mumbai, may have interacted, are as follows: 16,200 out of 8 lakh companies will be coming under the CSR net; nearly 14,000 companies have a CSR budget of upto Rs. 2 crore; and in total Rs. 20,000 crore will be spent annually on CSR initiatives. Corporates feel that NGOs are not ready to deal with the CSR demands and are incapable of high-end spending; corporates are running short on project and programme ideas; 5% of the 2% of the CSR budget could be used in capacity building of company staff as well as that of NGO partners; and volunteer work by employees will now also be considered as CSR.

The question is: Will corporates sincerely fund environment projects that make a difference on the ground, or will they go for *naam ke waaste* tree plantations as photo-opportunities, or gobar gas plants that are socially unacceptable and/or have high maintenance costs which no villager will be willing to undertake or afford. Such inane activities have a glamour quotient and provide a lot of media space to corporates. It is our responsibility to guide responsible corporates to spend funds in the right direction so our environment is made cleaner and threatened species can be saved from extinction. For saving threatened species and habitats, money is the main problem. With the miniscule budget of the MoEF, from which 70% is spent on only one species and its habitat, the MoEF has only token funds for other species. Now, we have an opportunity to undertake initiatives for saving all species and all habitats, but do we have the capacity? Building our own capacity to undertake large programmes should be the starting point.

Asad R. Rahmani

(With inputs from Dr. V. Shubhalaxmi, Dy. Director, Conservation Education, BNHS)

No Place to Call Home

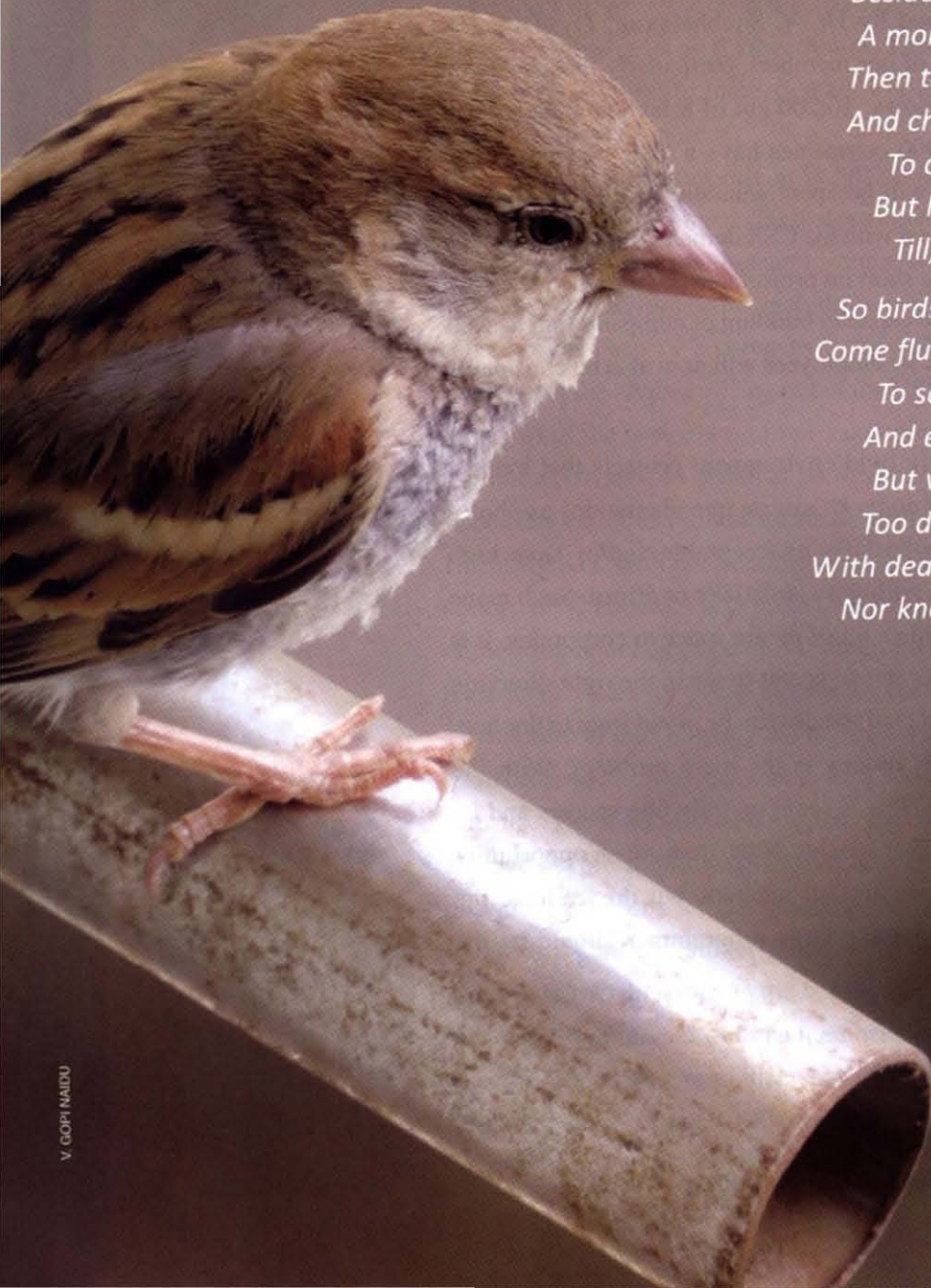
The Decline of the House Sparrow

The Sparrow

- Paul Laurence Dunbar (1872–1906)

*A little bird, with plumage brown,
Beside my window flutters down,
A moment chirps its little strain,
Then taps upon my window-pane,
And chirps again, and hops along,
To call my notice to its song;
But I work on, nor heed its lay,
Till, in neglect, it flies away.*

*So birds of peace and hope and love
Come fluttering earthward from above,
To settle on life's window-sills,
And ease our load of earthly ills;
But we, in traffic's rush and din
Too deep engaged to let them in,
With deadened heart and sense plod on,
Nor know our loss till they are gone.*

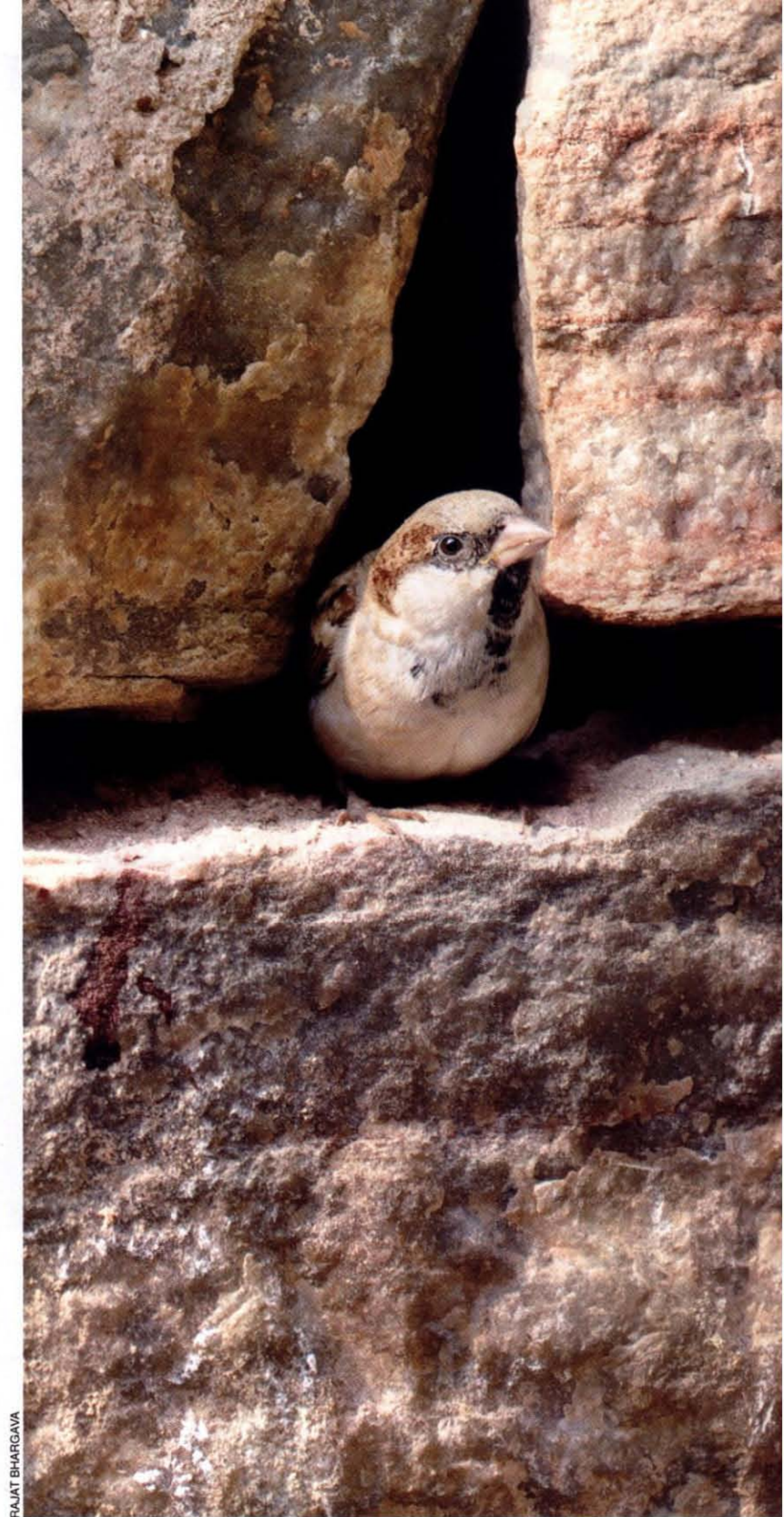


The House Sparrow *Passer domesticus* has a historical commensal relationship with mankind, and has followed their colonisation over most of the earth. It now has an almost worldwide distribution, inhabiting all continents and oceanic islands. It is absent from China, Indochina, Japan, and parts of Siberia and Australia to the east, and tropical Africa and northern areas of South America to the west.

This once-common bird is facing an alarming decline in numbers in urban areas in India. Loss of nesting sites and food resources, introduction of lead-free petrol which contains methyl tertiary butyl ether (MTBE), use of chemically treated seeds, effects of electromagnetic waves from cell-phone towers, reduced areas of free-growing weeds, reduced numbers of old buildings, and competition for food by other species, are possible reasons for this mysterious disappearance.

BNHS launched the Citizen Sparrow project on April 1, 2012, to document the current population and distribution of sparrows and compare this with the situation in the past. An online survey was conducted for two months and participants were asked to mark locations on a map and give basic information on sparrow sightings from those locations, including sightings from past years. This information made it possible to compare population changes of sparrows in different places, and helped identify threats and problems. Findings from the project are intended to feed into more detailed studies investigating the causes of decline, and potential measures for the recovery of sparrow populations. The project aimed at involving citizens and generating interest and concern about the sparrow and other conservation issues in India (turn over this page to see the results of this project!).

Sparrows are important indicators of the health of an ecosystem, and their decline or increase in populations in areas indicates changes in the habitat. So close has their association with humans been that there are few who do not have fond memories of sparrows while growing up. Let us hope that future generations too have the privilege of passing on first-hand stories and experiences about this chubby, chirpy little avian.



RAJAT BHARGAVA

The House Sparrow is a small and rather nondescript bird. The male is boldly patterned with a black bib, grey crown, and dark chestnut nape, while the female lacks these, and is plain, with a pale supercilium and faint streaks on the mantle. It is primarily a seed-eater in rural areas, specialising on the seeds of cultivated grain crops. Birds living in urban areas supplement their diet with a variety of household scraps, such as bread deliberately left out for them, and other available food. In contrast, nestlings are fed almost exclusively on soft-bodied insects and other invertebrates (both in the larval and adult form), with the prey species varying with the season.



CITIZEN SPARROW REPORT

about the survey

The goal of Citizen Sparrow (www.citizensparrow.in) was to gather information about House Sparrow populations across India, and to understand how they have changed in recent times. This was done through an online survey, to which all members of the public were invited to contribute.



10666 RECORDS **5655** PARTICIPANTS **8425** LOCATIONS

Tharangini@eliasubramaniam

who participated?

