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HORNBILL

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10/8/2004



OTTO PFISTER

VIEW POINT

J.C. DANIEL

Pets as PESTS

ANIL KUMAR CHHANGANI





IRA GARDNER-SMITH

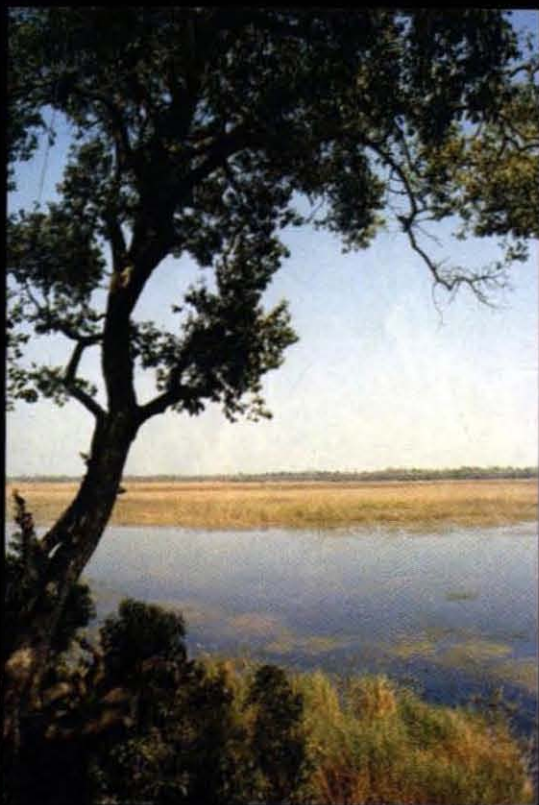
MAN'S BEST FRIEND has become wildlife's worst enemy and as destructive as man himself. From the dry evergreen forests of Pt. Calimere to the deserts of Rajasthan to the salt marshes of Ladakh, and the high altitude plains of Sikkim, packs of feral domestic dogs hunt blackbuck at Pt. Calimere, blackbuck, chinkara, langurs and the formidable porcupine in Rajasthan, chital in Keoladeo National Park, and eat from the nest the chicks of the critically endangered black-necked crane in Ladakh. They dig out marmots from their den in the high altitude plains of Sikkim, something that even the wolves have not learnt to do, and swim after Brahminy ducklings in the high altitude lakes of Sikkim. They are one more nail provided by man to the coffin of wildlife conservation in India.



DUDHWA NATIONAL PARK



...in daylight and darkness



GAYATRI W. UGRA

Sunset is falling over Dudhwa National Park and the powers that be must give it a thought. If India and Nepal are unable to manage the annual flooding of the Sharda river, another kind of sunset may descend on the Park.

Excess flood water remains stagnant in the taals of Dudhwa, killing much of the vegetation. Bare, leafless, dead trees stand stark against the bright sky. A member says "Isn't this a graveyard of trees!"



GAYATRI W. UGRA

■ GAYATRI W. UGRA

Gayatri Ugra obtained her Ph. D. from the School of Entomology,
St John's College, Agra.

Presently she heads the Publications Department, BNHS.



GAYATRI W. UGRA

Snake in the Grass – *Python molurus*

A twig snaps underfoot like a pistol shot in the eerie silence, the breeze whispers in the trees, leaves rustle, a phantom sound perceived only by the sixth sense. Mohammad Naseem, our guide, draws us close, warning us to be completely silent, as we walk along a sandbank through the tall elephant grass. Suddenly he stops short, pointing at the ground. We come upon our first pug mark, large enough to be from the kind of forepaw that can kill a man in one blow, and we pray that we will see its owner too. But no luck today, and we leave the trail with the uncanny feeling that the tigress has seen us, even though we haven't seen her!

The Dudhwa National Park website said "more than 30,000 insects" ... a paradise for an insect freak. That clinched it. I booked myself on the impending BNHS trip to Dudhwa in Lakhimpur Kheri district, along the Indo-Nepal border. And what a trip!

