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July-September, 2003



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#### Layout

V. Gopi Naidu

#### **Editorial Assistant**

Vibhuti Dedhia

#### Cover:

Forest Ghost Flower Anish Andheria

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Tel.: (91-22) 2282 1811 Fax: (91-22) 2283 7615

E-mail: bnhs@bom4.vsnl.net.in Website: www.bnhs.org

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## The Little Big Things in Nature

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Small is beautiful, we have heard a number of times, but do the small things of life really matter. They do! Read on to find how the little big things in nature can make a day out in the wilderness more beautiful.

The Tiger **Ephemeral** in Kipling's **Bombay** 

Text:

**Avanti Maluste** 



Once a denizen of Bombay, the tiger has long been driven out from the boundaries of the city. Could a recent sighting, a few kilometres from the city, be the signs of return of the big cat?

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Situated on the flood plains of the Brahmaputra, Kaziranga National Park has suffered considerable loss of land due to riverbank erosion along its northern boundary. Of its original 42,996 ha at the time it was notified as a National Park, 5000 ha along the bank of the Brahmaputra river have been lost to erosion. To compensate for these losses, the Government of Assam gave Preliminary Notification for six proposed Additions to the Park in 1984 and 1985.

These Additions include increased habitat for Kaziranga's mega herbivores, encompassing the last remaining tract of habitation, the western boundary and newly formed riverine islands of the Brahmaputra on Kaziranga's northern boundary. On the southern boundary, where human habitation and agricultural activities have proliferated in recent years, the Additions include the few remaining corridors to the Karbi Anglong Hills. However, these Additions face an uncertain future due to continuous litigation by encroachers.

Of the six additions, the First, Fourth and Sixth Additions have been notified by publication in the Assam Gazette. The remaining three have received only preliminary notifications. It is imperative for the future of Kaziranga that all these Additions are secured, legalized and handed over to the Park Management as soon as possible.

Kaziranga National Park and its Additions deserve the highest level of legal protection, because its spectacular and unique biodiversity gives it considerable scientific and heritage value.



TEXT AND PHOTOGRAPHS: ANISH ANDHERIA

Dr. Anish Andheria is a keen naturalist, wildlife photographer and a surface chemist by training. He is currently working with Sanctuary Magazine and is a BNHS member.

nce, while lying on my belly to photograph a butterfly, I accidentally came face to face with a leopard at the Sanjay Gandhi National Park (SGNP); on another occasion, I nearly stepped on an Indian cobra while contriving a strategy to elude a herd of elephants merrily feeding in a hadlu (swamp) at the Nagarhole National Park; on yet another instance, a tigress ambled towards me at the Ranthambhore Tiger Reserve and spent over five minutes rolling and scent marking while I stood motionless barely 15 metres away. Undoubtedly, these magical moments of oneness with the wild world will remain etched on my heart forever. However, such episodes are extremely rare and may never occur again in a lifetime! So, what is it that compels me to return to these wildernesses with such appalling regularity? It is definitely not the greed to bathe under the glory of yet another scintillating incident. While, the natural history of mega-fauna enlivens me, it is the not-so-noticeable drama involving the smaller creatures that truly urges me to keep pursuing my passion. Through the next few paragraphs, I relive these riches with other wildlife aficionados with a strong belief that it will bring to surface their own past experiences of the little big things in nature!

# Simplicity in life

Trees are the life support systems of this planet. The simple looking leaves perform a very complex function of providing life to innumerable creatures in as many ways. The sight of leaves swaying in soft breeze casts an inexplicably soothing effect on one's psyche. The vibrant red leaves of kusum *Schleichera oleosa*, against the deep blue background of the winter sky, is undoubtedly one of the most comforting sights of the Indian forests. In an urge to discover the unknown, we tend to miss out on simple, but equally stimulating moments in the wild. For me, gazing at a couple of fresh leaves under the scorching heat of the Indian summer is as refreshing as counting the number of stripes on a wild tiger!

# Red stands for danger

I recently visited the Keoladeo Ghana National Park (KGNP), Bharatpur, to celebrate a good monsoon after nearly three years. Although the focus of my visit was avifauna, I ended up capturing an impressive assortment of insects, which seemed as elated about the rains as I was. KGNP was nowhere near its past glory as far as birds are concerned. However, its insectlife kept me busier than I had initially imagined. On top of the list was one of the most common and striking beetles of India, the black and red coloured blister beetle Mylabris pustulata. During monsoon, this beetle is seen! around flowers, as petals and



pollen are its chief food sources. Its fearless foraging habit coupled with brilliant colouration makes it a photographer's delight. Nevertheless, on contact, an oily amber-coloured liquid is exuded from its leg joints causing painful blisters on its adversary. Well aware of the golden rule 'red means danger' I allowed my camera to do the talking while remaining safely sheltered behind it.

## Silence of the Cicada

Cicadas, known more for their awesome cacophony, swarm the jungles in thousands. The noise making apparatus is gifted only to the males, primarily to attract females so as to accomplish the sole task of propagating their own race. There are about 1500 species of cicadas on our planet. Their life cycle is unique, with the immature stage extending as much as seventeen years in some species! The female lays her eggs in small slits in the branches. The nymphs that emerge after about six weeks drop down into the soil and bury themselves. They then stay underground for years, surviving on the root sap and finally emerge to shed their last nymphal skin before taking to wing. It is believed that pictures can say it better than words, however, there is no parallel for keen field observations. Diaphanous wings, huge yellow eyes, hooked forelimbs can be easily captured on film. However, this is only a small portion of the actual picture. Other, equally authentic characters like the loud hissing sound and the liquid squirted from its abdomen cannot be translated on paper. This is what makes nature so intriguing and this is why, no matter how advanced the recording device may get, people will flock for a firsthand peep into the evanescent flavours of nature. Flavours that cannot be shared, only experienced.





## Monsoon miracle

I have developed a fascination for shooting pictures of predetermined forest locations in different seasons. Such shots, depicting a season-induced transformation, have an ability to mesmerize people. The dry streambed, although teeming with animal life, seems lifeless to an untrained eye. However, with the onset of monsoon, every single dry twig erupts with life, every single dry leaf melts into the soil and every depression and cavity fills up with a crystal clear aqueous soup of nutrients essential for the floral colonisation of open spaces created by the demise of vegetation due to various biotic and abiotic forces of nature! Indeed, there is life after death!



# Appetite extraordinaire

Amid light drizzle, a friend and I set off to photograph the bizarre lobster moth caterpillars. In spite of an intensive search, we failed to spot our subject of interest. Dejected by our futile efforts, we decided to call it a day. Suddenly, we observed a flutter on the tarmac. A Common Nawab butterfly Polyura athamas had descended over its favourite food source - animal scat, in this case, macaque scat. So bonnet engrossed was the butterfly that it refused to budge even when I was barely 10 inches away. Fully stretched on the tarmac, I got my camera talking, notwithstanding the excruciating stench that emanated from the scat! Though widely distributed, the Common Nawab is a difficult photographic proposition

because of its strong flight and elevated basking locations. Instead of the traditional diet of nectar, this butterfly, despite its name, relishes coprophiliac delights like animal scat, urine and dead crab. Although such incidents happen more regularly than we think, watching an invertebrate utilize the solubilising power of water as or perhaps more proficiently than even humans, was an experience no short of ethereal.



While photographing it, I could envisage the spell of terror that it must be planning for its unsuspecting prey. We often look at frogs merely as snake food, but actually, they deserve much more respect. After all, their unique adaptations give them a clear edge over invertebrates, making life a living hell for most. For these innocuous looking creatures, any animal that can be overpowered is a fair meal!

## Balancing act

Amphibians are intimately linked to marshy, well-watered areas and therefore act as indicators of the health of these fragile ecosystems. The brightly coloured fungoid frog Rana malabarica, is well equipped to maintain its balance on leaves of terrestrial and aquatic vegetation. However, it is unlikely to hold its ground against the imbalance caused due to human intervention in the form of urbanisation, industrialisation and pesticide use. This photograph was taken at SGNP, on a pleasant winter morning. The frog was perched on a leaf well hidden in a shrub by the side of a dirt track.