62.3%
from cities

27.7%
towns & villages

14.4%
from Mumbai



Ages
 ■ 11 to 20
 ■ 21 to 40
 ■ 41 to 60
 ■ 61 and above

ARNAV SHAH (7) from Pune was the youngest participant

PADMAM NAYAR (91) also from Pune was the oldest participant

top contributors

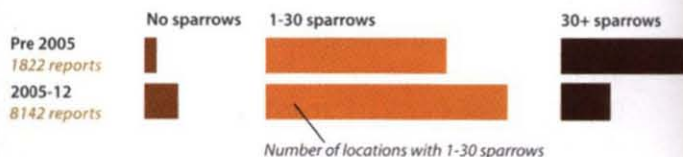
Arun M K Bharos (657 reports)
 Bhasmang Mehta (221)
 Dr. A Kumaraguru (189)
 S. Rajashekar (138)
 Kalidas (135)
 Kalpana Thakkar (117)
 V. Santharam (114)
 Banaras Singh (107)
 Khaja Rasool (95)

Satya Prakash (75)
 Feroza (72)
 Chirag Sharma (70)
 Ridhi R. Chandarana (67)
 Mukesh H. Koladiya (65)
 Kalai Mani (62)
 Girish Jathar (60)
 Rajiv K. Singh Bais (57)

past vs present

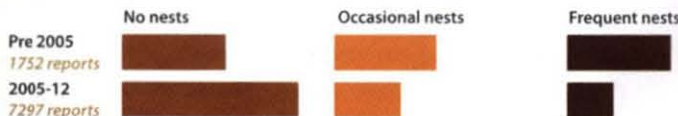
How are sparrows doing today compared with the past?

Sparrows were reported as absent from more locations after 2005, compared with the past. Lower numbers of sparrows were reported at more places in the present than in the past.



How many sparrows nests are seen today versus the past?

Considering only those locations with sparrows, nests were seen more frequently in the past, and in higher numbers, than in the present.



build your own nest box!

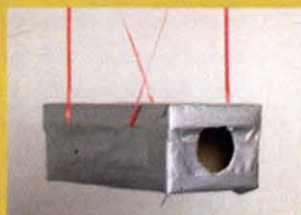
Although there is no clear evidence that sparrows are suffering from lack of nesting spaces rather from anything else, it doesn't hurt to provide a nest box and see what happens!



You can use a shoe-box into which you have cut a hole of about 8cm diameter in the side. Please affix the lid firmly in place.

Then you can suspend this home-made nestbox from the ceiling

of your porch or balcony. Just make sure that it's not attached to a pillar or pipe or tree, because then it will be easy for predators like squirrels and rats to get in.



You can paint your nestbox so that it doesn't look out of place. You can also wrap it with tape or paper. If you are using a shoe box, do make sure to replace it every year.

You are most likely to succeed in attracting sparrows if there is a population of sparrows not too far from your home. If there are no sparrows within a reasonable distance (say 1km), it's unlikely that your nestbox will be found by them.

Images courtesy: www.wikihive.com

sparrows today

Is there an urban-rural divide?

Look at the last column: there are nearly twice as many reports of large flocks of sparrows from rural areas as from cities. Sparrows are also more likely to be absent in cities than in towns and villages.

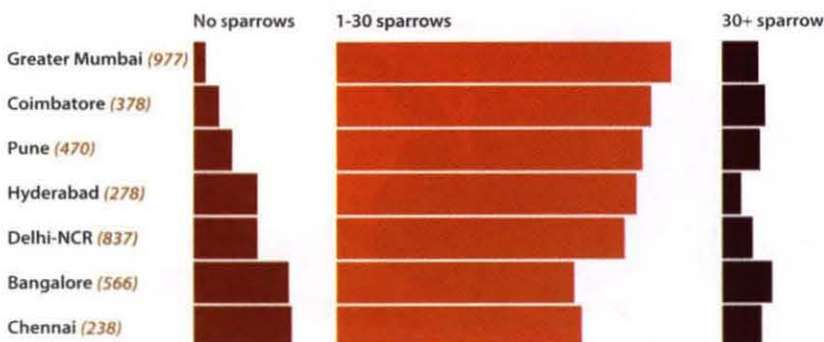


How are sparrows doing in different regions of the country?



The lowest rate of absence of sparrows is reported from Central and North East India. Large numbers of sparrows are most likely to be found in Central and North West India.

How are sparrows doing across our cities?



Mumbai and Coimbatore have the fewest reports of absence of sparrows, while many more reports from Bangalore and Chennai show sparrows as absent. Hyderabad reports very few large flocks.

Sparrow Courts – A community conservation initiative

Rehan Z. Balsara

“Sparrows may soon be an endangered species?”

That was my surprised reaction when I received the BNHS email on the Citizen Sparrow initiative. These adorable birds, which have been part of our lives in every city of India, truly need our help!

With the support of my school principal and teachers, I made a presentation on the Citizen Sparrow initiative at our school assembly, encouraging students and teachers to participate. Bird feeders and nesting boxes were placed throughout our school balconies and garden, and it was truly delightful to observe the increase in the sparrow population and witness the birth of baby sparrows!

However, I was determined to spread even more awareness about this initiative. With the active participation and support of the Carmichael Road Walkers (CRW) Association, a unique community conservation initiative was born – The Sparrow Court Initiative. The first ‘Sparrow Court’, a green area dedicated to the feeding and nesting of sparrows, was established on Carmichael Road in Mumbai.

The Sparrow Court has resulted in several beneficial environmental and community outcomes. The sparrow population in the area has significantly increased. Tree planting has created a greener and healthier environment, in which a greater variety of insect and bird species are now observed. But, perhaps, the most beneficial outcome of the Sparrow Court Initiative has been community participation. The Sparrow Court has become an area for all members of the community to congregate and actively participate in making our urban environment greener and more suitable for all natural species to survive and thrive.

I encourage other urban communities to follow the Carmichael Road Sparrow Court model.



AZMIN BALSARA



ZAL BALSARA



V. GOPI NAIDU

Rehan Balsara's 'Sparrow Court' initiative is a fine example of how everyone can help play a role in increasing sparrow populations in cities

The following guidelines are useful for successfully establishing a Sparrow Court:

1. Carefully select a quiet, less disturbed, sunny area as a Sparrow Court. An area adjacent to a large building wall or a footpath of a by-lane is ideal.
2. Plant trees and shrubs in the Sparrow Court and adjacent areas. Select indigenous trees and shrubs that provide dense foliage in which sparrows can roost and nest. Do not spray insecticides on trees and shrubs in the area, as insects form an important part of a sparrow chick's diet.
3. Install sparrow feeding platforms. Build the platforms from recycled materials. Fix the platforms at an appropriate height to protect the sparrows from predators like cats.
4. Hang sparrow feeders from tree branches. Feeders can be conveniently crafted by recycling PET bottles. Use clean and dry 1–2 litre bottles. Wooden sticks or unsharpened pencils can be used as perches and inserted 1.5 inches from the bottom of the bottle. Cut 1/4 inch wide feeding holes 1–2 inches above each perch. Hang the sparrow feeder from a hook screwed into the centre of the bottle cap.
5. Use seeds such as *bajra* (pearl millet), as adult sparrows mostly feed on grains.
6. Place sparrow nesting boxes at elevations above 12 feet on tree branches. Ensure that the nesting boxes are firmly fixed and have openings that are no more than 1.5 inches in diameter. Nesting boxes can be made from recycled cartons. Do not use wood treated with preservatives and do not paint the box. Do not use tin cans or metal for nesting boxes, as these quickly heat up during summer, causing sparrow eggs to reach a lethal temperature, killing them.
7. Organise celebrations of events such as World Sparrow Day (March 20), World Environment Day (June 5), and World Wildlife Week (October 1–7) by planting trees in and around the Sparrow Court. Spread the word in your community, and encourage people to visit the Sparrow Court daily. Children and senior citizens are particularly fond of feeding sparrows! ■

Thirteen-year-old Rehan Z. Balsara is a student of the Bombay International School. He is passionate about conservation issues and has pioneered several environmental initiatives. For more information on establishing Sparrow Courts, he may be contacted at sparrowcourts@gmail.com.

Sparrows of Udaipur

Nadim Chishty, Raza Tehsin, and Habiba Bano

There was a time when the morning alarm bells of chirping House Sparrows used to be wake-up calls for us in Rajasthan. These little brown and buff birds share an amicable relationship with the urban world. They have provided us company as perky, chattering neighbours and also amused us with their hovering dance. Due to the great bond between the House Sparrow and human habitations, it was named *Passer domesticus*.

But in the present world, we are not greeted by the fluttering sounds and the innocent presence of these birds around our houses, as their population in the past few decades is slowly declining. Now, we neither see these birds and their nests in our houses, nor are they seen foraging in our gardens and lawns.

The gradual decline in the population of sparrows from urban areas, especially in big cities, is evident. The changing set-up of the urban construct could be the chief reason for the disappearance of sparrows from cities and towns. These birds used to make their nests in tiled houses under the cantilevers, gambrels, and overhanging cornices. Thatched roofs, hanging street lamps, wall clocks, and photo frames used to be the favourite sites for building their homes. But modern architecture has hampered the nesting opportunities for the House Sparrow. The closely mounted concrete architecture leaves very few places for the sparrows to nest.

Ornithologists also link this sudden population collapse to increased use of pesticides and disappearing kitchen gardens. Heavy pesticide use and the by-

products of petrol have led to the disappearance of insects which served as the main food for sparrow chicks. Moreover, now-a-days, people from urban areas rely more on buying readymade pre-cleaned grains, due to which no waste and leftover grains become available to the birds. Due to lack of adequate food resources, these quintessential *chidiyas* have started abandoning their urban habitat. Radiation from mobile phone towers is also said to be one of the major causes that have pushed them to change their nesting sites.

Popularly known as *gauraiya*, the number of these birds is also on the decline in Udaipur city. But, surprisingly, large numbers of sparrows do still occur in the forests in this region, along with bulbuls. Due to availability of food,



NADIM CHISHTY

Sálím Ali called the House Sparrow 'man's hanger on', as they are known to fearlessly enter and make nests inside our homes



NADIM CHISHTY

Seen in this picture are House Sparrows and Red-vented Bulbuls. The latter are of an aggressive nature and are considered as one of the world's worst invasive alien species in places where they have been introduced

better nesting facilities, and a pollution-free environment, these birds are now shifting their habitats from cities to natural spots. It is reassuring that we can still sight these birds in farmlands. Conservation initiatives must be adopted and a congenial environment built to help them survive in the urban world along with us. ■

Nadim Chishty is an Associate Professor. His areas of interest are diversity, ornithology and toxicity. He has recently completed a University Grants Commission (UGC) project on the Red-vented Bulbul.

Raza H. Tehsin has been instrumental in forming three wildlife sanctuaries and has reported 14 new species from Rajasthan. He has authored three books on wildlife and was the Wildlife Warden of Udaipur for 33 years.

Habiba Bano is an Assistant Professor in the Department of Zoology at the University of Rajasthan, Jaipur.

Sparrows of Thane

Kusum S. Gokhale



NADIM CHISHITY

The House Sparrow is primarily a seed-eater. Birds that reside in urban areas supplement their diet of natural vegetable matter with a variety of household scraps, such as bread and peanuts

It is a well-known fact that the once-common House Sparrow living near human habitations has witnessed a population decline. This prompted me to try to look out for them and also analyse the reasons for their presence in certain localities of Thane city. This city is highly urbanised due to its proximity to Mumbai. In spite of this, sparrows are seen frequently in certain localities.

The twittering of sparrows from a Putranjiva *Putranjiva roxburghii* plant could once be heard every morning in the 'Bara Bungalow' locality, which is slightly secluded from the city. Sadly, one day, this tree was chopped down and the sparrows disappeared from the site forever. Tarangan Complex in Thane is a locality with high-rise buildings. A huge open nallah flows in front of these buildings and there is a flyover on the east side of the complex which carries heavy traffic. However, all the buildings have gardens, where cow dung is used as a fertiliser. Tall indigenous trees grow on the sides of the nallah. The drainage and water pipes of these buildings are covered with concrete walls and the facades have iron grills with small openings through which sparrows can easily enter, while keeping pigeons and crows away. Crows are rarely seen in this locality, even though their calls can be heard early in the morning, and pigeons appear to compete with sparrows for nesting sites.