Rivka Israel and I got together at CST Mumbai on 6th March, 2004, to board the

Pushpak Express. We arrived in Lucknow amidst the colourful revelry of Holi, with great trepidation left the station, got drenched in magenta and yellow on the way to the guest house, but still managed half a day of sight seeing and watching garden birds.

Next morning, we were on our way to Mailani. As the train sped past lush green wheat fields, our bird count began with eight graceful sarus cranes, peacocks in mango orchards, pied kingfishers hovering over village ponds dense with water chestnut, and a rare singleton, the shabby, scrappy scavenger vulture. More mundane sightings included glistening black drongos, perched on the electric lines all the way, and any number of cattle egrets in the pools and puddles along the track. From Mailani, it was a gruelling two hours on the dusty, cobbled roads of Uttar (Ultra?) Pradesh, till we reached the somewhat cooler *terai* habitat of Dudhwa National Park, where moist grassland and dense saal forests dominate.



MEETHIL MOMAYA

Small blue kingfisher *Alcedo atthis* perched over a Taal

Humans are advised to stay in the jeep, as tigers walk free ... it's their homeground! You also save yourself the indubitably hair raising experience of coming face to face with a rhino. With the possibility of elephant herds from Nepal joining these excitements, we had anticipated a holiday not for the faint hearted. And we soon discovered that we were right. But no animal, as Rivka says, can match the menace of man. Two days earlier, the forest guard of Shitlapur beat, Shesh Giri, had been hacked to death by armed poachers. I am told that poachers lay traps even across the jeep track in the forest. They come for the tiger and the rhino, of which there is a closely guarded population of 18 in the Park, enclosed by electric fencing.

It is 3 p.m. on 8th March as the last of the participants arrive, and we are informed by the inimitable Mr. P.B. Shekar, our group leader, that there will be a bird walk along the railway track inside the Park. Wandering off alone is strictly

forbidden, putting most of the flowers and insects beyond my reach, so I join the dedicated birdwatchers that form the core group in any BNHS camp. Darters and cormorants are perched on bare branches, spreading out their wings to dry, moorhen and teal swim in small flocks in the water, while chestnut-headed bee-eaters half-hover and swoop at their flying targets, the gnats and midges swarming in the evening light over the lake. All along we see Rohini trees, whose round red fruit yields the kumkum that Indian women wear on their foreheads. Dr. M.R. Almeida, our botanist group leader, points out the violet spikes of *Pogostemon bengalensis*, the only confirmed herbal antidote for the venom of the viper *Echis carinatus*, which I hope I shall never need to test on myself.

The first morning, and speaking of reptiles, can one ever forget the sight of the rock python that we see in Kishanpur. It lies basking in the sun, gorged and sluggish after a meal that can be

seen externally from its dilated midbody. A rush to look closer, a scream from one panicky member, and it begins to slide away with amazing rapidity for such a huge creature. (Only after our return to Mumbai are we able to assess its true size from the photographs ... it was 12 ft long! And then I am not surprised that the lady screamed.) I have trouble convincing her that it is not venomous, is not moving to attack us, and judging from the sudden, sharp, ammoniacal smell of urine that all of us can discern, it is more alarmed than angry, and only wants to get away. That is not to underestimate the tremendous strength of a 12 ft long python, whose constricting musculature can put paid to an adult human being.

More reptiles – a mugger lies basking in Suheli river, half draped over a fallen tree trunk, so absolutely motionless and mud covered that it appears to be a stone relic from the Jurassic period. Its mottled blue, brown and purple colouring is revealed only when we see another one swimming in the same stream later on. But nothing seems to animate this first one so long as we watch it. A blue-eared kingfisher perched on a branch ruffles its purple-blue and white plumage, its brilliance reflected in the stream

below, then it takes off to roost. That night there is commotion in the jungle, an alarm call that lasts more than six minutes. Some say it's the chital, others insist that it is hog deer, but neither way do we get to see the large feline that set it off.