## Cradle of life

There is more to the world than meets the eye. For some, the forest is a lonely place, whereas for others it is the busiest part of this planet. Every single millimetre of the forest has a story to tell. Various tools, within the machinery called evolution, work round the clock to conceal the obvious. However, concealment is not the only key to continued existence. Impersonation plays an equally important role in day-to-day survival. Life is not about staying away from predators, it is about being right there and yet being invisible to them! The filament-like structures seen jutting from the twig in the picture above are not vestigial outgrowths. They are, in the true sense of the word, cradles of life. These bizarre structures belong to a group of insects called lacewings (Order Neuroptera, which means nerve-winged insects). Lacewings resemble their close relatives ant-lions both in appearance and dietary preference. Their larvae are important pest controllers as they subsist on plant-pests



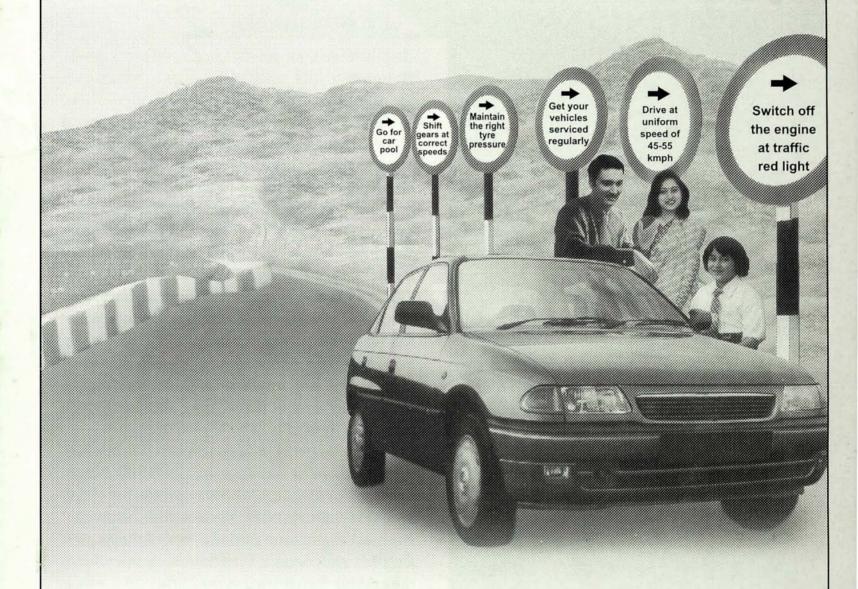
like aphids. However, it is the structure of their eggs that makes them unique in the insect world. They are stalked and laid singly or in rows on leaves or branches. The fine bristle-like stalk, which is attached to the substrate, is about five to six times as long as the pale knob-like egg attached to its tip. The evolution of this bizarre egg-stalk, among other things, seems to be governed by the fact that the larvae are so gluttonous that they devour any insect food available, including other lacewing eggs. Were the eggs not on stalks the chances are the first larva to hatch would eat the rest, driving the species towards certain extinction.

# The bigger picture

Some plants are wind pollinated. Pollen grains from one individual land on the receptive flowers of other individuals just by chance. Where many species live together and where great distances separate individuals, wind pollination is relatively inefficient. Under such circumstances, plants exceedingly depend on biological vehicles for dispersion of pollen. Such a phenomenon, where animals transport pollen between flowers for rewards such as nectar, is called dispersive mutualism. No organism epitomizes this better than bees. They visit flowers to feed on highly nutritious pollen and nectar, to gather substances such as oil and fragrances and to carry pollen for their brood. In doing so, they also transport pollen from flower to flower. The adjoining picture of a solitary ground-nesting bee hovering around a Mimosa pudica flower depicts one ephemeral moment in the perpetual evolutionary process that aims to optimize the give and take relationship between the two. It is the cumulative effect of trillions of relationships between millions of organisms that has given rise to the intricate web of life. Being the most intelligent of animals, the onus of maintaining the vim and vigour of this web lies on us. For, whether we like it or not, the quality of our lives is merely a reflection of the quality of life of the bee and the flower!

Punctuated amidst the rare bigger moments are an astounding array of smaller titillations provided by the least noticed facets of the forest. These very titillations have the power of transforming even a mundane moment into the most extraordinary one, thus playing a pivotal role in rejuvenating both body and soul.

The sights change. The cars vary. The destinations differ. But the route for Petrol Saving remains the same.





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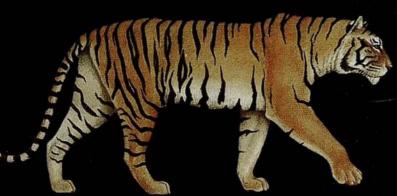
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# The Tiger ephemeral in Kipling's BOMBAY

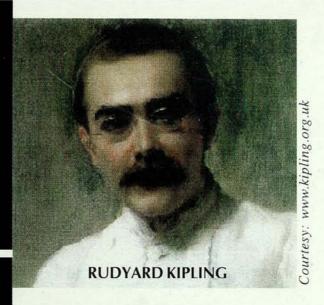
#### BY AVANTI MALUSTE

Avanti Maluste is a student member of the BNHS. She is a nature lover and keen science student at the Cathedral & John Connon School, Mumbai.

The tigers have travelled a long distance. Their original homes were probably far north, towards the Arctic, before they reached the Indian subcontinent. This top predator did face some trouble in settling here, but the timely protection may now help the tiger to survive in this Subcontinent.



© BNHS, PAUL BARRUEL



WAS BORN IN BOMBAY, since renamed Mumbai, an urban jungle of over 10 million humans, countless skyscrapers, endless horn-blaring traffic jams, and every vice and virtue known to man. A large proportion of people in this city live cheek by jowl in apartment blocks and shanty towns. Not surprisingly, from infancy I have escaped to what remains of India's real jungles — in Borivli, Shivpuri, Bharatpur, Bandipur, and so on. As a child, I was riveted by Disney's cinematic interpretation of the Jungle Book featuring Mowgli, a lost boy and animals that brought him up. Predictably, he also found a muse in that famous Bengal tiger Sher Khan, who terrorised them all.

Much later, I discovered that Disney was inspired by the writings of the 1907 Nobel Laureate for literature who was born in my city in 1865. A hundred and twenty one years before me! Rudyard Kipling is regarded as one of the greatest English short-story writers. As a poet he is remarkable for rhymed verse in the slang of the ordinary British soldier. His writings consistently project three ideas: patriotism, the duty of the English to lead strenuous lives, and England's destiny to great empire.

Kipling, in adulthood, invoked Bombay in verse:

Surely in toil or fray
Under an alien sky
Comfort it to say
Of no mean City am I

Rudyard Kipling's birthplace is marked by a small sign in the sylvan campus of the Sir Jamshetjee Jeejeebhoy School of Art, where

his father was Principal. He lived in Bombay till 1871, when he went to school in England. Eleven years later, he returned as a journalist with Lahore's Civil and Military Gazette. Reading Jungle Book and Kim, I wondered as an adolescent where Kipling first encountered wildlife, especially tigers. Not for him the predicament of poet-artist-mystic William Blake who wrote of the animal's "fearful symmetry" in his paean, Songs of Experience, The Tyger, without ever having seen the cat in the wild!

The anomaly of seeing animals and hearing their sounds outside my window in Mumbai has always intrigued me. Owls, parakeets and the occasional peacock on Malabar Hill celebrate one of the last vestiges of forest in the city I call home. Nights, while I study, windows ajar, bats fly across the house with insouciance. Monsoons find my home cricket and moth infested. And the raptors that hover here are mainly kites and vultures. But most evocative of all is this tale I grew up on: before Kipling was born, a large male tiger ambled down Malabar Hill towards Gowalia Tank to slake its thirst. His pugmarks were clearly visible the next morning, fact or fiction? Later, I came to know that this had been reported in a 19th Century newspaper, the Bombay Courier. Is it conceivable, then, that Kipling first set eyes on these grand cats right here in Bombay, where he spent his early years?