The garden of the first twin-towers has a ficus hedge that adjoins a bamboo hedge. This bamboo hedge is a thicket on the roadside and is the main roosting place of sparrows. It

measures about 13 feet in length, 5 feet in breadth, and 11 feet in height. Away from the road, the bamboo hedge becomes short and sparse and continues into the ficus hedge. Not even a single sparrow uses this as a roosting place.

The sparrows generally chirp approximately for 30 minutes before sunrise and leave the place within 15 minutes. Most of them fly away, but a few return to the trees to rest for a few seconds. Generally they fly in groups of 10 to 20, and sometimes fly alone. They rarely feed in the locality. In the evening, they first gather in the ficus hedge for some time, and then retire to the roosting site in the bamboo thicket.

I observed a pair of sparrows nesting in a kitchen exhaust pipe, not once, but seven to eight times in one year. This exhaust fan was rarely in use. They seemed to use this location to protect themselves from pigeons and other dangers. The nest seemed elongated due to multiple additions during each breeding period.

This locality is not ideal for sparrows, as they have to forage in outside areas. However, they appear to be well-fed and refuse food and water offered even in summer. This could be because the housing complex is surrounded by patches of agricultural land where rice and vegetables are grown using domestic sewage, where food is available in abundance for them. ■

Kusum Gokhale has 35 years of teaching experience. She has worked as a research guide for PhD students and her main work is focused on the Thane creek and mangroves.

The Sparrow's Fall

Deepak Rikhye

“There’s a special providence in the fall of a sparrow.” Shakespeare’s words that inspired Dr. Sálím Ali. His book, *THE FALL OF A SPARROW* recounts the role a Yellow-throated Sparrow *Petronia xanthocollis* played in his life. His encounter with a sparrow precipitated a life-long interest in ornithology. “It was at this moment that my curiosity about birds really clicked,” he wrote. Sparrows are described by Sálím Ali as “cheeky and familiar” in human environments. This chirpy little bird now has the distinction of being Delhi’s State Bird. Sadly, the population of the House Sparrow is facing an alarming decline. For naturalists, this is of course an invidious development. What is causing this fall?

Charles Darwin in 1835 had warned about the Malthusian Catastrophe. He had ominously predicted that when the human population increased unchecked, it would cause gaps, and wildlife in some forms would perish. Was Darwin right? A recent “gap” in India was when three of our vulture species witnessed a drastic decline. Today, we fear the sparrow, too, is on the way out.

I am fortunate to be living in an arcadian environment. Acres of cultivated land surround our houses. It is these areas that still display houses with eaves. Sparrows prefer eaves to trees for nesting. “The brawling of a sparrow in the eaves,” a delightful line by W.B. Yeats (1865–1939) expresses the congruity between a sparrow and an eave.



SIDDHESH SURVE

The House Sparrow prefers to nest in caves, walls, and other man-made structures



V. GOPINATH

These cosmopolitan birds are believed to have been closely associated with humans since the Stone Age

Shankar Raman from Kerala has been studying the effects of unleaded fuel, which contains MTBE that kills insects when its toxic fumes are released into the atmosphere. Gayatri B. from Bengaluru reports, “We used to see a lot of bee-eaters, kingfishers, and golden orioles. Like the sparrow, their population too has declined”. The birds mentioned by Gayatri thrive on insects. Are the effects of MTBE causing an imbalance? Are buildings designed for air conditioning not providing eaves which sparrows need? Similarly, reports from Hyderabad have also indicated a decline in sparrows.

Parks and green belts in our capital, New Delhi, provide a home for sparrows to some extent. Trees in open areas are also veritable “sink” areas for pollution in the atmosphere. Mrs. Brita Singh, a resident of Salt Lake, Kolkata, reports that sparrows occur in large numbers in the Salt Lake area. There is a reason – many buildings in this area are designed with the roof forming an eave. Mrs. Singh has observed sparrows nesting even in the space between an air conditioner and a ledge. In Rajasthan, areas in close proximity to villages are reporting larger flocks of sparrows. Houses with eaves are common in rural areas.

However, the general consensus is that flocks of 30 to 50 birds used to be observed, but today, this has reduced to smaller flocks of around 10 birds. The destiny of sparrows is perhaps turning bleak and uncertain, with the decline in the population of insects and increase in buildings without eaves. An immediate investigation into the true causes of the sparrow’s decline and conservation measures may redeem the situation. Peter Jackson, wildlife journalist, naturalist, photographer, conservationist, and cat specialist, explains the dangers if the ‘Pyramid of Life’ is destroyed. Insects, vegetation, and healthy soil form an integral part of this pyramid. A sparrow depends on insects and grain. Insects depend on vegetation which in turn depends on healthy soil. We can link any living creature to a part of this pyramid. R.G. Ingersoll (1833–1899) warns us not to ignore these factors. “In nature, there are neither rewards nor punishments – there are consequences.” ■

Deepak Rikhye is a journalist and writes mainly on matters related to wildlife and the environment. He lives in Ambala and has worked for 25 years on tea estates in Assam.

Vultures on the Ebb

Text and Photographs:
Nand Kishor Dimri

The Alaknanda valley, shaped and moulded by the Alaknanda river, is a mysterious region of the Garhwal Himalaya. I grew up in the foothills of these majestic mountains, always wondering about what lies beyond them. This curiosity that always tickled me led me to make regular trips closer to the clouds. This time, the retreating monsoon and clear skies encouraged me to head towards Srinagar. Driving through the hairpin meanders of the mountainous roads, it is impossible to miss one of the largest birds of the Garhwal region, the Himalayan Griffon *Gyps himalayensis*. High over the hills, vultures seem to glide and navigate the world with exceptional ease.

The day was warming up rather quickly. Surendra Singh, our driver was surprised to learn that vultures have declined in numbers. He mused that the plight of vultures might eventually fall on us. Suddenly, we saw what appeared like a hooded cloak flying past us in the valley. It led our eyes to four grim-faced, yet beautiful Himalayan Griffons perched on a tree, "What gorgeous gigantic birds," I thought. I had never seen them at such close quarters before. Apprehensively, I walked towards these solemn giants, who probably do not like being disturbed. Having taken a few photographs, I moved away and we drove off. Overwhelmed by the sighting, we sat in silent contemplation as our vehicle manoeuvred through serpentine roads. After a while, we decided to stop



A juvenile Himalayan Griffon (left) seen here with a Cinereous Vulture (right)

at a tea stall for some snacks, and I took the opportunity to ask a few diffident locals about griffons and other vultures in the area. To my surprise, I found that many of them thought that they were vile animals and deserved to be persecuted. The myth that vultures prey on healthy livestock has almost become part of the folklore. Child-lifting by leopards is not uncommon in these hills, as Jim Corbett would have agreed, but vultures are simply incapable of such actions. We tried to explain that these creatures do not cause harm to humans and livestock, and on the contrary, the loss of vultures could have profound ecological and social consequences all across their range. We further elaborated that there has been a dramatic increase in feral dog numbers due to the decline of vultures, and that in turn poses a high potential hazard to human health and safety. We left the area in high spirits, hoping that the locals were convinced and would appreciate vultures instead of despising them.

Over the years, so-called “development” and greed have rapidly changed the face of the mountains in Srinagar. My association with the Wildlife Institute of India in assessing past, present, and future impacts of hydroelectric mega projects in the Alaknanda river basin led us to some lesser-trodden paths. One day, while coming back to our base camp in Srinagar, we took a route filled with sand and boulders. The river bank was a little steep and the trek was not easy. We were beginning to feel a little exhausted from the long walk, when we noticed some movement at the river bank. I scrunched my eyes through a pair of binoculars and saw, not more than a hundred metres from us, Egyptian Vulture *Neophron percnopterus* pecking at a carcass of what seemed to be a calf, which had probably been carried away by the river. This species, also known as the White Scavenger Vulture, is listed as Endangered in the IUCN Red List of Threatened Species. It sports a yellow beak, is largely white, and is one of the

most attractive vultures. The presence of an Egyptian Vulture in such an artificial environment, surrounded by the heavy machinery of the hydroelectric project, astounded me. Perhaps vultures are left with no alternative but to survive around huge man-made structures like these.

Similar sightings were witnessed by one of my colleagues from the Wildlife Institute of India, Upma Manral. Here is her experience in her own words:

“Rajaji National Park is one such key conservation area that is known to house six species of vultures. I vividly recollect a chilly winter afternoon in Rajaji when several species of vultures descended to feast in great numbers. Working with villagers in and around Rajaji, I was able to observe vulture activities at the interface between human habitations and wilderness. On the way to Gangabhogpur village, just beyond Chilla barrage in the Gohari range, a barren piece of land is the dumping ground for sick and dying livestock. Having seen jackals and crows feeding on the carcass of a buffalo calf earlier that week, I peered out curiously to catch a similar glimpse as we drove past.



A Himalayan Griffon gliding through misty skies



*I watched a pleasant surprise unfold, as instead of the canids or corvids that I was expecting, vultures descended from the sky. There were seven individuals of three different species, namely the Cinereous Vulture *Aegypius monachus*, Red-headed or King Vulture *Sarcogyps calvus*, and Himalayan Griffon. It was an excellent sighting, which overshadowed the whole day's activity. Enlisted as Critically Endangered, the Red-headed Vulture use to occur in many areas of India but is now rare in southern India. The Cinereous Vulture, too, has high conservation value due to its Near Threatened status.*

*It seems that spotting vultures in Rajaji may not be very difficult for watchful eyes. On another occasion, we saw two species of vultures in the Dhaultkhand range of Rajaji. This time, we were greeted by one beautiful Egyptian Vulture perched on a dhaora *Anogeissus latifolia* tree.*

Above: Two juvenile Himalayan Griffons feeding on a carcass

Below: View of the Srinagar Hydroelectric Project



On our way back we noticed about 15 Himalayan Griffons hovering in the sky, perhaps with a carcass in their sight. We also sighted a lone individual perched on a semal Bombax ceiba tree just before the end of the trip."

Vultures fulfil an extremely important ecological role and are indeed a perfect example of the link between birds and people. Loss of vultures would mean loss of important natural services to people, like removal of animal carcasses from the environment. The decline of vultures is one of the most dramatic cases of decline of any wild species, but some hope persists with the recent ban on diclofenac. Populations are said to have slowly recovered. Awareness and political

Above: Himalayan Griffons basking in the sunshine

Below: The Red-headed or King Vulture is a striking black vulture with a red naked head, neck, and legs



interventions are essential for their survival. Many species of vultures had undoubtedly benefited in the past, when they adapted to human-dominated landscapes. A shift from picking up a dead antelope to a livestock carcass led to the rapid expansion of their population. They were more abundant near human habitations than in natural habitats before several factors, including diclofenac poisoning, led to a drastic decline in their numbers. However, the populations which inhabited the wilderness were less affected by this catastrophic decline and have a more promising future. The Himalayan region still has a healthy population of these birds. It has the potential to be a future vulture conservation area. Vulture conservation in the Alaknanda catchment

may need the aid of the Forest Department and locals to generate awareness so that these populations do not meet the fate of their counterparts from the plains. Despite the local belief in some parts of the region that vultures are evil, the Garhwali Hindus here consider them sacred and protectors from evil. According to Hindu mythology, a vulture (*Garud*) once helped Lord Krishna defeat an evil snake, and thus locals believe that keeping a feather of the bird will prevent snakes from entering their houses. Using this approach, it is not difficult to involve

locals in the conservation of vultures and their habitat.

As I am writing this article, a distressing thought creeps into my mind. Were we watching one of the last remaining vultures in our country? It is about time that we take necessary steps to ensure effective conservation of vultures in the Himalayan region. We must create an environment where there is a healthy co-existence of man and these magnificent creatures. Let us all hope to see these impressive scavengers swarm the sky in good numbers throughout their distribution range in India. ■



Nand Kishor Dimri is a researcher at the Wildlife Institute of India, Dehradun. His prime research interest is Himalayan ecology and he has explored many rugged and remote areas of this region. Previously, he was also associated with WWF-India and TERI, New Delhi.