We leave the Forest Rest House early morning in four jeeps, usually with just a cup of tea and biscuits for fuel. An empty stomach, it seems, is conducive to good birding; it sharpens one's senses and the eye sees more than it would if one had fed liberally on the kind of hot parathas that follow on our return. The spartan menu of Dr. Salim Ali's field camps must have had a purpose other than mere economy, I think, as we drive under a canopy of saal, shisham and haldu trees. The lucky ones see a flight of hornbills, six, seven, eight, they recount excitedly, when we return to camp. Both the Oriental pied and great pied! Naseem says his day is made, for he has rarely seen more than four or five at a time in this forest. The final tally at the end of the trip is 97 species of birds alone. My own attention keeps returning to the intricate inter-relationships displayed in the towering red silk cotton or semul trees that grow wild in the whole area from Lucknow to Dudhwa. The heavy nectar and pollen of the showy red flowers

The heavy nectar and pollen
of the flowers
on the trees attracts ants,
bees and purple sunbirds,
while redvented, blackheaded
and redcheeked bulbuls
visit the trees in abundance.
And undoubtedly waiting
to pounce on them
is this short-toed eagle.

Short-toed eagle keeps watch for prey



ASOKE LAHIRI

attracts numerous ants, bees and purple sunbirds. The red-vented, black-headed and red-whiskered bulbuls come to the tree in abundance, delicately picking off insects and sipping nectar from the flowers. And undoubtedly waiting to pounce on them are the raptors: the great crested, serpent and short-toed eagles, and the black kite. Outside the Tiger Reserve, driving through Kishanpur, I had seen seven Indian white-backed vultures on a red semul, while Rivka counted at least 44 on one tree.

Other trees coming into bloom outside the Tiger Reserve are the palash, wreathed with brilliant vermilion flowers that yield a dye used to play Holi in the old days. They evoke images of Chaitra, of spring warming to summer (and examination fever!). So does the gorgeous red erythrina, which harbours the same bird-insect-flower food chain as the red and yellow semul.

Dudhwa National Park was created in 1977 to protect the swamp deer or barasingha, which we now watch from a machaan across a jheel in Sathiana. My binoculars focus on one, two, then a hundred of them, browsing beyond the waterspread that hosts cormorants, darters, coot, teal, black stork, white-necked stork, pintail and jacana, and if you look long and hard, bush larks

on the ground. I watch the antlers of one magnificent male barasingha as it raises its head, then lowers it again, lazily cropping off the grass, unaware of my attention. It is difficult to choose one's favourite among the ungulates here: the dappled cheetal that moves in small herds on the fringes of the forest and is easily seen, the less numerous darker coated hog deer that raises its tail in alarm and bounds away, sambar which we never saw, or the smallest one, the red-brown Indian barking deer *Muntiacus muntjak*. It is too quick for me to get a really good look, and the only other time I saw it was in a cytology lab, where even the most well cared for animals look pathetic at best.

Next morning we are in for a star sighting, the rhinos of Dudhwa. The air is mist laden as we drive through the forest, our hands stiff in the morning chill, clutching camera and binoculars. The jeeps stop at a forest post where a Shaheed Smaarak or memorial stands: a grim reminder of the fate of two forest personnel killed at night by a tiger. Never underestimate the awesome strength of nature, it tells its silent story. Here we mount a rough wooden machaan, and two elephants are brought alongside for us to clamber on, four at a time. The mahout tells us that our

Bankey – the two ton dandy



G. MAHESWARAN

Bankey – the debonair dandy – is a two ton alpha male, from whom the taal is named. He revels in his superior status, dominating the other rhinos in the enclosure, so that there is talk of relocating him to give the other males an opportunity to breed.

mount is named Pushpakali, and a heftier flower bud would be hard to find. Her regal pace and sturdy step are reassuring, until we enter Bankey taal, a slushy, muddy, leech infested swamp, where the elephant grass brushes against our legs. Khair trees, which yield *kattha*, grow near the fringes of the swamp, with carton nests of tree ants on their sparse-leaved branches. Ashy prinias and many warblers flit among the reeds. As we go further into the slush, the elephant stumbles and totters, and keeps trying to go off on her own, but is prodded back on course by the mahout with a mean looking iron *ankush*. He stands astride Pushpakali's massive shoulders to get a better view, and then points out the hero of the day, Bankey.