Seven islands. Primeval mangrove forests, palm groves and tamarind trees. A crystalline blue ocean stretching towards the shores of Arabia. This is how an earlier Mumbai would have revealed itself to Arab, Portuguese and British merchants and colonisers. A thick jungle was found on the slopes of Malabar Hill and "Cocoa palms, jacks and mangoes" proliferated in Mahim. Remnants of these forests lie in and around Mahim Creek, Borivli National Park and the catchment areas of three lakes: Tulsi, Vihar and Powai.

Unfortunately, due to urbanisation, the mangrove forests have receded to the outskirts of the city, where they are constantly threatened by pollution and deforestation. The Borivli National Park still remains, a moist deciduous and partly tidal forest in North Bombay. It has the distinction of being the only wildlife park in the world within a city precinct. The natural ecosystem it engenders is important: helped by sea breezes, Mumbai's forests temper its summers. Besides, the city is

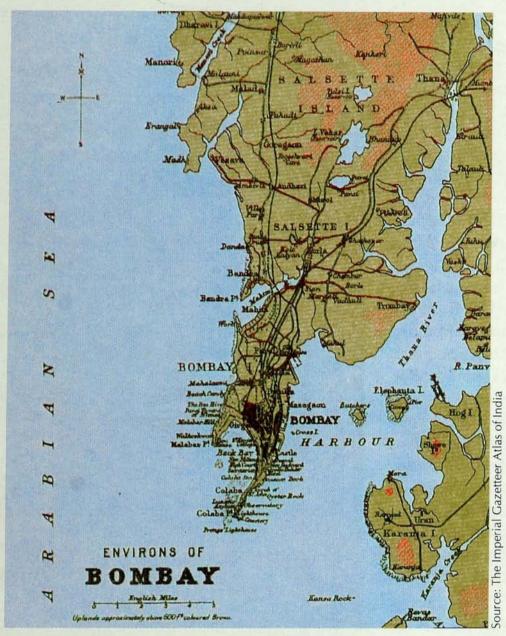
# Are the tigers returning?

Just when we thought that Mumbai's tigers were gone for good, along come reports stating otherwise. This time, the evidence was concrete. In the latter half of May, pugmarks and droppings were found in the extremities of Sanjay Gandhi National Park, reinforced by sightings in Tungareshwar, a dense forested jungle area.

Forest guards found the marks and made plaster casts. The chief wildlife warden, examining the evidence, confirmed that it was indeed a tiger. Forest officials say that this tiger probably came from the Sahyadris/Nashik region and wandered in through Tungareshwar to Nagla. In the Maharashtra belt, tigers roam around Tadoba and Melghat, around 650 km from Mumbai. The presence of the tiger in an area so close to Mumbai is far from reassuring: it is a measure of how disturbed the surrounding forest ecosystems are, forcing the tiger to stray into unknown territory. At this point, it makes sense to begin protecting Tungareshwar and the surrounding areas.



Tiger pugmark at Sasupada: The big cat's presence was confirmed by the marks that it had left behind



Seven islands, green forests and a crystalline blue ocean: that's what this Island city looked like before it became what we see of it today

excluded from the list of the 10 most polluted cities in the world, as the Park helps clean the air.

Sometimes strange birds, such as the grey hypocolius — a Persian bird shot in Kihim in 1940 or thereabouts, have made their appearance in Mumbai's environs. The avian population of Mumbai fluctuates with migrant birds. As I write this, BNHS's alert to the city that thousands of flamingoes will be alighting in Sewri's mudflats has become a reality - Mumbaikars flocked in droves to celebrate this sight. More often, residents of the Western Ghats make their appearance: trogons, minivets, blackbirds and the Malabar whistling-thrush.

According to the definitive BOOK OF INDIAN ANIMALS by S.H. Prater, the Indian tiger was found

everywhere, from the Himalaya to Cape Comorin (with the exception of the deserts of Rajasthan, Punjab, Cutch and Sind). Prater did not include Bombay in the "Exception List"! Sources say that although this giant cat was not a native of the seven islands, it may have swum across the Mahim Creek from the mainland, after trekking from the Shivaliks to Maharashtra. It would have used, as explorers did, Mumbai's creeks and ports as entry points.

According to Prater, "in the past, a part of Salsette, which is now included in Bombay, was the haunt of wild animals like hyena, tiger, lion, leopard, panther, bison, jackal, and deer. Besides this, there were monkeys, the jungle cat, squirrels, the Indian palm civet and the mongoose. Winters draw migratory birds from Afghanistan, Russia, Iran and Mediterranean countries." The book goes on to say, "the panther is found mainly in the hills with the low dense shrubs. It sometimes comes down to prey upon stray cattle, dogs, etc. near the Park." In the late

1700s, it was quite common for the Governor and his entourage to retire to Salsette for a "Pleasure Party to hunt wild boar and Royal tiger, both of which were found there in great plenty". Salsette was one of Bombay's seven islands, comprising Bandra and Thane.

By 1838, Bombay had been considerably cleared of its foliage, and had been converted into a typical colonial town, one that offered, according to the Gazetteer of Bombay City and Island (1909), "no attraction to any animal except such as frequent human habitations." Hence, large predators of the Cat Family were almost never seen. The jungle cat (*Felis chaus*) was probably the only large feline native to the Bombay Islands.

Between 1800 and 1863, there were sightings of 5-6 tigers, all of which had apparently swum across the harbour. In 1806, two tigers were seen in Kurla, near General Macpherson's Bungalow. In 1829, a tiger that had apparently swum across the harbour and landed at Mazgaon Fort was "driven into" the compound of a bungalow owned by one Mr. Henshaw where it was shot by the Dockyard Guard. And on March 2, 1858 the crew of a steamer "Aden" killed a large tiger as it attempted to board a small boat while swimming across the harbour to Mazgaon! On January 26, 1863 another tiger was killed in Mahim after it had mauled a Parsi cart-owner and committed other damage.

Tiger shootings caused a reduction in population from 40,000 (at the turn of the 20th Century) to a mere 1827 (All India figures of 1972). The last tiger was reportedly shot in the wild boar infested Salsette jungles (beyond what is now Bandra in Mumbai) in 1929. The hunting party stood by the Vihar lake, in quiet anticipation, when, "a tiger walked out of the shadows into the moonlight." According to the BNHS Journal of 1929, "The tiger in question, a straggler from the mainland, probably crossed over by swimming the Thana Creek. An animal doing so would find immediate shelter in the jungles, which cover the hilly portions of Salsette." Today, the country's vestigial tiger population remains protected in national parks, where it continues to fight against ecological imbalance, loss of habitat and the occasional poacher.

It is recorded that tigers "were in all parts of India except the desert regions of the northwest and the higher Himalayas." Babar, founder of the Moghul Empire, was known to have hunted them on the banks of the Kabul river near Peshawar. Beyond India, the tigers were once known to extend all the way from Ellanx to the Indonesian archipelago, especially in forests along the southern shores of the Caspian Sea. Blyth, a naturalist, wrote in 1855 that the "middle region" and even the snowline of Ararat were infested with them.

So how and when did tigers enter India in the first place? Tigers supposedly entered India through China and the Eastern Himalaya from North Asia after the last ice age. Their original home was probably far north, towards the Arctic, where tiger fossils dating back to the Pleistocene era have been found. They may have first entered Bengal from China and Burma. It is inferred that this was after Sri Lanka separated geographically from India, as there is no evidence to suggest their presence in Sri Lanka. Interestingly, the Asiatic lion now confined to Gir in Saurashtra, once ranged across West Asia and even Europe. It is as if the lion and the tiger divided Afro-Eurasia between them. The tiger took the East, leaving the West to the lion!