EDITORS' CHOICE

The Way Through the Woods

They shut the road through the woods
 Seventy years ago.
 Weather and rain have undone it again,
 And now you would never know
 There was once a road through the woods
 Before they planted the trees.
 It is underneath the coppice and heath
 And the thin anemones.
 Only the keeper sees
 That, where the ring-dove broods,
 And the badgers roll at ease,
 There was once a road through the woods.

Yet, if you enter the woods
 Of a summer evening late,
 When the night-air cools on the trout-ringed pools
 Where the otter whistles his mate,
 (They fear not men in the woods,
 Because they see so few.)
 You will hear the beat of a horse's feet,
 And the swish of a skirt in the dew,
 Steadily cantering through
 The misty solitudes,
 As though they perfectly knew
 The old lost road through the woods ...
 But there is no road through the woods.

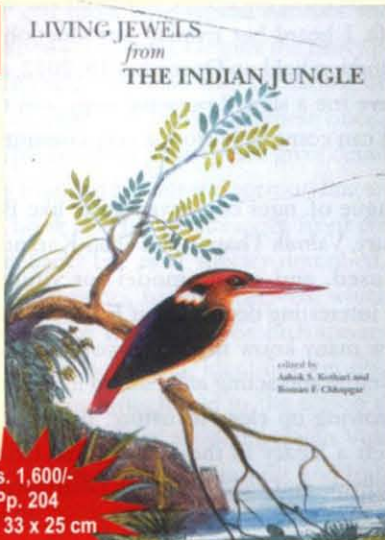
— Rudyard Kipling

ISAAC LEHMKAR

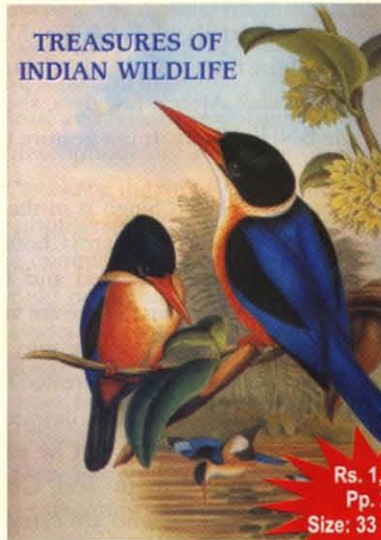
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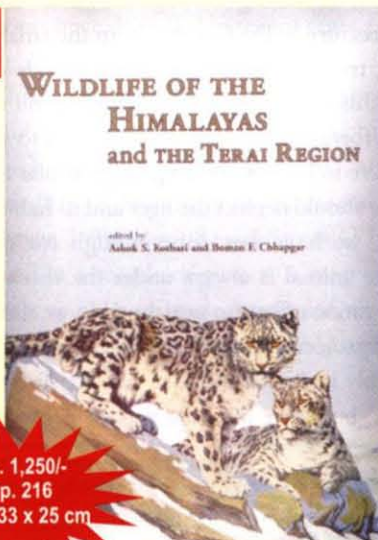


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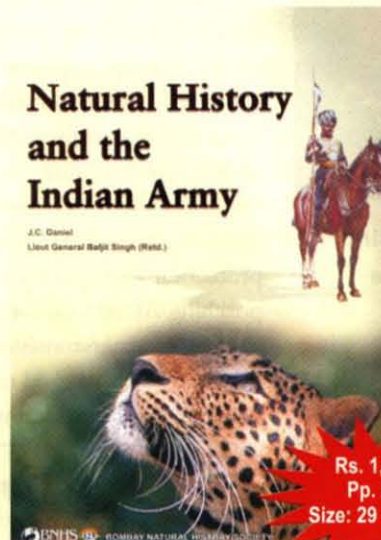
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Historical writings of wildlife enthusiasts, drawings, and paintings from valuable old books, journals, and gazetteers, in the collection of the Bombay Natural History Society, come together in these books to paint a vivid picture of India's rich flora and fauna, which faces an urgent need for protection today. These books are prized possessions for one interested in India and its natural history.



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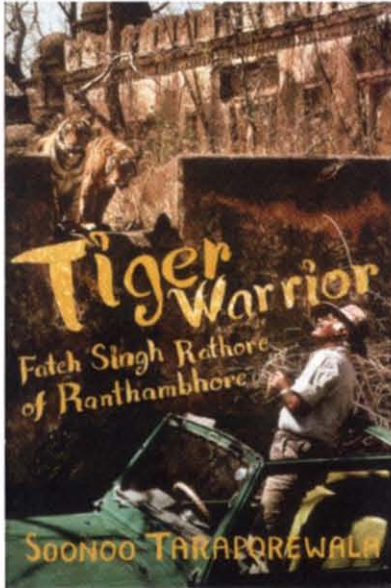
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Reviewed by: **Asad R. Rahmani**

This is a book of two passionate people: one, Fateh Singh Rathore, a well-known tiger conservationist, and the other, Soonoo Taraporewala, a long-time member and staunch supporter of the BNHS and an admirer of Fateh Singh's work. Both are in love with their subjects. The biography covers minute details of Fateh Singh's life. I heard her riveting introduction of Fateh Singh and Ranthambhore during the book release function held on December 18, 2012, and decided to review it for *Hornbill*. After a few days, she gave me a signed personal copy and two additional copies for the BNHS library. It is a gesture that can come only from a very committed member of the BNHS.



Tiger Warrior: Fateh Singh Rathore of Ranthambhore

by Soonoo Taraporewala

Published in: 2012

Published by: Penguin/Viking,
Penguin Books Pvt. Ltd. India,
New Delhi.

Size: 20.5 x 13.6 cm

Price: Rs. 499/-

Pages: 230

Fateh Singh is in the league of tiger conservationists like Billy Arjan Singh, Saroj Choudhury, Valmik Thapar, and Ullas Karanth – totally dedicated and focused, and a role model for younger generations. There are very interesting details about Fateh Singh in the book. For example, how many know that in his younger days, he was more interested in drama and acting and had no inclination towards wildlife, despite growing up close to nature. Fateh is no more with us but he has left a legacy in the form of his family, particularly his son, Goverdhan, and field biologist Dharmendra Khandal, who are carrying out his unfinished work to secure the future of the tiger and Ranthambhore National Park, with the same dedication and passion.

Soonoo makes the mistake of writing (on page 105) that “if the tiger is saved, every living creature in the forest – from the smallest insect to birds, herbivores, trees, shrubs, and the grasslands – is protected as well” – I wish this was true all over India. I admit that some of the best protected forests are in tiger reserves, but to save India's varied wildlife, we have to look beyond the tiger. When I say this, it does not mean that we should neglect the tiger and its habitats. Actually, according to me, we have not done enough for tiger protection and this majestic animal is always under the threat of poaching. Along with conservation efforts to save the tiger, we should have more programmes and projects to save other species and other habitats. Fateh worked mainly in Ranthambhore, like Arjan Singh worked mainly in Dudhwa, but their message was to protect all wildlife and all habitats.

I found the book compelling to read, maybe because I know many of the people mentioned in the book. I am sure our members will also have the same impression after reading this book, and I encourage them to purchase it. I am certain that they will not be disappointed. 🐾

We are grateful to

SETH PURSHOTAMDAS THAKURDAS & DIVALIBA CHARITABLE TRUST

for a generous donation to the
Pratap Saraiya Hornbill Fund
to support the publication of *Hornbill*

Reviewed by: **Atul Sathe**

India is truly a biodiverse paradise and each region of the country is endowed with characteristic flora and fauna. The country boasts of over 1,300 bird species itself! The Gangetic plains of northern India have typical habitats such as Terai grasslands, riverine tracts, wetlands, and Sal forests in some areas. Despite the heavy pressure of the increasing human population and extensive agriculture, combined with increasing urbanisation and industrial pollution, many islands of rich bird diversity still survive on these once pristine and fertile floodplains.

This compact photo guide gives detailed descriptions along with photographs of 86 species of birds found in Meerut and surrounding areas, including the sprawling Hastinapur Wildlife Sanctuary. The book also has an attractive front cover photograph of a Black-rumped Flameback. For each species described, the common English, Hindi, and scientific names have been given, which would be useful to amateurs and experts alike. Description of each species includes important aspects such as coloration, behaviour, identification tips, habitat, and feeding habits. Some magnificent birds found in the region that have been covered in the book include the Painted Stork, Egyptian Vulture, Peregrine Falcon, Sarus Crane, European Roller, Rosy Starling, and Indian Grey Hornbill.

The book has grouped bird species into categories such as waders and raptors. Birdwatching tips, an index of species, and a checklist of 288 resident or migratory bird species found in the region and their conservation status have also been included. The book also talks about some species whose numbers have dwindled in recent years and of some that are no longer found in the region.

This book has received the support of the Indian Armed Forces and should also interest nature lovers, birdwatchers, ecotourists, students, researchers, forest department staff, and others who wish to learn about the birdlife of Meerut in particular, and western Uttar Pradesh in general. However, better proof-reading could have helped avoid spelling mistakes noticed in a couple of places. A map of the region, along with major bird habitats would have made it more informative and interesting, and description of calls wherever possible, would have further added to the utility of the book. 📖



Birds of Meerut
by Rajat Bhargava
Published in: 2012
Published by: 509,
ASC Battalion, Meerut
Size: 20.7 x 10.4 cm
Price: Not mentioned
Pages: 96



Did You Know?

The Stream Glory *Neurobasis chinensis* (seen on the cover) is found in tropical Asia. Males are known to flash their iridescent green hind wing to attract females and also mark their territories along streams. Capturing unpredictable subjects in the wild in the right position, light and frame is no easy task and requires a great deal of skill, patience, and persistence.

We are grateful to

RISHAD NAOROJI

for a generous donation to the
Kekoo Naoroji Memorial Fund
to support the publication of *Hornbill*



DIPANJAN GHOSH



AYAN MONDAL

Above: Damage done by Orange Shoot Borers *Indarbela tetraonis* on bark
 Below: Certain mites, mealybugs, and barklice are known to feed on bark

Bark – a source of sustenance

Bark is a sort of protective covering that acts like an overlay on the stems and roots of trees and other woody plants. Technically, all the tissues outside the vascular cambium are considered as the bark. Therefore, the living phloem or food-conducting tissue of a tree trunk is also regarded as the bark, apart from the non-living cork layer. Depending on the species of trees, the bark has different characteristics and functions. It provides trees with essential structural support, conducts nutrients from the leaves down to the roots, acts as an excretory medium, and offers protection from various animate and inanimate agents.

Surprisingly, the bark of some trees is edible and even though it is not very nutritious, it is used as a food source by a large array of animals. Contrary to what is often believed, animals gnawing at barks are not displaying unusual behaviour. In fact, it is a normal means by which some animals acquire food and nutrients, especially during periods of food scarcity.

Several pests feed on barks, often causing harm to trees. Certain mites, snails, beetles, grasshoppers, and millipedes, too, are bark-eaters.

A major part of an elephant's diet is composed of various types of tree-bark and wood, namely Acacia, Baobab, Elephant Apple, Silk Flower, and Rain Tree, among others. While eating, elephants cause massive damage to the forest trees and by looking at the type of damage, experts can even estimate how many elephants are present in the forest.

Polar Bears *Ursus maritimus* have also been found to eat the bark of Fir, Redwood, Lodge Pole Pine, Douglas Fir, and other such species, especially when alternate food sources are depleted.

Humans use bark for medicinal purposes and as flavouring. There are certain small creatures like insects that depend on it as a main food source. Larger animals, while feeding on the bark, inflict harm on trees. This is damaging for the tree, but from an ecological perspective it reveals how the bark can support a wide range of different species in a biosphere. ■

Dipanjan Ghosh and Ayan Mondal
 West Bengal

The 21st International Conference on Bear Research and Management

The 21st International Conference on Bear Research and Management was held at the India Habitat Centre, Delhi, from November 26–30, 2012. The Conference was hosted by the Ministry of Environment and Forests (MoEF), Government of India, with partner organisations like the Wildlife Trust of India, Central Zoo Authority, Wildlife Institute of India, International Bear Association, and other conservation allies. National and international bear experts from 37 countries were present to discuss their research work on themes ranging from bear-human interactions to bear rescue and habilitation.