A monument of insect architecture – termite hill



GAYATRI W. UGRA

Bankey – the debonair dandy – is the 2000 kg alpha male around here, from whom the taal is named. He revels in his superior status, dominating the 17 other rhinos in the 29 sq. km enclosure, so much so that there is talk of relocating him to give the other males an opportunity to breed. What we first see is an ugly, warty rear end, and we have to manouvre the elephant past him for a lateral view. Then we appreciate the awesome power of the animal within the slaty grey armoured shroud of a skin. Even from our vantage point atop Pushpakali, his dimensions are imposing. The horn is about 18 cm long, to give an indication of the total size. He humphs and snorts, and sends shivers down our spines. Frantically, I capture as much as I can on

camera, and then venture a closer look through the binoculars. He bares one long tooth, and the mahout advises us that Bankey has had enough, so we proceed as rapidly as Pushpakali's legs will carry us through the swamp on to the 2 km mud track. The seemingly endless ride, seated on a jerky earthquake, calls to mind Aldous Huxley's words on his first elephant ride up Amber Hill in Rajasthan "I returned full of respect for Hannibal, he crossed the Alps on elephant back."

That evening we go to Tiger Haven, where we meet the legendary but controversial Billy Arjan Singh. Hailed by some for his lifetime achievement in tiger conservation, criticized by others for allegedly "contaminating" the tiger gene pool, he continues his good work. On his private land, chickpea is grown for the peacocks as well as their less glamorous females, which step delicately in the fields, feeding on the soft new sprouts. Sugar cane is planted on the rest of the farm. Here too, we see yellow-headed wagtails, pied bushchats, ashy prinias and other seed eaters, typical grassland birds in plenty. Sunset is falling over Tiger Haven, and the powers that be must give it a thought. If India is unable to come to an agreement with Nepal to manage the seasonal flooding in this region, another kind of sunset may descend on Dudhwa National Park.

The problems that beset Dudhwa National Park are as varied and numerous as its habitats and biodiversity. Patrolling this vast 490 sq. km of grassland, swamp, water bodies and moist

deciduous forest, intersected by 40 km of railway track, is a challenge in logistics for the notoriously ill-equipped forest department. The extensive area of the Park also reduces the chance of seeing “glamorous” species like the tiger that draw public interest and management attention, which are more often seen in the smaller Bandhavgarh.

Extensive deforestation in Nepal has led to flooding of the River Sharda, which last year washed away large tracts and rendered homeless scores of villagers who are camped some 40 km away, in thatched mud huts, with nothing but their few heads of buffalo to scrape together a living. Excess flood water that remains stagnant in the taals of Dudhwa has killed much of the vegetation, and bare, leafless, dead trees stand stark against the bright afternoon sky. A member says “Isn’t this a graveyard of trees!” and I cannot help agreeing. We drive on through grassland, flushing out a startled pair of black partridge. Past the breeding ground of the Bengal florican, but Naseem tells us that it is yet to appear, despite its breeding season having started.

On the evening of 12th March, we return to the bridge over the Suheli, where we first saw the croc. All day, my eyes have been scanning the canopy, hoping to sight a hornbill. There are jamun trees enough for them to nest in. I sit silently, alone with my thoughts, regretting that we missed the tiger, which all of us were dying to see. The others too are slipping into return mode, talking about the trip that was. Suddenly there is a cry “Hornbill, hornbill!” Excitement breaks out again, the magnificent great pied hornbill *Buceros bicornis* is perched on the branch of a distant tree. “Another one!” and then I see an unforgettable sight – two birds take wing, their wing tips flapping up and down, the rhythmic wing beat steady as they sail across from one side of the valley to the other, infinitely more complex and graceful than any man-made flying machine. The tiger is forgotten, and my day is made. What better crowning glory for a BNHS trip than these cousins of William, the Society’s own hornbill!

Daybreak on 14th March, we say our goodbyes reluctantly, as it has been a great camp.