Over time, forests were felled and habitats eroded, causing tigers to turn on humans. All across Java, Singapore, Southern China, Manchuria, India and the Caspian Sea, there were human fatalities due to tiger attacks. In India, in 1822 in the Khandesh district of the Bombay Presidency, wild animals, mainly tigers, killed 500 people and 20,000 cattle. By the 1880s, maneating tigers were considered rare in Khandesh. Obviously the tigers in rapidly urbanising areas like Bombay had been sought out and killed.

The alarming decline of the big cats led to the launch of Project Tiger in 1973. Today, at least the few tigers that remain wild are allowed to roam free. That is, protected from being killed, but not from ecological pressure. When launching Project Tiger, the then Prime Minister Smt. Indira Gandhi remarked that the survival of the top predator measured the health of an entire ecosystem beneath.

The next time you see a play of sunlight and shadow, and a lightning flash of fiery orange, hold your breath... as I did when in Ranthambore, a couple of half grown cubs gave chase to a sambar; and more playfully, a peacock. Time stood still. It could have been any century. It could have been Kipling's Bombay.

This excursion into tiger territory was made possible by the BNHS: especially Messrs. J.C. Daniel and Isaac Kehimkar who guided me to a wealth of material.

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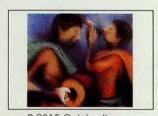
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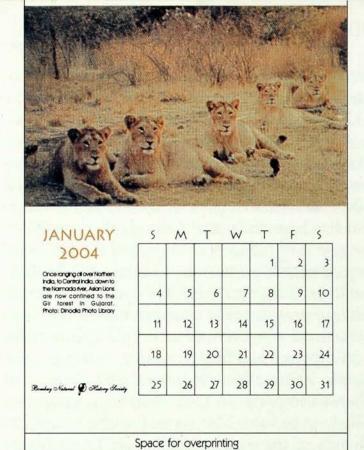
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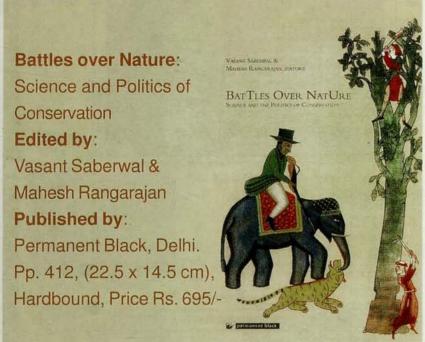
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REVIEWED BY: DIVYABHANUSINH

**Much** of the world's wildlife and biodiversity is concentrated in less developed countries, a fact which may not immediately strike a lay person, but the reasons for it are not far to seek. Man has not had time enough to run through most of it yet in such areas. The situation in India is typical of this condition and we may well be at the threshold of the penultimate chapter of devastation.

In recent years, volumes have come out of the printing presses advocating one or the other course of action, or simply bemoaning the prevalent condition. This one is different; it is a collection of essays by historians, biologists, activists and others, each one of whom are primo inter pares in their respective fields. Each essayist presents a facet of the situation, and the book, in totality, presents a holistic picture of what is and what needs to be done. It is divided into four parts: Biological Imperatives, the Nature of Ecological Science, Politics of Conservation and Community Participation within all 12 essays. It is evident that the editors have tried to take a look at the total picture of the situation as it exists today when we are at an impasse in Indian wildlife conservation effort between those advocating participation of local communities in and around protected areas for the latter's protection, and those using ecological justification for more

effective exclusion of such communities from such areas. Very briefly, we look at some of the 12 essays.

In the first section, M.D. Madhusudan and Charudutt Mishra examine why big fierce animals are threatened. In their survey, they look at the depredations of antelopes, elephants and predators such as lions and tigers. Among other conditions required to reduce such depredations they point out livestock protection, and this can't be done without reducing its size. They point out that the administrators of the country's natural resources often do not even have simple quantitative descriptions and analyses along with the most basic information on animal abundance and human impacts. In their absence, mistakes are likely to happen. This is one possible tool in the hands of managers, which must be fashioned without delay.

In the paper titled "The Anatomy of Ignorance or Ecology in a Fragmented Landscape", Renée M. Borges surveys the implications of fragmented landscapes, taking the experience of Bhimashankar Wildlife Sanctuary in Maharashtra as the area from which the data is drawn. The paper points out that species identity, specifics of species biology, fragment topology, connectivity and environmental stochasticity are crucial to the survival of specific species and the viability of ecosystems. Very importantly, the paper points out that we do not have knowledge of these factors except species richness and fragment topology. While here there is a clear case for hard science to light the way of conservation, the author makes an impassioned plea to protect and defend inviolate natural reserves.

Ramachandra Guha's paper in the second part of the book on "The Authoritarian Biologist and the Arrogance of Anti-humanism" is a critical exposition of the intellectual and cultural approach to conservation of five major groups i.e. city dwellers and foreign tourists, ruling elites, international conservation organisations, the state wildlife service and lastly, biologists. All these groups approach the problem from their standpoints to the virtual exclusion of the local communities dependent on natural resources in

their neighbourhood. He points out the instance of national park management practices in India which have a heavy imprint of the American experience, which takes as axiomatic beliefs, the need for 'big continuous wilderness' and the claim that all human intervention is bad for protection of natural resources. Such approaches obviously exacerbate conflicts and he ends the piece with a quote from a Chenchu hunter gatherer of Andhra Pradesh, who was expected to sacrifice his lifestyle for a tiger reserve, who retorted that if the tigers were so important, why not take them all to Hyderabad and convert the city into a sanctuary for them!

Mahesh Rangarajan's tour de force of the changing approaches to conservation from the 1950s is an illuminating survey of the changing paradigm of the politics of ecology. He recalls a speech of M. Krishnan given in 1979, when the savant referred to the choices before the conservation movement being between Emperor Asoka's method of setting aside and forcefully protecting Abhyaranyas and those of Vedanthangal i.e. those of protection by the local communities. Rangarajan carefully traces conservation by Government fiat in a near unitary state dispensation of the 1950s, which has disappeared progressively to be succeeded by a federal structure, where administrative machinery is no longer as effective and its attempts within the existing structure to manage forests jointly with local communities in the present circumstances. With the maturing of democratic practices the local communities i.e. the disadvantaged sections are asserting themselves as never before and Asoka's and Vedanthangal's approaches are now locked in a contest for supremacy. Actually, Guha's five pressure groups would do well to learn from Rangarajan's narration of fifty years of Indian political imperatives.

Vasant Saberwal's examination of the forest and environment ministry's position vis-a-vis other departments of the Government throws up a conclusion that under the present conditions, the Ministry is, and it will remain on the periphery of importance in Government priorities with the lack of lobbying from those that can influence the law makers for its concerns. There is a clear signal for Guha's five groups to ponder over and change course to be effective if they are to remain relevant to conservation.

In the final section of the book, K. Sivaramakrishnan examines the problems of wildlife conservation in India at the crossroads or more appropriately at the tri-junction of global imperatives on the one hand, national anxiety on the other and local assertions on the third. He demonstrates how the urban conservationist approach to conservation and his view of the wildness of the rural jungle communities are the twin incompatible assumptions on which conservation effort is based. But the very fact that the analysis of the situation among ever developing, if not shifting imperatives of regional, national, and global cultural formations itself is proof of the acceptability of reappraisal of accepted conservation approaches of today. This according to him would yield results in future; it is an indication of the breaking out of the straitjacket of conservation from above.

The book comes at a time when the country is poised at a crucial juncture for conservation. Over a century ago, lamenting the condition of his homeland, Mathew Arnold found communities living at a time when the old world was dead while the new one was powerless to be born. The same can be said of our present. In a review it is not possible to examine or comment upon all essays though they form a common approach. Suffice it to say, it is timely and cautiously instructive. It is a must for the five groups of Guha to see their own strengths and limitations (more of the latter) and how they need to trim their sails. The book is obviously aimed at the English speaking actors, i.e. Guha's five groups in the field of conservation of natural resources; the language it is written in is an indication of the same. While the rural /jungle communities await their turn to be informed, the book's utility and timeliness is in no way diminished. Bold ideas presented by experts in the field of conservation are there for anyone to read, digest and implement.