The Additional Director General of Forests (Wildlife), India, urged over 300 participants to explore the successes and challenges of bear conservation efforts throughout the world, and to formulate recommendations to improve organisational leadership within conservation management systems.

The five-day conference had technical sessions, speed talks, poster presentations, and oral presentations. Dr. A.J.T. Johnsingh gave a talk titled 'Bear Conservation in India'. Mike Baker, Chief Executive, The World Society for the Protection of Animals, gave a talk on the rehabilitation of *Kalandars* in India. He laid stress on creating alternative livelihood programmes to empower *Kalandars* – a community whose main occupation has been bear entertainment, as it is just as important to provide stable income sources for them and their families as it is to save these bears from torture.

Some interesting posters were displayed by the participants at the conference on the second day. Posters related to human-bear conflict, conflict management, temporal and spatial patterns of human-brown bear conflicts in the Tibetan Plateau, food and feeding behaviour of bears in captivity, and attempts to rehabilitate and release orphaned bears in Greece, among others.



Smt. Jayanthi Natarajan, Union Minister of State (Independent Charge) at the conference

BIBA JASMINE KAUR

The International Bear Conference successfully concluded with the belief that crucial steps need to be taken to develop appropriate strategies for conserving bears across their entire range. According to the final panel discussion, the current gap in knowledge about the population status of bears around the world is limiting the proper execution of conservation measures, including the creation of sound management plans and appropriate policy interventions. ■

Biba Jasmine Kaur,
Uttarakhand

◀ ABOUT THE POSTER ▶



SIDDHESH BRAMHANKAR

Indian Eagle Owl *Bubo bengalensis*

This relatively large species of owl has prominent brown ear-tufts. It is mostly nocturnal, and usually flies close to the ground. It is found in rocky hills with bushes, semi-desert habitats, scrublands, woodlands, and forests. Its diet consists of rodents like mice and rats, and also crabs, amphibians, reptiles, and birds. Its breeding season starts in October and ends in May, with increasing activity between February and April.

The Indian Eagle Owl is unfortunately associated with many superstitions because of its striking, forward-facing large amber eyes, horns, and deep resonant calls. Sálím Alí has noted two of the most widespread of these superstitions. One is that starving the bird for a few days and beating it will cause it to speak like a human and predict the future of its tormentors or bring them wealth. The other one deals with killing the bird to find a "lucky" bone that can move against the current of a stream. Although illegal under Indian law, the vice of superstition continues to fuel the persecution of this magnificent bird.

Indian Eagle Owl *Bubo bengalensis*



The Eagle's Eye

Text and Photographs: Gobind Sagar Bhardwaj

The diffused, glowing light of the evening sun transforms the woods of Ranthambhore into Elysium, imparting gorgeous hues to the landscape and its inhabitants – an absolutely delightful experience for photographers like me!



I was busy photographing a Red-throated Flycatcher *Ficedula albicilla*, when all of a sudden, it disappeared. Before I could scour the branches, a huge bird dived to perch beside the stream. As a reflex, I aimed my lens at it, a Crested Serpent-Eagle *Spilornis cheela*, my new subject. Perched comfortably, it remained on that spot for around fifteen minutes, intermittently stirring the water with its talons. I was enthralled by its unsettling behaviour.



Suddenly, I noticed ripples near the *Azolla* ferns which revealed a Checkered Keelback *Xenochrophis piscator* in the stream. The snake looked startled and alert, lashing its bifid tongue repeatedly, as though aware of the lurking danger. A strong foreboding engulfed me as I patiently waited for the drama to unfold...



All of a sudden, the eagle took flight and swooped down on the snake, and all I could see was a violent splash of water, which left me wondering if victory was of the prey or the predator.

Soon after, I could see the white belly of the snake gripped in the talons of the eagle, clearly the victor of the encounter. The snake was tossing about and I could see blood oozing out of its jaws.



The eagle then took flight and came closer to our vehicle. It crushed the victim's skull and the writhing snake made one last attempt to evade its fateful end by lashing its tail, but all in vain. The tenacious eagle instantly protected its eyeball with the nictitating membrane, a third eyelid present in some animals, which moistens the eye while maintaining visibility.



The snake now seemed to be dead. Meanwhile, as a few more jeeps turned up at the site, this magnificent bird of prey flew away to nearby *Syzygium* grove to devour its meal in peace and solitude, away from the crowd and clamour.



Gobind Sagar Bhardwaj, Chief Conservator of Forests (WL), Jodhpur, has extensive experience in the field of natural resource conservation, and especially wildlife management. He is also an ardent wildlife photographer and writer.



Silhouetted cormorants amassed on a riverbank tree



Above: The Ibisbill lives in the proximity of slow-flowing water in order to feed, which limits its habitat despite its large range
Below: A Streaked Spiderhunter steals nectar from flowers

Mina Ram, the Birder

Text and Photographs: **Ashish Kothari**

His finger to his lips, Mina Ram beckoned me closer. I got my camera ready, and he tiptoed to his side, looking at the pond in front of us that he was pointing to. Suddenly, there was movement... a duck glided out of its hiding spot, glanced back at us, and before I could even focus, vanished in a flurry of wings. The sight of white in the wings excited me, as I knew. I had just spotted the elusive and rare White-winged Duck *Asarcornis scutulata*, courtesy Mina Ram the birder!

I was in Nameri Tiger Reserve, Assam, where this duck is a more sought-after species by wildlifers than the tiger (what a relief!). It is highly endangered due to hunting and since its forest-

wetland mixed habitat has been destroyed in many parts of its range. Here in Nameri, only a few dozen birds hold out. And considering that a pair of bird photographers had just spent three frustrating days trying in vain to spot it, I was very lucky indeed. Quietly, Mina Ram gave me a thumbs-up, and I gratefully clasped his hand.

Truth be told, it was more his skill than my luck that was responsible. A week earlier, I had requested the Field Director, Rajendra Garawad, to help me with some birding, and he had assigned Mina Ram Gogoi, a watcher, who works with the Forest Department, to accompany me. Having occasionally come across some really gifted birders in the lowest rungs of the bureaucracy, I expected Mina Ram to be good. Even so I was swept away by his knowledge of birds. Not only could he identify almost all birds that we saw, but

he could also identify bird calls, which is an enormous boon in a rainforest where birds are “more often heard than seen”. And though his knowledge of English was minimal, he could name most of the birds with the latest nomenclature.

During the two days of walking (ah yes, another unique aspect of this tiger reserve is that one is allowed to walk!), we saw more than 70 species of birds. Not at all bad for an evergreen forest where the thick foliage often blocks the view! But this would not have been possible were it not for Mina Ram’s keen eyes and ears. Within the first few minutes of our walk into the forest, he rattled off the names of birds he said I was sure to see, and from amongst these I picked the ones I was interested in as I had not seen these species before. So, over the next couple of days, he would occasionally stop dead, motion me to listen, then beckon me to a forest



The view from a watchtower at Nameri Tiger Reserve, Assam



Mina Ram on a wildlife-watching boat ride

patch we had just left behind, or to a patch ahead of us, to show me one of these birds. We spotted the Sultan Tit, Streaked Spiderhunter, Pin-striped Tit-Babbler, among others. Occasionally when I saw something he had missed, I was mighty pleased with myself!

Over the days, I also got to know the man better. Originally from the Kaziranga area of Assam, Mina Ram had been in

the department's service for about 13 years. Unfortunately, like so many talented individuals in his position, he had not got a permanent position, and so was on a pittance of a salary. He had no idea why, but two tests had not got him admission into the rolls. It is a sad commentary on our bureaucracy that people like him are not able to gain a decent living while dedicating their lives to conservation.

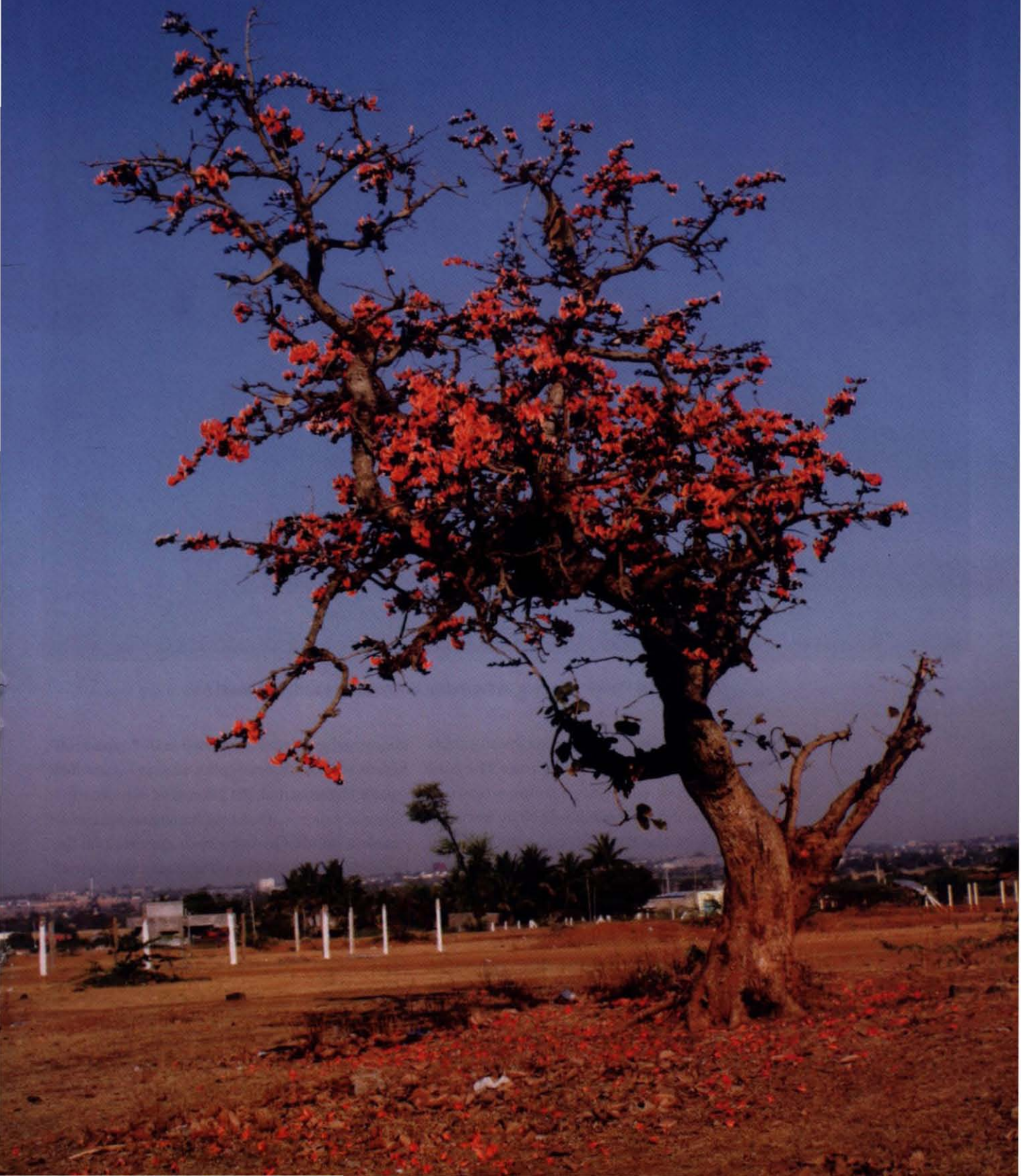
Mina Ram has been issued a substandard pair of binoculars and a bird field guide. That he could spot most birds with this equipment was itself a source of wonder; clearly he had the knack that many seasoned birders possess for identifying hazily, visible species. There was, however, clear recognition of his talent in the department, and as I bid him goodbye on the last day, I resolved to put in a word with his superiors about both his job and the need for giving him a new pair of binoculars. While writing this article, I'm happy to state that the Field Director has responded positively to my request, though of course the matter of his getting a permanent job will have to take its due course. I hope for the sake of Mina Ram and his family, and the birds of Nameri, he does become a permanent employee, and receive the accolades that he rightly deserves. ■



Ashish Kothari is the founder-member of Kalpavriksh, author of BIRDS IN OUR LIVES AND CHURNING THE EARTH: THE MAKING OF GLOBAL INDIA.