Five of us take a forty minute walk to Dudhwa station, along a jeep track between towering saal trees and enormous termite mounds. We follow two sets of fresh tiger pug marks, an adult and a juvenile, scanning the undergrowth, hoping we might see them yet, but they exit the path just before the railway track appears. At the station, which must be the original Sleepy Hollow (it takes half an hour to buy a ticket!), we rest dreamily against our little hill of backpacks. A “sher” was seen here the previous evening. There is my incentive for the next trip! A shrill whistle interrupts the flow of thought, and I join the rest in a hurried scramble to board the train. ❁

Another raptor, the crested serpent-eagle, is seen in the Park

MEETHIL MOMAYA



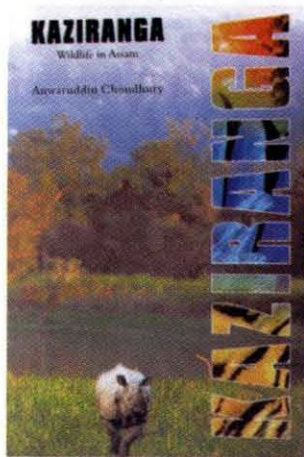
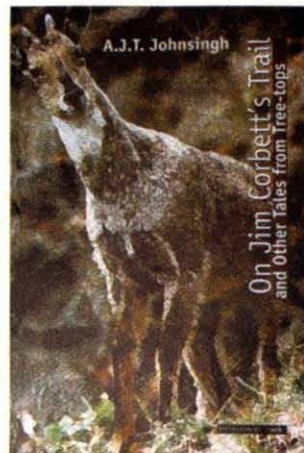
ON JIM CORBETT'S TRAIL: AND OTHER TALES FROM TREE-TOPS

by A.J.T. Johnsingh. Published by Permanent Black, Delhi, 2004.

Pp. 139 (22 x 14 cm). Hard Bound, Price Rs. 295/-

BOOK REVIEWERS are supposed to be completely objective. But how can you be objective when reviewing a book by a friend whom you have known and admired for the last 30 years? When Johnsingh asked me to review his book for *Hornbill*, I was reluctant for obvious reasons, but once I started reading the book, there was no going back. It is a perfect natural history book that one enjoys reading on a lazy Sunday afternoon, or sitting near a fireplace in a cold winter night. If you are in Corbett country, so much the better. I congratulate the publisher Permanent Black for putting together some of the best natural history articles by Johnsingh. Earlier versions of these articles or parts of them were published in *Hornbill* and other magazines, but make a good reading again. As the name of the book indicates, Johnsingh is a fan of Jim Corbett, the celebrated hunter-conservationist and writer, who is frequently mentioned in the book. Except for the one on mahseer, all the other

articles are on mammals. There is no article on birds or reptiles about which Johnsingh has very good knowledge. Johnsingh rightly laments the decline of tracking skills (p. 130) among naturalists, foresters and local people. In this age of satellite phones, GPS, remote cameras, geomaps, etc. who wants to get down from a jeep and walk even a few hundred metres in a jungle? Regrettably, many young 'field' biologists think that only the keyboard of a computer would give them all the answers to their natural history questions. There is no substitute to hard field data that is gathered the way Johnsingh has been doing for the last 30 odd years. And, it is more fun. When you read his eminently readable book, you will know what I mean. 🐾



KAZIRANGA: WILDLIFE IN ASSAM by Anwaruddin Choudhury.

Published by Rupa and Co., New Delhi, 2004. Pp. 94, (21.5 x 14 cm). Price Rs. 194/-

WHILE RESEARCHING for the book on the Important Bird Areas, I was appalled to find that we do not have good literature on some of our well-known protected areas and threatened species. I find it very funny when some government officials and funding agencies say that there should be no

duplication of research work. When there is so much to do even on our supposedly well-researched subjects, where is the question of duplication of data?