The fear as usual is: Is anyone out there listening?



#### Coral fishes **₹**="

I enjoyed reading about coral fishes in the Jul.-Sep. 2002 Hornbill. It refreshed memories my earlier trip of Lakshadweep, where I saw these and many other reef fishes. I wonder why coral fishes, especially the Moorish idol, pennant fish, or even sea horses are not torpedo-shaped like the sharks, mackerel or mullets.

> Genevieve F. Ribeiro Mumbai.

Beefsea replies: Open ocean fishes like sharks and mackerel swim fast and over long distances. Hence, their bodies are streamlined and torpedo-shaped. Fishes that live among coral reefs need to manoeuvre around objects, swim backward and hide in the narrow crevices of rock and corals. Hence, they tend to be flattened.

## Instant humour ₹=7

During my visit to the Ranthambhore Tiger Reserve, Ramswarup, an official guide in the forest, surprised me with his uncanny sense of humour. Being curious about the scientific name of one of the most predominant trees, called 'Dhok', I approached Ramswarup. In spite of his lack of any formal education he has picked up quite a bit of working English or Hinglish, if you like. His thorough knowledge of flora and fauna is undoubtedly amazing. "What is the botanical name of 'Dhok'? I asked, "It is something pendula, isn't it?"

"Yes, any guesses?" he asked. When I admitted my inability to guess he said, "You have



already disclosed the specific name." When he saw me still clueless, with a mischievous smile on his face, he said, "It is Anogeissus pendula."

"Right!" I said and at once realised that humour cannot be taught in a school.

> Sagar Karandikar Thane

### Let's save our trees *₹=*7

As we stand today, population pressures are inevitably clashing with environmental resources, especially in countries like India, in which villagers living alongside forests will increasingly pressurize forests for alternative energy sources, particularly for cooking. We are at present facing a deforestation crisis, the like of which has never been witnessed before in India. The Govt. of India, with funding from the World Bank, is clear felling all ancient indigenous fruiting and shade trees, along all Indian national and state highways, under the dubious premise of constructing four lane highways. This is a massive loss to the biodiversity of this nation and the burning of this massive timber resource will add to global warming in South Asia to a remarkable extent. It is essential for all conscientious citizens to immediately voice their dissent by writing to the President and Prime Minister of our country. It is no use writing to the Ministry of Environment and Forests, since this august body has given its clearance for the tree felling. It is now up to us to voice our dissent by writing in environment journals and newspapers. Also write to: Mr. James Wolfensohn

President, The World Bank, 1818 H Street, Washington D.C. 20433.

Bulu Imam

## Congratulations! **#=**7



via email

Hornbill at 25 years is a 'youthful' magazine. The quality of pictures in true colours is interesting. It is now worthwhile to sell Hornbill in the open market for wider readership and also reap some much needed 'bucks' for the BNHS.

> N. Shiva Kumar Noida.

Congratulations to Hira Punjabi for the beautiful picture of the tusker on the cover of Jan-Mar. 2003 Hornbill. Congratulations to you for bringing out a well edited and well printed magazine.

> Thakur Dalip Singh via email

#### Oops!

We missed telling you that the photograph on page 14 is that of a plumbeous redstart feeding a cuckoo chick.

# **Save Nature**



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Founded in 1883, the Bombay Natural History Society (BNHS) is India's largest Non-governmental Organisation (NGO), engaged in nature conservation, education and research in natural history. It has members in over 25 countries.

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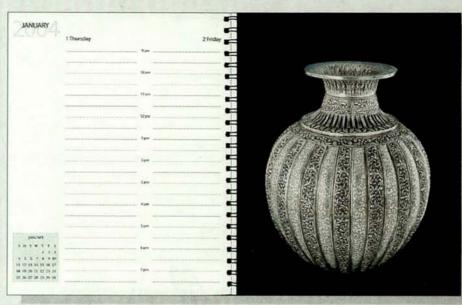
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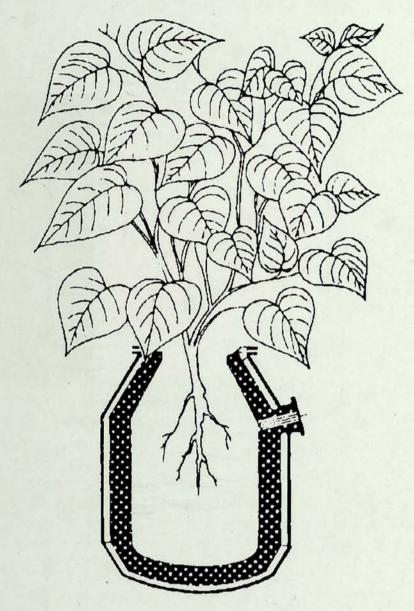
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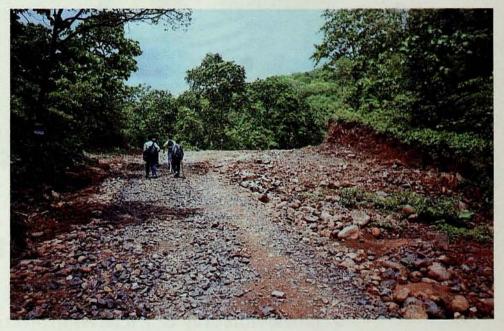
Tungareshwar is located in the Sativali Range in Vasai Taluka, Thane District and is well known for its Shiva Temple. It is one of the finest forest areas in the vicinity of Mumbai and the highest altitude is 662 m. The forest is moist evergreen with some deciduous patches and has a few perennial water sources. It hosts more than 600 species of plants and is also rich in other faunal diversity. The white-rumped shama, orange-headed ground thrush, Indian pitta and Malabar pied hornbill are among the two hundred or more bird species that can be easily seen in this forest. Insects, reptiles and amphibians are abundant during the monsoon. It is also an important breeding site for the largest breeding population of the Atlas moth Attacus atlas in and around Mumbai. Among mammals, one can see the leopard, spotted deer, barking deer and sambar. Recently, in May 2003, even a tiger was sighted in Tungareshwar.

However, over the last few years, the systematic and illegal expansion of roads and diversion of natural streams in this reserve forest, has threatened this biodiverse area. Cart track (from Sativali to Tungareshwar Mandir) as shown in the forest topo sheets has now been converted to a 20 m wide road for vehicular access to the Sadanand Baba Ashram, which is a complete violation of the Forest Conservation Act (FCA). The course of three natural streams has been diverted by blasting and elevating the road by 6 m. Another road from Parol to the Sadanand Baba Ashram is a blatant example of FCA violation. Once a forest tract, it has now been converted to a 10 m wide road. Several thousand trees have been hacked down to expand this road. The total road length that has been widened is 15 km from Sativali, and 7 km from Parol, to the Sadanand Baba Ashram. The Ashram has no legal status. It is a two-storied building with supporting infrastructure and has been built on reserve forest land.

BNHS has launched a campaign against the illegal work in the Tungareshwar

# **CONSERVATION ALERT**





Reserve Forest. After a sustained campaign and tenacious followup, some action is now visible. We have made strong representations to the MoEF, State Forest Department and Central Empowered Committee on this issue. However, we need more support from people.

We appeal to our members to write letters protesting against this illegal work to:

> Mr. Shirish Asthana, IFS Chief Conservator of Forests Office of the Chief Conservator of Forests Charai, Thane 400 601.