Flame of the Forest

Text and Photographs: Vijay Tuljapurkar





The Palash is native to the Indian Subcontinent and Southeast Asia

Standing all alone, just outside the city limits is a Palash tree *Butea monosperma*. The road which goes out of town is always crowded with vehicles and the tree is about 50 metres away on the side of this road. Several years ago, this was barren land, where patches of grass appeared during the rains and in the hot summer months, rocks and pebbles of various sizes were conspicuous among the dried grass. The tree stood like a sentinel and stoically watched the changes around it. Its appearance also changed with the seasons. The trifoliolate leaves, though nondescript, covered its branches during the monsoon. Winter saw the shedding of its foliage and the tree appeared as a bony old creature,

ebony and gnarled. It remained in this apparently lifeless state for a few weeks, and as *Vasant Ritu* (spring) approached, the process of rejuvenation began. As days started lengthening and the cold receded, hundreds of tiny buds appeared on the boughs of the tree. Soon the buds transformed into beautiful scarlet blooms. The flowers were laden with nectar and attracted a host of birds and insects. The Palash, or Flame of the Forest as it is aptly called, could now be witnessed in all its glory.

The Palash is known to Indians since time immemorial. It has been described in the *Ramayana* and *Mahabharata*. The great Sanskrit scholar Panini mentions it in his treatise



Palashi, the town where the famous Battle of Plassey was fought, gets its name from this tree

Ashtadhyayi. Not only has the beauty of this tree in bloom been praised, but even the shed flowers have inspired poets. In *Gatha Saptashati*, Hala Satvahana sees Palash flowers scattered under the tree and imagines them to be saffron-robed Buddhist monks, kneeling and offering prayers before Lord Buddha.

The Palash tree which I observed was the only one of its kind in the area. A few Tamarind trees flanked the road, and there were fruiting trees around homes, but none had the splendour of the Palash. As food supply became available when the tree began to bloom, birds arrived singly, in pairs or in flocks, and this made birdwatching at this tree a delightful experience.

I visited the tree on a pleasantly cold late February morning. The golden-yellow light of the early morning sun enhanced the vibrancy of hundreds of scarlet flowers, which adorned the branches. The first thing I noticed was the incessant chirps of birds. On approaching closer, I realised that there were more than a dozen Rosy Starlings *Sturnus roseus* fluttering from one branch to another and chirping. The birds appeared restless and displayed aggressive behaviour not only against their own kind, but towards other birds also. They chased smaller birds, and even harassed a Common Myna *Acridotheres tristis*. Perched on a branch, they sipped nectar from the Palash flowers, looked up for a while, chirped,



A bright green Rose-ringed Parakeet picks on the scarlet flowers of the Palash tree

rubbed their bills on the branches, and flew over to the next bunch of blooms. Now and then, the whole flock would suddenly take off, fly to another distant tree and return after a few minutes to continue feeding.

Common Mynas also enjoyed the feast in groups of not more than three. They usually stayed on the upper branches and were not as vociferous as the Rosy Starlings.

Purple Sunbirds *Cinnyris asiaticus* and their cousins, Purple-rumped Sunbirds *Leptocoma zeylonica*, were regular visitors. The shimmering blue of the Purple Sunbird was a perfect contrast to the background of scarlet blooms. I watched in awe as a tiny bird flitted from flower to flower, hovered in midair for a few seconds with rapid

wing beats, alighted deftly on a bunch and perched upside down to suck nectar. Rosy Starlings often chased them away, but the tiny resolute birds always returned within minutes.

A pair of Little Green Bee-eaters *Merops orientalis* arrived one day. They were not interested in the nectar, but kept a lookout for insects that hovered around the flowers. If prey was sighted, the bee-eater took wing, twisted and turned in flight, and glided back to the perch when the chase was over. The insect was rubbed on a branch and then eaten. Interestingly, the Rosy Starlings made no effort to drive away the bee-eaters.

Parakeets invariably visit Palash flowers, and this tree was no exception. A lone Rose-ringed



Rosy Starling

The Palash has been used extensively in Ayurveda, Homeopathy, and Unani

Parakeet *Psittacula krameri* paid short visits occasionally to feed. It was a beautiful sight to see the grass-green bird picking scarlet flowers with its red bill.

A flock of five Common Babblers *Turdoides caudata* alighted on the tree one day and their chatter added to that of the starlings. They did not stay long and flew away, perhaps in search of another food source.

The Palash is not only a feeding station for birds but has many other uses. Ethno-botanical studies have revealed that *adivasis* (tribal folk) have known various applications of this tree, which plays an important role in their lives and culture. A dye is extracted from the flowers, the bark is a source of gum, and leaves are stitched

together to make 'disposable' and biodegradable plates to serve food in rural areas. The powdered bark is used to stupefy fish.

As the flowering season ends, the scarlet carpet under the tree thickens. Tender leaves appear on the boughs and the tree starts to lose its grandeur. I will have to wait for another year to see the Palash tree in flower again, but the wait will indeed be worthwhile. ■



Vijay Tuljapurkar has been a Consultant in Medicine in Miraj for the last 30 years. He has a keen interest in nature photography and enjoys writing on topics related to natural history.

Spiders for Shutterbugs

THE ART OF CAPTURING SMALLER LIFE FORMS

Text and Photographs: **Ishaan Raghunandan**

I have been back in the loud, dusty, traffic congested Bengaluru, my home, for some months now. For a travel photographer, this can mean a lull in inspiration. I have hardly stepped out of home during this time. Let me explain the reason why, instead of complaining about the city that I once loved with all my heart.



Crab Spider



Lynx Spiders are ambush predators.
Marigold flowers at the author's home provides this spider with perfect camouflage

After a few days of being home, I idly pointed my camera in the direction of my backyard garden and then I saw this creature: a Striped Lynx Spider. And this is where it all started. A whole new dimension of the world opened up for me right in my backyard. I am still amazed by how easy it is to be unaware of these little beings in our surroundings. If you were to ask me how I happened to spot the fellow, I wouldn't be able to tell you. I had tried my hand at macrophotography, but hadn't spotted any life other than the flowers I had photographed at home a few months ago.

But things have changed since then; these 'creepy crawlies' are now always on my radar. My fear of spiders has dropped drastically, though those big hairy ones can still send shivers down my spine.

Watching a spider set up its web was absolutely fascinating! The meticulousness of the procedure is absolutely beautiful. The initial stages of web construction are extremely interesting to witness. Many webs span the gaps between objects which the spider cannot cross by crawling. So, it first produces a fine sticky thread to drift on with the help of a faint breeze. When the thread sticks to another surface, the spider feels a change in the vibration of the strand by which it is hanging. Once the first strand is reeled in, the spider carefully walks along it and

strengthens it with a second thread. This process is repeated until the thread is strong enough to support the rest of the web. Once the rest of the web is spun, the spider sits at the centre of the web and waits for potential, unsuspecting prey. A clump of grass now becomes a booby trap!

Looking through the viewfinder, I imagine myself as a flying insect weaving and darting through blades of grass. The night air is still and cool – ideal conditions for flying, when suddenly it feels like I have hit a net of steel! If you have watched the spider set up its net, at this point, you cannot help but take sides with the spider. In a flash, the spider takes off from its resting place in the centre of the orb and attacks the insect stuck to the web. Sometimes it is eaten immediately and sometimes it is wrapped and stored for later.

Spider web architecture is a topic of study on its own and many spiders are classified by the type of webs they weave. Some of the common types are: spiral orb webs, tangle webs or cobwebs, funnel webs, tubular webs, and sheet webs. To build webs, several different types of silk are used. Weight for weight, the tensile strength of spider silk is greater than that of steel and has much greater elasticity. Its potential applications in industry include bullet-proof vests and artificial tendons. One can actually watch videos online of scientists collecting silk on a tiny spool. It is hypothesised

that webs co-evolved with the evolution of winged insects. Some web constructions even protect the spider from birds and wasps.

Not all spiders make webs to catch prey and some do not build webs at all. Spiders use various strategies to capture prey: trapping it in webs, lassoing it with sticky ropes, mimicking the prey to avoid detection, or chasing it. In fact, most of the spiders I happened to photograph did not build webs to capture prey.

I wish to share my experiences with capturing smaller life forms like spiders with you:

Tips for photographing spiders

Nowadays every compact (point and shoot) and prosumer (fixed lens) camera comes with the built-in feature for macro or close-up photography. However, it is always better to be equipped with a SLR or DSLR which gives you far better control over macro shots.

To try your hand at macrophotography, a high magnification ratio is required. There are three ways to do this:

1. Having a dedicated macro lens: This must seem like a dream. I have not used a lens of this type, but I assume there is no loss in light. Also having the auto focus function does sometimes tempt me. But you do not need the best or most expensive gear. In fact, the most basic DSLR will do the job too.

Using the next two methods, you can get even higher ratios of magnification.

2. Inverting the lens: Holding any lens inverted in front of the camera can get you a very high magnification. The greater the millimetre of the lens, the higher the magnification. In fact, you can use lenses in combination as well, to enable various effects. This method requires buying a lens reversal ring that has the same diameter as the lens you are using, or one can even use the lens handheld. The problem with this method is that the camera can only focus on objects that are very close to the lens (within macro range only). This is a hindrance while zooming in on the subject as you cannot view the subject as you gradually get closer to it. Also, there is a considerable loss of light because of the high apertures you will have to use to get sharp images.

3. Using extension tubes: Extension tubes fascinate me. The first time I saw them they were around a person's fingers like rings. No glass lens elements. Essentially they are nothing but hollow tubes of different length. A black cardboard tube does the same job that extension tubes do – to increase the distance between the lens and the sensor; the greater the length of the tube, the higher the magnification. But this has to be of a reasonable length because increasing the length of the tube also results in greater loss of light and loss in depth of field. These days extension tubes with auto focus and aperture control are available, making this a more

Jumping Spiders can be easily distinguished by their eye pattern. They are known to possess really good vision, which is utilised during courtship, hunting and navigation





Jumping spiders generally hunt during the day. Most species in this group can jump several times the length of their bodies!

favourable method than inverting lenses. Unfortunately, just like with inverting a lens, extension tubes do not focus on far away objects.

Overcoming the problem of depth of field and low light

I started to photograph spiders and insects during the monsoon. For such small creatures that need to be magnified greatly for photography, getting enough depth of field needs small apertures, which would be a problem during cloudy weather. One has to compensate for this either with higher ISO (ASA) or shutter speeds. In low light this is a compromise in terms of grain in the image and/or stability.

To overcome this problem, I decided to use a flash. It was during this period that I realised just how important the quality of light is. Most insects and spiders have surfaces that are highly reflective, so the use of hard light resulted in hot spots and high contrast. Therefore, I eventually made a makeshift macro soft-box of thermocol and butter paper. The main criteria I kept in mind were:

1. The attachment should not hinder accessibility of any camera function. One must also be able to change flash power.
2. The light must be as diffused as possible – this removes highlights from burning out too fast.
3. The light source should be large relative to the subject, so as to reduce contrast.

The *jugaad* or hack or improvisation that I created was effective. Its diffused lighting removed highlights from burning into the image and also reduced contrast by enlarging the light source relative to the spider subject. Following this, I began to balance the light of the flash with ambient light. This is harder than it sounds as almost every frame provides a multitude of leaf and plant surfaces, that either bounces the flash back onto the subject or absorbs light, playing havoc with your exposure.

I have stopped using the attachment ever since the monsoon retreated and the sun started shining brightly. Not only do I think that good natural light is more beautiful than using a flash, manoeuvring between plant stalks is easier without the attachment. I admit that the attachment I made was quite large and can be modified to be smaller and allow for more movement.