Kaziranga National Park is one of world's fore most protected areas, a UNESCO World Heritage Site, and home to more than 60% of the one-horned rhinoceros *Rhinoceros unicornis*. It is celebrated, perhaps for right reasons, for bringing back the rhinos from a very low number – less than 50 in the early 1900s to 1,552 in 1999. Despite poaching, fortunately under control now, and havoc created by annual flooding, Kaziranga has shown steady increase in rhino population. Perhaps, we require repeated aerial counts to confirm the ground census.

Dr. Anwaruddin Choudhury is a prolific writer and a perfect naturalist. He has been visiting Kaziranga for the last 20 years, so he is the right person to write a book on this famous park. Besides including his own observations, Anwar has compiled information from research papers and government documents to produce this small handy book for the general public. It has checklists of mammals, birds and reptiles, which will be useful to any visitor. It also has interesting, easy to read information on rhinos, elephants and other herbivores, tiger, birds, flood problem, conservation issues, and future of tourism. I did not know that probably the highest density of tigers in the world – 17 tigers per 100 sq. km — is found in Kaziranga.

The book is not without its glitches. The binding is not good and the maps are unreadable. Some colour pictures are substandard and one picture of an adult male sambar *Cervus unicolor* is wrongly captioned as hog deer *Axis porcinus*. Despite these shortcomings, it is an interesting little book and a must buy for people visiting Kaziranga, at least for its authentic checklists. 🐾

Reviews by: Asad R. Rahmani



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GIR

The only home of the Asiatic Lion



Text and Photographs: Meethil Momaya

Meethil Momaya is a freelance wildlife photographer.
He is a life member of the Society.

THE THREE-MONTH-OLD wrinkled her face in a yawn. Hers was not a practised one – it looked like she was trying to bite off a large piece of meat with the sides of her jaws. She shook her head but with little conviction. A small pink tongue licked the tip of her nose and her mouth opened for another yawn, but gave up midway. Her small body shook rhythmically under her deep breaths and her naughty eyes reflected the yellow glow of the evening. Occasionally, she would turn to her mother.

The nine year old lioness sitting a pounce away pretended to ignore her youngest. In reality, she had a keen eye on her every move – and ours too. While her clear yellow eyes followed us, she also stole a glance at the young one.

Tired of inactivity, the cub closed up to her mother and rubbed her small body against her mother's face. Expecting action, my friend and I oriented our cameras to face the duo. Our movements alerted the lioness, she was soon upright, forelimb muscles tightened, ears tensed up, and eyes wide and unblinking. Sensing danger, the cub took shelter behind her mother, barely visible now.

It took the cub just a few moments to reappear from behind her Fort Knox and take a few confident steps towards us with her mother not much behind. Failing to engage the lioness in a playful encounter and conscious of our presence, the cub took off in the opposite direction. The lioness followed, outdistancing her infant who now struggled to



keep pace. They disappeared behind a small mound that separated the riverbed from the road.

The sun took a cue from their exit and set behind a hill, dropping the curtain on their performance and leaving us to our first dusk in Gir.

In the southwest of the peninsular state of Gujarat lies the Gir National Park, created to protect the last wild population of lion outside Africa. The Gir National Park and Lion Sanctuary is collectively known as the Gir Protected Area. An important part of this Area is the 4 sq. km Gir Interpretation Zone, about 12 km from Sasan village, the headquarters of the Park. Gir stretches over about 1,153 sq. km with 259 sq. km forming the core area of the National Park. It is famous for being the last natural home of the Asiatic lion, although it has a healthy population of other animal species too.

Our accommodation was just 1 km from Sasan. The only reason for choosing it over the others in Sasan was a room large enough for three. We were just two, but our four camera bodies, ten lenses, camera flashlights, tripods, bean bags (small pillow shaped bag filled with grain, used for support), forty rolls, filters, cords, cables and other accessories too required some room. I confiscated the bed, while my friend set base on two chairs. Before dinner, we made sure that our equipment was cleaned and dusted, the rolls numbered and field notes completed. We reloaded our pockets with fresh rolls and packed our bags for next morning's ride.