Please send a copy of the letter to
Mr. Deepak Apte,
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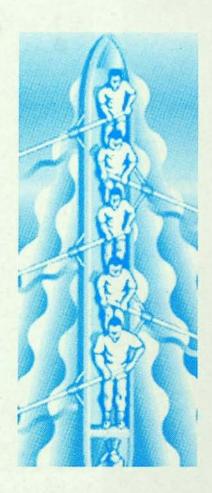
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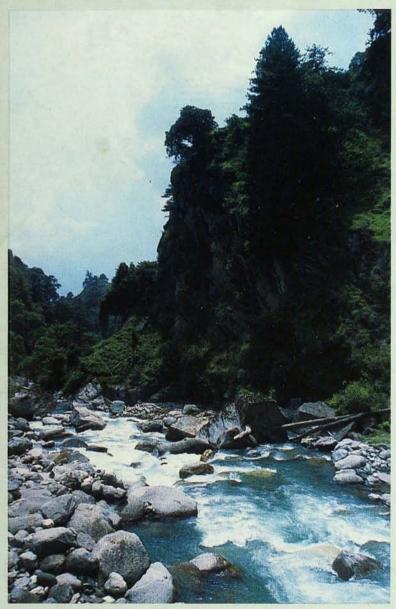
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# On Foot in the

# Himalayan Valleys

TEXT AND PHOTOGRAPHS: SUSHMA DHUMAL

Sushma Dhumal is a nature enthusiast and a BNHS member.

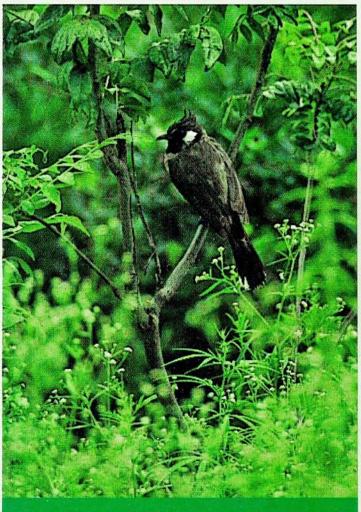


Rushing rivers and cool green environs are what the eye seeks when in the Great Himalayan National Park

s we left the broad motorways of Haryana and climbed the hills of Himachal Pradesh, I looked out expectantly from the cab window. This was my first visit to the western Himalaya, and I looked out for trees, lush undergrowth and gurgling water, but what met my eyes was nothing close to what I sought. Bare grey hill slopes covered the landscape. It appeared as if someone, in a hurry, had precariously stacked thick slabs of slate one on top of the other; one hard push would have sent them sliding down. Even a heavy downpour would be enough! The rushing Beas, however, made up for the missing greens, as it wove along the beautifully rounded stones of different hues. It was in such an hurry to reach down the valley, as if late for an appointment!

In Kullu, we stayed in the Himachal Pradesh Tourism guest house. With hills at the back, the twinkling lights of the township in front and the Beas gurgling at the foothills, *Sharvaree*, the guest house, was indeed picturesque. The next morning we left in a bus arranged by the Bombay Natural History Society. As the bus climbed higher, we passed plantations of juicy red plums, pears and apricots. The hills were now covered with all kinds of chestnut, deodar and pine, and the ground a soft springy carpet of their needles. Nestled among these towering trees was the forest guest house, our abode for the next few days.

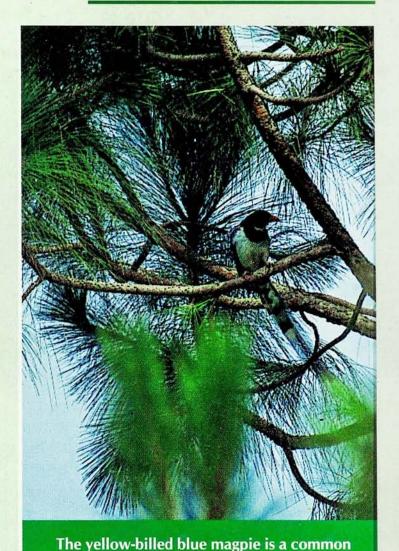
We were now on the banks of the Tirthan river, in the ecozone of the Great Himalayan National Park, and could hear the melodious song of the blue whistling-thrush. The afternoon was spent in a steep test climb to a herb nursery looked after by the "Sahara" group of women, a project of the Forest Department. A towering tree that lay across the river had brought us to this hill. As we huffed and puffed higher up the hill, we saw the great barbet, resplendent in green, blue, yellow



The white-eared bulbul is among the variety of birds that one gets to see in the Park

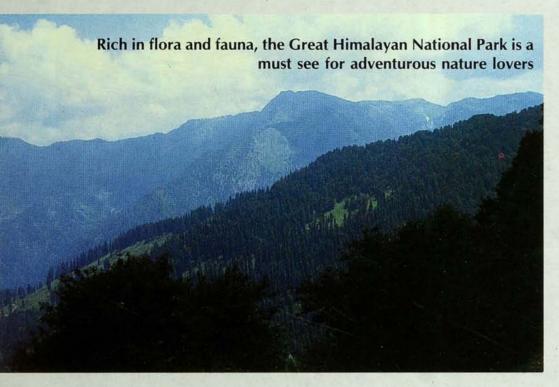
and brown, the yellow-billed blue magpie and the spotted-winged grosbeak. Hovering above was a common kestrel, who dived in vain to get food. As we rested, I saw hills in front. They were so thickly covered in towering pines that if one ventured inside one would be lost in no time. Behind me I saw snow-covered peaks, lit by the evening sun. It was all so magical I could have lived there forever!

The next day we were at Gushaini, trekking 9 km up to Rolla. It was a long trek with a night halt in log huts and tents. The path was gradually sloping, and ran along 8-10 mountainsides and several quaint wooden bridges. Sometimes it passed through a grove of trees or bamboo, which was cool and invigorating, and at other times we walked through stark sunshine. The sun was bright sometimes, yet hid behind the clouds many a times. I had yet to learn to take the climb slowly and was out of breath several times, but I thoroughly enjoyed



the trek as we saw many birds and butterflies. Birds I could identify because of my earlier experience in Sikkim, and the butterflies I was more familiar with because of Isaac Kehimkar. There were about 30 varieties in the Himalaya, of which the Peacock, the Sapphire and the Himalayan Black Veined and Painted Lady were the most interesting. The yellow-billed blue magpie and grey treepie made their presence felt by their cackling. They didn't seem disturbed by human presence. The spotted forktail, plumbeous redstart, Eurasian blackbird and brown dipper kept appearing along the riverbeds. When we began our long trek, the river was way below in the valley, but after half time we were walking along the riverbed and then we began the ascent up to Rolla. As we approached Rolla, we met a farmer and his wife, the last to be living in the Sanctuary, who refused to vacate in spite of a good offer from the Forest Department. The couple had grown potatoes

resident of the Park



in the field, which attracted a number of butterflies. Our trek had begun at 9:30 a.m. and we reached Rolla by only 2:30 p.m. The last hour being the most torturous, I literally dragged my feet. In the evening, we sat next to the river, observing the plants, and birds that flitted in and out, green-backed and black-lored yellow tits, red-headed tit, grey-headed flycatcher and a flock of slaty-headed parakeets.

The next day, June 24th, was cloudy. I stayed back from the trek to Shilt Hut as it was steep and narrow. Many others abandoned it due to rain. The walk back to Sai Ropa was more enjoyable as

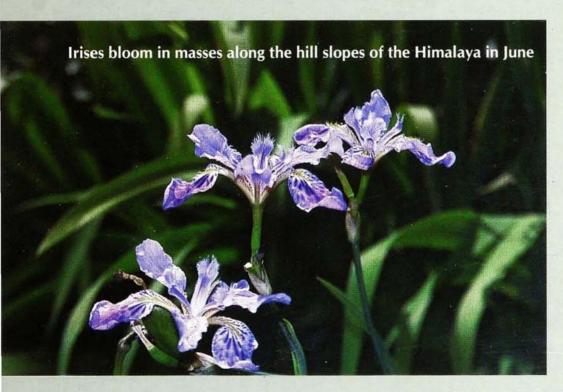
there was little climbing. We saw a hunting party of birds, yellow-naped yuhinas, black bulbuls, grey-headed flycatchers, a pair of treepie and yellow-billed blue magpies. The trees were laden with ripe berries and the birds feasted together. We partied in the evening on fresh caught trout from a nearby trout-breeding farm, but only after I had photographed the last blossoming rhododendron.