Some insects do not seem to be affected when you fire a flash at them, but spiders are quite the opposite. You can see them jump in terror after the ‘pop’ of the flash. A few of the most territorial spiders in the garden got startled and moved off after I started using a flash. I felt like I had crossed a line, disturbed them and this was not acceptable.

I have spotted only a handful of spiders and insects so far. And now, everywhere I go, I look out for them and am



Lynx Spiders play an important role in agricultural pest management

Spider Silk Facts

- Spider silk is a type of protein fibre. Not all spiders weave webs.
- Some species weave a web and coat it with sex pheromones to attract mates. Sometimes the silk is also used as a food source.
- Spiders use silk to make:
 - **Swathing silk:** For wrapping and immobilising prey.
 - **Webs:** For catching prey using silk that is sticky and elastic.
 - **Draglines:** These are safety lines that prevent the spider from falling off the web. This kind of silk is the strongest as it helps support the weight of the spider.
 - **Parachuting or ballooning:** This process aids in moving to new areas for food sources and in the dispersal of young.
 - **Shelters:** Such as burrows and nests.
 - **Mating:** Male spiders weave webs on which they deposit sperm and later transfer it to their pedipalps (sensory organ), from which it is transferred to the female's epigynum (external genital organ).
 - **Egg-sacs:** To protect the eggs from harm.

amazed by their presence. Their world almost seems like another universe. Looking at insects makes one feel god-like. It's that view from above, you get to see life unravel in front of you every day. With insects and spiders, the speed of events is also so great that as an observer you feel relatively immortal. When a spider I am observing on a plant disappears I actually start worrying, and when it resurfaces on another plant elsewhere, it reassures me that it is well. A wide variety of creatures eat spiders, including the orchestra of toads that have taken up residence in the pond in my backyard. Once the spiders vanish, the resident plant will be 'vacant' for a while. There are replacements soon – baby spiders. They eventually grow in size, moulting, continuously taking up occupancy, and the cycle starts again.

I will soon start travelling again, trying to find stories that are close to my heart. Yet, now I realise that one does not really have to travel far to see the world, as one can see much of the planet from one's own backyard! I have learnt so much and I am glad I ventured into the enchanting world of spiders. ■



After completing his B.E. Tech in Information Science, Ishaan pursued his passion for photography and completed a P.G. Diploma course in Professional Photography from Light and Life Academy, Ooty. He considers photography as a medium that would allow him to stay close to animals and nature.

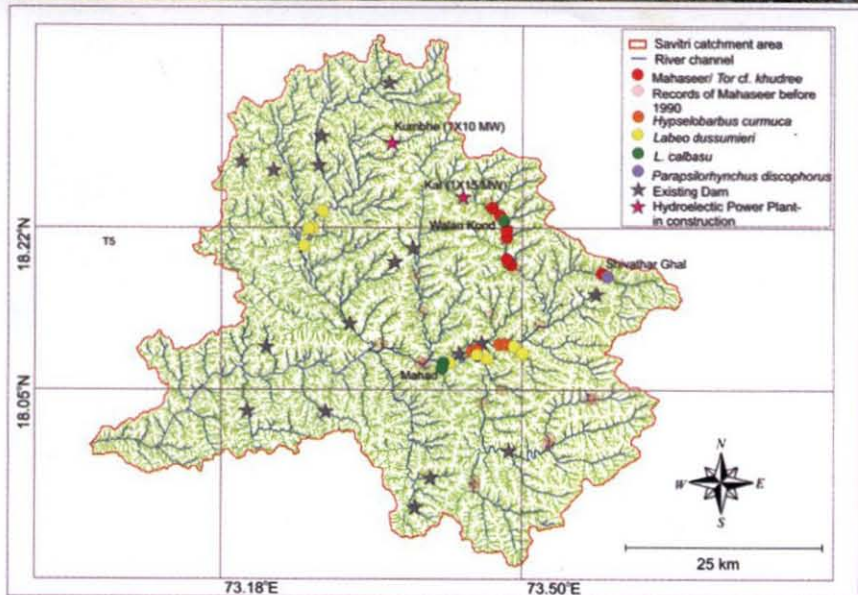


Where have all the mahseers gone?

Text: Unmesh Katwate and Deepak Apte

Photographs: Unmesh Katwate

The river Savitri is one of the five sacred rivers, or Panch Gangas, of India. This perennial river originates from the Mahabaleshwar hills in the Western Ghats (or Sahyadris) in Maharashtra, has a catchment area of 2,262 sq. km, and nourishes almost half of Raigad district. It flows rapidly westwards through the district and eventually meets the Arabian Sea at Harihareshwar. On her journey to the Arabian Sea, the river receives inflows from two major tributaries, the Kal and Gandhari.



Above: Google Earth image of Kal – A hydroelectric power project taken on December 12, 2011

Below: A map depicting the distribution of mahseer and other rare cyprinids across the Savitri river basin

Since 2009, BNHS has been documenting the freshwater fish diversity in the lesser explored areas of Raigad district and other parts of the Konkan while simultaneously working on different projects. As a part of this exercise, we started intensive surveys of the Savitri river basin with a CEPF-ATREE funded project to assess the fish fauna of Raigad district in 2013. The project aims to develop a database on the diversity and distribution of freshwater fish in the Konkan region, while building local capacity through the involvement of experts from various academic institutes, NGOs, civil society, and local fishing communities.

While going through the literature on the fish fauna of the Sahyadris, we found a report of the Deccan Mahseer *Tor khudree* from the Patalganga river by Dr. M. Arunachalam and his team in 2002. This was the only known record of the species from a west-flowing river of Maharashtra. We had been searching for this ‘king’ of Indian freshwater fish in Raigad for some time and finally found them in the Savitri river.

The mahseer (*mab*=big; *seer*=head), is prized by the angling community. Its massive strength and inherent fighting ability makes it the crown catch for anglers. There is no estimate of the number of *Tor* species found in India, mainly because

of several taxonomic ambiguities. Though mahseers contribute in a major way to inland fishery, they are also one of the most threatened and heavily exploited groups of mega fishes. Unsustainable fishery, dynamite fishing, and habitat degradation through pollution and dams are some of the major threats faced by mahseers in Indian waters.

Construction of large hydel power dams, along with small irrigation dams, has badly affected the mahseer population across the country. Building a wall across a river not only fragments the fish population but also poses a major barrier in the pathways of species that migrate or undertake long distance movements, especially for breeding. Mahseers usually prefer cool, deep, and oxygen-rich waters in the main river channel but in the breeding season, they migrate upstream to the shallows. In the northern Western Ghats, the breeding season of mahseers coincides with the onset of monsoon. Tackling the current of murky water churned up by the monsoon and other natural hurdles, they migrate to the shallow upstream river beds, and spawn in small boulder and cobble-strewn river beds. These dams become major hurdles for migratory fish species attempting to breed, and cause fragmentation of viable populations, which eventually lead to population declines and extinction.

Despite being one of the 20 mega fishes of the world and the most threatened fish group in Indian rivers, mahseers have not received legal protection in India. Most mahseer species like *T. khudree*, *T. kulkarnii*, and *T. malabaricus* are listed as Endangered globally in the IUCN Red List of Threatened Species, but none of these are included in the Indian Wildlife (Protection) Act, 1972. Some populations of mahseers in the Western Ghats are left unmolested through ‘community fish sanctuaries’ as they occur in the vicinity of Hindu temples, where fishing or killing of wildlife is taboo. At such sites,

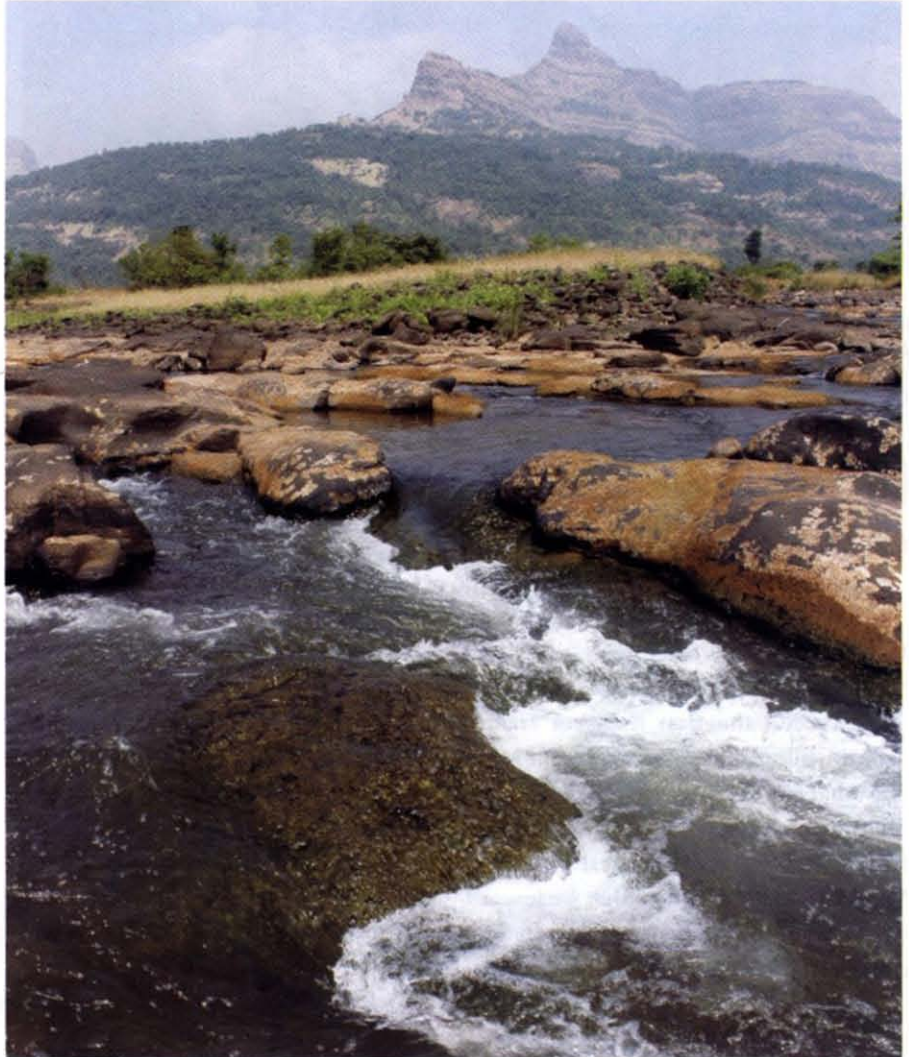
one gets to see grand old specimens of these fishes. However, very few such refuges still exist in the Western Ghats; Karnataka has the largest number of these in the Western Ghats. They also existed at Alandi and Pandharpur along the Bhima river in Maharashtra, but rapid urban development and pollution have almost wiped out mahseers from these so-called ‘sanctuaries’ [information retrieved from Parineeta Dandekar’s article on the South Asia Network on Dams, Rivers and People (SANDRP) site: www.sandrp.wordpress.com].

The Endangered Deccan Mahseer *Tor kbudree* was described from the Mula-Mutha river near Pune. Indiscriminate expansion of the city and increasing pollution has completely wiped out this species from its type locality (the type locality is the site where the species was first collected and described for science). The last wild specimen of *T. kbudree* in Pune was caught in 1999. Fortunately, researchers have found other healthy populations of *T. kbudree* in adjoining areas like Neera and Koyna rivers (Dr. Neelesh Dahanukar *pers. comm.*).

While surveying and documenting the fish fauna at Mahad, as part of a community involvement programme, we interacted with the local fishermen of the Katkari and Bhoi community. In our earlier surveys, we did not get any information about mahseers from the locals, which was not unexpected as this fish is not known as ‘mahseer’ in this area. However, when we showed them photographs of mahseer, surprisingly, they were familiar with it. They told us that this is one of the rare species in the Savitri river, locally known as *kbadas*. This was the first possible report of its occurrence in Raigad after 2002. Our field assistants urged us to survey and

Above: Fast-flowing perennial riffles of the Kal river supply rich, dissolved oxygen to a pool of water at *Walan kond*

Below: A shoal of mahseer at *Walan kond*





Freshwater resources are a prime source of livelihood for the *Katkari* community

fish in the upper catchment areas of Savitri, like *Walan* and *Shivathar ghal*, and we recorded the first mahseer from Savitri while fishing at *Mangharun* and *Shivathar ghal*. According to the locals of *Shivathar*, mahseers are rare and sacred fishes associated with a local goddess *Vardayani Mata*. It is here that we learnt of a large protected population of mahseers at *Walan kond*.