The mornings at Gir were cold and the sun rose very slowly. Though the trees had been stripped of all their



leaves, the thicket of dried branches and hilly forest terrain allowed very little light to penetrate the forest. A dull brown hue clung to the forest for two long hours after sunrise, when shafts of yellow sunlight finally broke the monotonous landscape.

Undulating hills interspersed by rivers, streams and small reservoirs make up the Park. The vegetation of the entire park is mixed deciduous, with trees like teak, ber, flame of the forest, acacia, jamun, tendu, semul and some banyan making up the majority of the forest cover.

Interspersed among these are the vast open areas with scanty vegetation.

A distinct belt of vegetation is found along the river and streams. Trees like the jambu, karanj, umro, vad, kalam, charal, sirus and amli are found here. These trees are mostly broad leaved and evergreen, making the area cool and shaded.

Above: Another day begins in the land of the king

Below: The lion shares the jungle with a number of other mammals





The cub took only a few moments to reappear from behind her Fort Knox

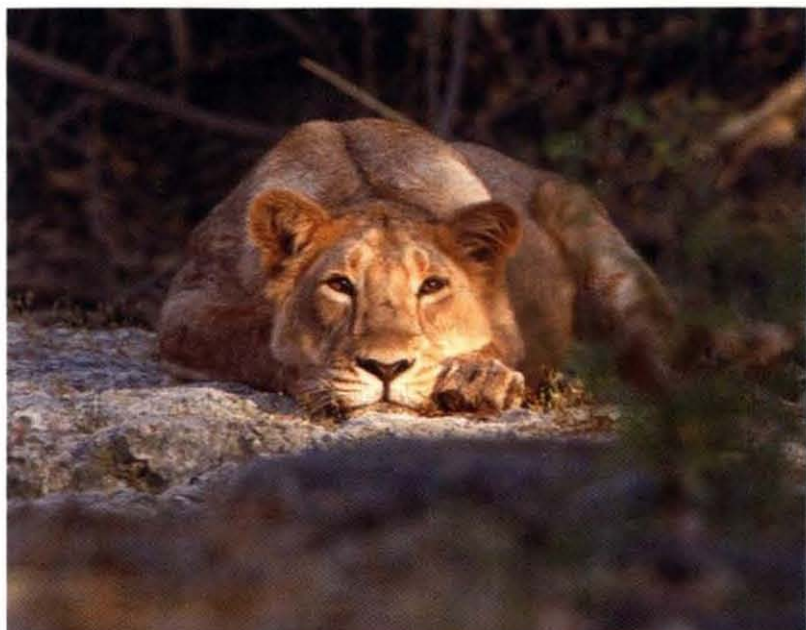


The morning sky wore a forked streak of pink, like a large pink river flowing amidst a blue landscape. The horizon was pinkier, it soon turned orange and then faded away. At dawn, the jungle was silent. The first light of the sun evaporated the dew that bound the dust. And as sunlight reached the forest floor, the dust took to the air. As the temperature rose, the air carried more dust – a killer for the camera.

We travelled for an hour before hearing a bird or animal call. All the while, our driver Lalit and guide Bhiku looked on either side of the road for pugmarks of the king cat. We reached the dried stream where we had seen the mother and cub the day before. They were not there today. We rode for another half hour, stopping at junctions and mud banks to check for pugmarks. We found a pair of prints, but lost them someplace down the road. Another set went down the road and turned into the forest a little ahead of the dried stream. We continued on our route till we came to a battery-operated van belonging to the forest department.

Three forest guards sat outside their van in a close circle, sticks and wireless sets by their side. Lalit parked our jeep behind the van and got down for a word with them. After the customary exchange of words, a few jokes and sharing 'mawa' (a mixture of tobacco, betel nut and lime) Lalit came and told us that the mother and cub were in the woods to our right. They would try to cross the road some place ahead of the van to go to a water hole on the left. We waited. Two other jeeps came our way. One of them decided to wait while the

The lionesses kept the cameras and the photographers busy for a long time



other continued on its way. After 15 minutes, one of the guards spotted some movement. There were three lionesses; the mother and cub from yesterday and another four-year-old, said to be the daughter of the same mother. They had plotted a diagonal course across the forest, so they would pass us and approach the road, some 66 metres ahead of us. The young lioness along with the cub was leading the way while the mother followed at a distance. They reached the road but our presence stopped them in their tracks. They turned back to find an alternative route to the water hole. On their way back, the mother sighted a group of deer and began stalking them. The cub, out of instinct, began to imitate her mother in her 'hunting attempt'.