June 25<sup>th</sup> saw us tighten our belts and lace up our boots again for a climb up to Jalori Pass, a three-hour trek to a high altitude

spring-fed lake. It was a 5 km trek that passed through lush green meadows dotted with white and yellow geraniums, followed by a steep descent of 1 km. We then traversed a hill, with thick tree cover on both sides, and climbed up to a lake. The lake was disappointing as it was covered with oil. A temple nearby may be responsible. We played volleyball with a handmade ball of plastic waste with the local youths after a good lunch. Need I say who won? They had even made mats of grass coated with plastic waste, quite ingenious! On our journey to and fro we saw a number of birds, the

more interesting among them were the white-collared blackbird, the black-and-yellow grosbeak, the large scaly-bellied green woodpecker, the Himalayan golden-backed wood-pecker, rufous gorgeted flycatcher and the rufous-bellied niltava. The day ended with a talk by the Director of the Great Himalayan National Park, Mr. Sanjeeva Pandey.

The newly established Great Himalayan National Park is rich in flora and fauna with many little known vistas. For us it proved to be a challenge well worth the attempt.





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# One summer morning...

TEXT AND PHOTOGRAPHS: KEDAR BHAT

Kedar Bhat is a photojournalist with an eye for wildlife.



The Oriental white-eye, red-vented bulbul and white-throated thrush kept a watchful eye for predators as they approached the waterhole to quench their thirst

t was the 26th day of May, my third day in Tadoba-Andhari Tiger Reserve in Chandrapur district of eastern Maharashtra, summer was at its peak and the temperatures were soaring, ranging to 45 °C. From day one, I was overwhelmed by the tiger sightings at the waterholes.

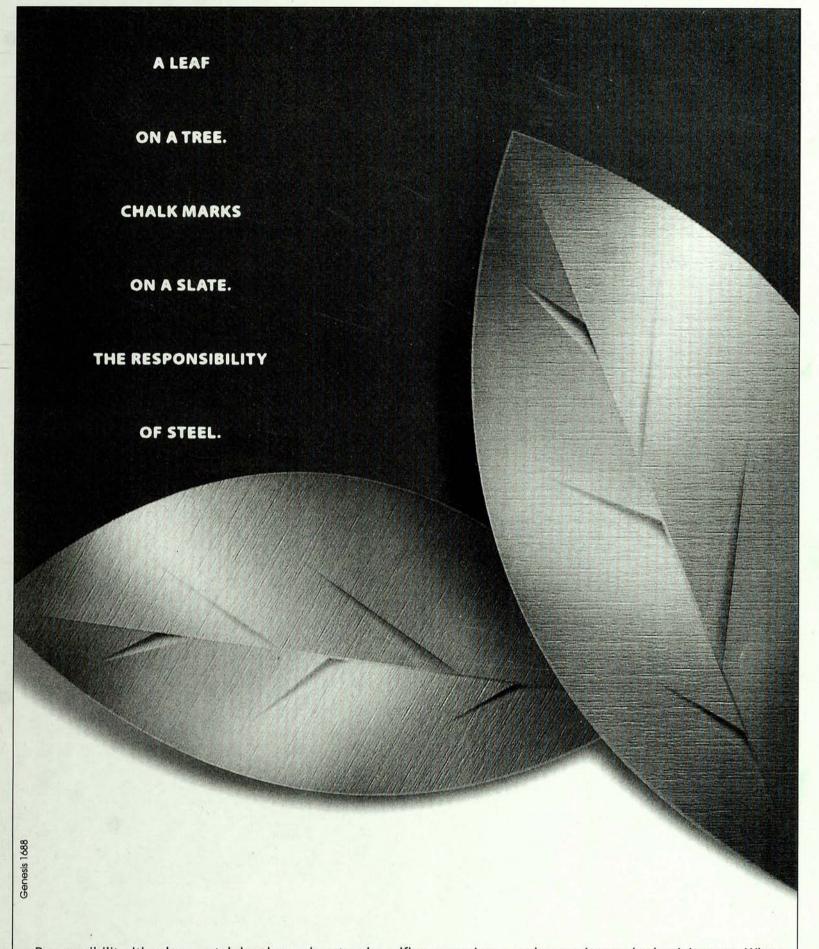
Waterholes are generally the most ideal place to catch wildlife, but to be able to sight an array of birdlife together at one place, a white-browed fantail-flycatcher and white-throated thrush in this case, is indeed an unusual event



It was 9 a.m., a tiger was sleeping below a bamboo cover near the Zari waterhole in the Reserve. But what caught my attention that day was a huge congregation of birds at the waterhole, which was about 2 m in diameter. I counted exactly 23 birds in half an hour. The birds were so close to one another that I could grab a variety in just one single frame. I was seated in a Sumo, about 5 m from the waterhole with a tiger sleeping at just some distance, but for today, I ignored the big cat as I was busy identifying and counting the colourful avian congregation before me. Then all of a sudden there was a stir at the waterhole, a shikra was on the move. Once the danger on wings had passed, the birds were back at the waterhole. This was one of the best birding experiences I have had to date.

The leafless
branches of this
bamboo could no
longer hide the
Asian paradiseflycatcher
(juvenile male)
and Indian treepie,
giving me ample
opportunities to
capture them in a
camera





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# Documenting the Important Bird Areas

TEXT AND PHOTOGRAPH: ZAFAR-UL ISLAM

The Important Bird Areas (IBA) programme aims at selecting bird sites for conservation. The sites that are important for conservation of birds have been chosen using four standardized and globally recognised criteria. The protection of these sites would ensure the conservation of globally threatened species and their habitats.

Birds are an important focus for conservation attention in their own right. They play an important role in terrestrial, marine and freshwater ecosystems. Their economic role, particularly through pollination, seed dispersal and control of insect populations is well recognised. They help to generate revenue through bird watching and tourism, which are growing activities in India. Historically, birds have a great significance in India's diverse cultures. Birds are an excellent medium for creating conservation awareness among our citizens.

Birds are widespread, morphologically different and easy to identify. More information is available on birds than any other group of higher animals. The group is taxonomically well known, as the total number of species is small compared to other taxa. Most bird species are diurnal, and comparatively large, therefore easy to survey. All these features make it convenient to use avifauna as the criteria for prioritizing conservation efforts.

We realize that birds are not the perfect surrogates for biodiversity in general. Some sites with rare plants or endemic amphibians could be left out of the IBA network and a few sites may be important only for rare birds and not for other wildlife. The IBA programme will take steps to protect and try to improve the conservation status of the selected bird species and sites.

In India, out of 1225, 78 bird species are globally threatened with extinction, of these 9 are listed as Critical, 10 as Endangered, 57 as Vulnerable, 2 as conservation dependent and one as data deficient. A further 52 are classified as



The Fambong Loh Wildlife Sanctuary is an Important Bird Area in Sikkim

Near Threatened. Many of the common bird species in India are also rapidly declining and are in urgent need of conservation action.

The main causes of extinction of these species are habitat loss and degradation. Changes in land use patterns have had a detrimental impact on habitats, which have been fragmented and reduced in extent and diversity, resulting in a marked reduction in the abundance and range of several bird species. An effective way to save birds is to save their habitats. The identification of such representative habitats is carried out through the IBA Programme, which is also trying to involve NGOs and communities living in and around IBAs.

IBA programme is in the process of compiling information on key bird species and the sites that are important for them through the participation of the Indian Bird Conservation Network (IBCN) members. The inventory of internationally recognized sites, vital for the conservation of birds, will be available by the end of this year. Copies of the inventory will be made available to all the IBCN members.