Walan kond, one of the biggest pools in the Savitri watershed, is a notable example of a ‘community fish sanctuary’ in the northern Sahyadri. It is situated on the main stream channel of the *Kal* river, a major tributary of Savitri. The term *kond* usually refers to a big pool in a river. *Walan kond* is popularly associated with the deity *Vardayani Mata*. Locals regard mahseers as the children of this goddess. The local *Katkari* fishing community believe that the presence of *khadas* (mahseers) not only indicates the good health of the river, but also that the sacred river has the potential to nurture humankind. We spotted around 50–60 large mahseers at *Walan kond*. Villagers have declared a complete fishing ban across the 1.5 km stretch of the river. Based on the survey till now, the population of mahseers in the Savitri basin appears to be restricted to just two small upstream tributaries at the *Walan*, *Shivathar ghal* and *Mangharun* sites.

We obtained past records of mahseers in the Savitri river through interviews with the elders of tribal communities. From these, it is clear that mahseers were well-distributed throughout the river basin before the spurt in industrial growth at *Mahad* and *Birwadi* during the early 1990s. The river is also severely impacted with a large number of existing irrigation and proposed 10–15 MW hydroelectric power dams. The complete absence of mahseers in the tributaries of the Savitri which have dams at numerous sites clearly indicates that the dams have adversely affected the distribution of this species in the river and its tributaries. Along with the mahseer, other rare fish species such as the *Curmuca Barb Hypselobarbus curmuca*, *Malabar Labeo Labeo dussumieri*, *Orangefin Labeo L. calbasu*, and *Ratnagiri Minnow Parapsilorhynchus discophorus* also seem to be affected, with discontinuous distribution across the river system.

The mahseer habitats in the upper catchment areas of the Savitri are still free

from industrial and urban pollution. However, two hydroelectric power projects, namely *Kal* (1x15 MW) and *Kumbhe* (1x10 MW) proposed by the Water Resource Department of Maharashtra are almost complete. *Kal* is just 7–8 km upstream from the *Walan kond* community fish sanctuary, and may pose a direct threat to it. Once operational, the excess water released from the *Kal* project may impact the water quality at *Walan kond* and other adjoining areas. The drastic rise and fall in water levels could alter the chemical and biological properties of the water, adversely impacting the fish population, including the mahseers of *Walan kond*. Though it is mandatory that the company owning/operating the dam must undertake an Environmental Impact Assessment (EIA) before the start of project, we have not come across any such EIA studies for the *Kal* and *Kumbhe* projects. Such cases of negligence do take place in the Western Ghats and other areas of India, as we have heard every so often!

To conclude, though it appears that community sanctuaries can provide protection to the mahseers (as long as religious sentiments persist amongst local communities), this alone cannot shield the species from the threats from dams, industrialisation and its accompanying ills, which are on the increase in the Western Ghats. There is a pressing need for involvement of government officials, researchers, and conservationists to formulate effective policies to conserve the freshwater systems of the Western Ghats (and other regions of India). Only then can we ensure that the mighty mahseer and other aquatic fauna thrive in these biodiversity hotspots that our country is blessed with. ■



Unmesh Katwate is currently working as Scientist-A at BNHS. His work deals with the conservation, taxonomy, and ecology of freshwater fishes and amphibians of the Western Ghats.



Deepak Apte, Chief Operating Officer at the BNHS, is a marine ecologist and Open Water PADI diver.

IBA Advocacy

The Important Bird Areas (IBA) department was abuzz with advocacy and outreach activities in the last quarter of 2013. The chain of events began with a survey of IBAs of Manipur conducted by IBCN members from Manipur along with BNHS ornithologists during December 9–18, 2013. The survey was carried out in the Yangoupokpi Lokchao Wildlife Sanctuary, Shirui Community Reserve, and around Loktak lake.

On December 22, 2013, a capacity-building and network-development workshop was organised at Hazaribag for IBCN members in Jharkhand. Neha Sinha and Dr. Raju Kasambe from BNHS, Dr. S. Subramanya (IBCN State Coordinator, Karnataka) and many forest officers guided the participants. This was followed by a survey of IBAs conducted in Jharkhand during December 23–28, 2013, as part of the activities under the Indian Bird Conservation Network



BNHS's new publication – IMPORTANT BIRD AREAS OF MAHARASHTRA, was released at the Pakshimitra Sannmelan in Nagpur

(IBCN), a BNHS initiative. The survey covered the Palamau Tiger Reserve, Topchanchi Wildlife Sanctuary, Tilaiya dam, and Hazaribag Wildlife Sanctuary, in association with the State Forest Department and the Neo-Human Foundation.

BNHS supported the 27th Maharashtra Pakshimitra Sannmelan in Nagpur, which was held on January

4–5, 2014, by the Society for Wildlife Conservation, Education and Research (WILD-CER). A new BNHS publication – IMPORTANT BIRD AREAS OF MAHARASHTRA – was released during the Sannmelan by Shri Maruti Chitampalli, veteran ornithologist and writer, and Shri Sarjan Bhagat, Principal Chief Conservator of Forests, Maharashtra. ■

Coastal and Marine Protected Areas Workshop

A two-day workshop on Conservation and Sustainable Management of existing and potential Coastal and Marine Protected Areas (CSM-CMPA) was organised by Deutsche Gesellschaft für Internationale Zusammenarbeit, also known as the German Society for International Cooperation (GIZ), an enterprise of the German Federal Government, in Chennai during December 10–11, 2013. Hosted by the National Centre for Sustainable Coastal Management, Chennai, the workshop was part of the larger Indo-German Biodiversity Programme. The BNHS delegation, comprising Dr. Deepak Apte, Atul Sathe, and Nishigandha Pednekar, participated in the workshop, in which the structure and implementation of baseline surveys for the CSM-CMPA Project were discussed. Presentations made during the workshop dealt with the background of the sites included in the CSM-CMPA Project, conservation issues, socio-economic indicators, baseline planning for the project and finalisation of the survey instruments for field testing. This was followed by a training session for invited enumerators in charge of socio-economic surveys. The last component of the workshop included a field visit to one of the shortlisted



A field visit to the CSM-CMPA site

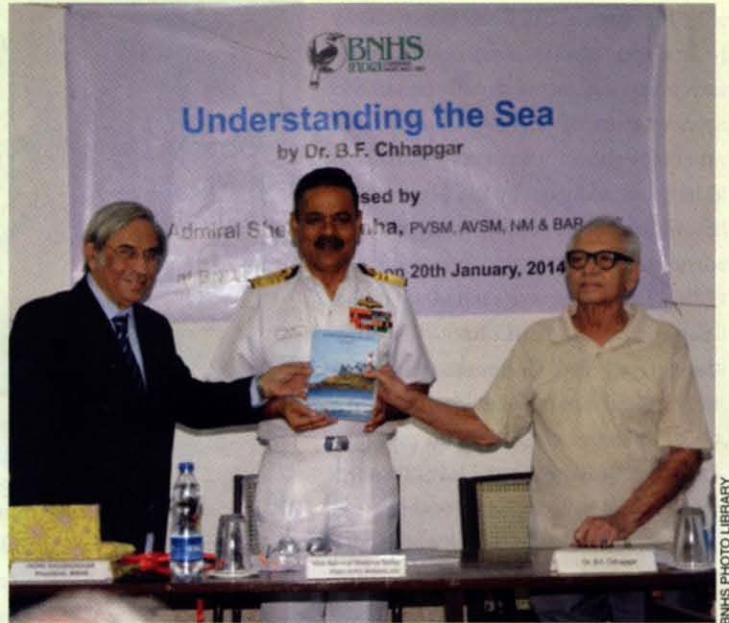
sites. The expected outcomes of the CSM-CMPA project are enhancing coastal conservation, capacity building for local livelihoods, scientific cooperation, and participative management of biodiversity heritage sites and community reserves. ■

Book Release – Understanding the Sea

On January 20, 2014, BNHS launched UNDERSTANDING THE SEA written by veteran marine biologist Dr. B.F. Chhapgar, which was released by Vice Admiral Shekhar Sinha, PVSM, AVSM, NM&BAR, ADC, at Hornbill House. Dr. Chhapgar enthralled the audience with his lifelong maritime experiences and anecdotes. Vice Admiral Sinha shared his knowledge of the high seas. The event received good coverage in the media.

The book covers a range of subjects related to the marine world, such as winds, waves, tsunamis, tides and currents to biological phenomena like biorhythm and bioluminescence, and seamanship and maritime lore. This joint publication of the BNHS and Oxford University Press will be of interest to marine biologists, budding oceanographers, sailors, navy personnel, fishermen, and other readers interested in the subject.

The book, priced at Rs. 500/-, is available at the BNHS store. ■



Homi Khusrookhan, President, BNHS, Vice Admiral Shekhar Sinha and B.F. Chhapgar at the book release of UNDERSTANDING THE SEA

Vulture Safe Zones in Madhya Pradesh

In continuation of its decade-old Vulture Conservation programme, BNHS, in association with Rio Tinto and BirdLife International, plans to establish Vulture Safe Zones (VSZ) in the Bundelkhand region of Madhya Pradesh. The Memorandum of Understanding (MoU) for this joint project was signed on January 23, 2014, in the presence of BNHS and Rio Tinto officials at Hornbill House. The Bunder Diamond Project of Rio Tinto in the Bundelkhand region of Madhya Pradesh is partnering with BNHS for the conservation of vultures in the state. This is a five-year partnership that will work in an area of 30,000 sq. km, including parts of Chattarpur, Tikamgarh, Ashoknagar, Vidisha, Sagar, Damoh, Panna, and Satna districts, identified as a potential VSZ, where targeted awareness activities and cattle carcass sampling will



An MoU for establishing Vulture Safe Zones at Bundelkhand in Madhya Pradesh was signed at Hornbill House

be conducted. This will help ensure that no diclofenac or other veterinary drugs toxic to vultures are present in carcasses. A VSZ can be an ideal place to reintroduce captive-bred vultures back into the wild. In future, areas nearby can be converted

into similar VSZs so that a combined larger area is eventually available for vultures to survive and multiply. A dedicated team will work for the creation of VSZs in close association with local NGOs and the government. ■

Published on March 20, 2014, by Ms. Sumaira Abdulali for Bombay Natural History Society, Hornbill House, Dr. Sálím Ali Chowk, Shaheed Bhagat Singh Road, Mumbai 400 001, Maharashtra, India.

BNHS Beyond Borders

Explore Africa

ZAMBIA

August, 2014



Witness untamed Nepal

NEPAL
November, 2014



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bnhs.programmes@gmail.com or call us on 022-22821811

DID YOU KNOW



LONG-STANDING ACIDITY CAN BE A SYMPTOM OF CANCER?



STONES CAUSE SEVERE PAIN BUT CAN BE REMOVED BY ENDOSCOPY?



CANCER OF THE GI TRACT CAN NOW BE DETECTED AT A VERY EARLY STAGE AND CURED?

CONSTIPATION & GAS CAN BE RELIEVED BY ALTERING YOUR DIET AND LIFESTYLE?



Established with a mission to traverse new frontiers in digestive sciences, BIDS chalked up numerous firsts.

1st dedicated Acidity, Constipation, Stone and Cancer clinics.

1st to perform the special procedure of POEM for Achalasia Cardia in South East Asia.

1st Institute recognized by the Maharashtra University of Health Sciences to start a fellowship course in Advanced Endoscopy.

1st Institute to start the Indian College of Endoscopy to train young gastroenterologists from India and abroad.

The Baldota Institute of Digestive Sciences, India's premier institute for Gastroenterology & GI Endoscopy located in Global Hospitals completed **1 year** on 24th October. During the year, BIDS treated 11,241 patients, provided subsidised treatment to 4,850 patients and its state-of-the-art technology enabled early detection of cancer in 933 patients.

cognito



BIDS | Baldota Institute of Digestive Sciences

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