The Indian Bird Conservation Network is a formal network of individuals and organizations that is involved in promoting the conservation of biological diversity of India with special reference to bird species and their habitat. We request all those interested in conserving birds and their habitat to join the IBCN.

For more information contact: Zafar-ul Islam (Projects Manager IBA-IBCN), Email: IBAbnhs@vsnl.net

# Protecting our Forests

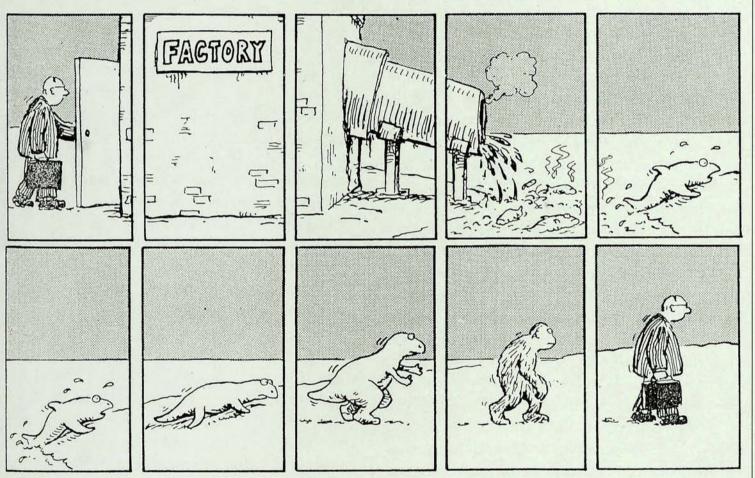
In the last issue of *Hornbill*, the Viewpoint — National Forests by Mr. Duleep Matthai expressed the need for protecting forests as they are instrumental in providing rain water, enhancing the ECOLOGICAL SECURITY of the nation. The views were endorsed by the Hon. Finance Minister, Shri Jaswant Singh

in a letter to Mr. Matthai from which we quote "I am as convinced as you are about 'ecological security'. We have earlier, too, exchanged views about this vital facet of policy."

We hope this means that the Government will take action on this issue.■



# EDITORS' CHOICE



Courtesy: When Humans roamed the Earth, Earthscan Publications Ltd., Cartoon by Chris Madden

We are grateful to the

#### MEHTA SCIENTIFIC EDUCATION & RESEARCH TRUST

for a generous corpus grant to constitute the *Pratap Saraiya Hornbill Fund* to support the publication of *Hornbill* 

# Local Groups of BNHS members activated

#### **Ahmedabad**

After a long gap, members at Ahmedabad got together on September 14 for a monsoon watch at ATIRA campus. Mr. Pranav Trivedi led an enjoyable walk to watch monsoon plants. On September 21, the group, led by Mr. Isaac Kehimkar, watched butterflies at the Indroda Park, Gandhinagar. Many exciting outings and camps have been planned for October and November. For details contact: Madhu Menon or Chandresh Lodhiya at anala@wilnetonline.net or 656 1359, 644 2289.

#### **Nagpur**

Though few, members in this city are very enthusiastic and have conducted several activities. Mr. R.S. Bhangu has given a presentation on trees. Other activities, including nature awareness programmes for students, are being planned. For details contact: Mr. Jaimesh Thapar at airtech@nagpur.dot.net.in or Tel: 255 0287 / 9822219287.

#### Navi Mumbai (New Bombay)

A tree planting drive, led by Mr. J.C. Daniel, Hon. Sec., BNHS, on July 20, formally launched the Navi Mumbai Group of BNHS members. On August 3, Mr. Sagar Mhatre and Mr. Adesh Shivkar led a wildflowers trail, on the Gawlideo hill — a perfect time to watch a myriad of wildflowers that bloom during this season. In September, the BNHS members at Navi Mumbai gathered again, this time to see butterflies. Isaac Kehimkar PRO, BNHS, led the trail to CIDCO nursery at CBD Belapur. The youngest member of this 30 member group



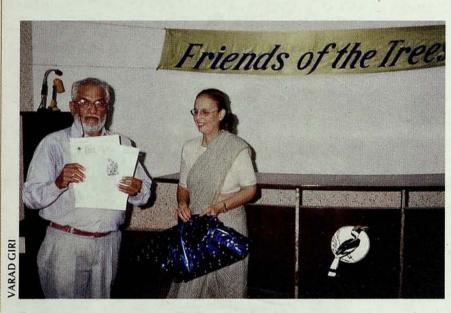
The Navi Mumbai members of the BNHS came out in huge numbers during the tree plantation drive

was yet to celebrate his first birthday, while the oldest were three senior citizens. An e-group has been formed to update the activities of the BNHS and the Navi Mumbai BNHS Group. For details contact: Mr. Sagar Mhatre at 2767 1951/9820116484.

#### Pune

Though activities for members in this city are yet to take off fully, an exhibition of photographs on Antarctica was held in June. Several activities are being planned to bring together this active group of BNHS members. For details contact: Dr. Erach Bharucha, Ms. Shamita Kumar and Dr. Ghorpade at bvieer@vsnl.com or Tel: 437 5684 at Bharati Vidyapeeth, Dhankavadi.

# First Tree Day Celebrations for Maharashtra



The President of the National Society of the Friends of the Trees Mrs. Pheroza Godrej along with Dr. A.R. Maslekar who released *Van Shobha*, a periodical of the organisation

The persistent efforts of Mr. D.T. Joseph, a senior bureaucrat and BNHS member, finally resulted in a Gazette Notification by the State Government which states that Maharashtra Tree Day be celebrated every year on *Jaishtha Pournima*.

The National Society of the Friends of the Trees along with the World Wide Fund for Nature – India and Bombay Natural History Society, therefore, celebrated the first Maharashtra Tree Day on *Jaishtha Pournima* – June 14 – this year at Hornbill House.

Dr. A.R. Maslekar former Principle Chief Conservator of Forests, Maharashtra State, who presided over the function, spoke on "Tree – The most maltreated friends of man". He later distributed prizes and certificates to the winners of the Inter-school Nature Drawing Competition organised by Friends of the Trees.



## Centennial Celebrations



The Society's Journal completes its 100th Volume this year. Started three years after the Society, in 1886, it completed 100 years of publication in 1986, with Vol. 83. The anomaly between calendar years and

volume numbers is from the fact that up to Volume 54 each volume had 4 issues and their publication was not related to the calendar year. It is only from Vol. 55 (1958) that each volume was contained within a calendar year. The completion of 100 volumes called for a celebration.

Two celebrative events are planned for November 12, 2003, Sálim Ali's birthday: Release by a dignitary of the 2nd & 3rd issue of Vol.

100, which has invited articles from Indian and foreign scientists followed by a get-together of members and invitees, a classical programme and dinner, at the Tata Auditorium of National Centre for Performing Arts (NCPA) at Nariman Point, Mumbai. An International Seminar on Wildlife Conservation will be held from 13-15 November at the Indian Institute of Technology (IIT) campus, Mumbai. The theme of the Seminar is "A Look at Threatened Species". The title of the seminar refers to the seminal contribution of Lee Talbot in the early fifties of the last century, who studied the status of threatened species in Southeast Asia and which started the conservation of threatened species in the Subcontinent. The seminar will examine the current status and future prospects of endangered wildlife in relation to the Wildlife Action Plan of the Government of India.



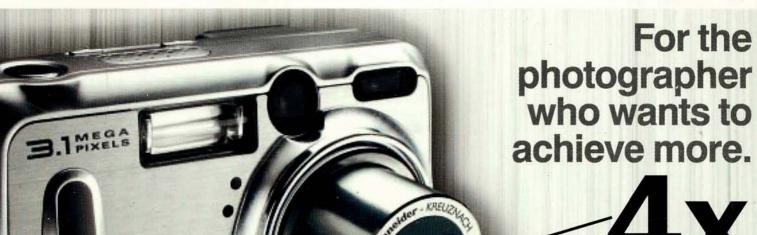
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