Seeing a hunt in action, my spirits soared. Though we could not see much from where our jeep was parked, we could get a view of the three from a clearing in the forest a little further down the road. If the lioness killed a deer, we could drive down there and get a few pictures, I thought. The lioness, and the cub, doing her best, stalked the deer for almost ten minutes before a deer from another herd further away raised an alarm, forcing the lioness to abandon the hunt. As the lioness walked away to an unknown destination, all we could do was to shake our heads in dismay. Just missed! The young lioness and the cub sat behind a tree near the clearing off the road, checking us out while they waited for their mother to return from her secret expedition.

The lioness reappeared five minutes later, this time 10 metres to our right between the forest van and our jeep. She had found

her way through the thicket of dried twigs, which looked like the remains of shrubs or undergrowth. The thicket was so dense that we had not noticed her until she had stepped out of it. After a good look at the two vehicles, she returned the same way, quietly. She joined her children and the three attempted to cross the road ahead of us. We drove ahead of the van and kept to the left, stopping a good distance from them. The young lioness crossed first, then the mother and lastly the cub – hiding behind her mother. Just when we thought they were gone, the mother came back to the road and stood looking down the sloping road towards us. She stood there long enough for us to finish a couple of rolls. What happened next we saw only through the viewfinder of our cameras, missing the action between two shots. Seeing her mother stand proudly before us, the cub decided to join her. She jumped out of the leaf litter and landed on the road just behind her mother, came around her and stood by her forelimbs – curiously staring at us. She took four steps towards us: click ... click ... click ... standing clear of her mother ...

click ... click ...zzzzoooooom ... While another roll rewound, I took a moment to adore the little one with *both* my eyes.

The drive back was a 'know your deer' session. We saw almost all the possible ones that could be seen in Gir, except the chowsingha which we spotted on our last evening. The lion shares his jungle with the leopard, sambar, spotted deer (cheetal), nilgai, four-horned antelope (chowsingha), Indian gazelle (chinkara), wild boar, wild cats, common langur, jackal, hyena and grey mongoose. Of these, we missed only the leopard and the hyena.

The evening ride was uneventful. Shot nothing, saw nothing (except plenty of deer), and heard nothing, except a few alarm calls which could have been a reaction to our presence.

The mornings grew colder, and the third morning brought fog along with it. The sun crawled over the horizon and rays of light took an eternity to reach us. It was cold, very cold for February. I buried my hands in my photography jacket. The full-sleeved shirt was of no help as the wind cut through it. My ears missed the warmth of a monkey cap and it

was sheer willpower that kept my teeth from chattering. The sun rose slowly as we zipped through the forest, kilometre after kilometre, with visibility decreasing with every metre. The fog thickened, the landscape faded and our hopes of spotting wildlife dampened.

We parked ourselves at the banks of an artificial reservoir amid the gnawing and grunting of five cats feeding on a wild boar. One lion and four lionesses of various ages were devouring their morning kill. In spite of being on an elevated road, the thick forest cover made it impossible for us to get a glimpse of the animals. But they were close – for the sounds we heard were better than the best home theatre system in the market. At times they got so loud, we felt that we were sharing their table. The wild boar was finished in 20 minutes and the cats went quiet again. Lost! A lick of thick fog lapped up the landscape from east to west. The forest, the water and the Indian cormorant on the water below us dissolved in the milky fluid.

That evening we saw two pairs of grey mongoose. Seeing a pair of mongoose is said to bring good luck, but we had none with the lions. Perhaps the good effect of one pair had been neutralised by the second?

We left the Park a little early to join in the gossip at the small tea stalls opposite the Gir headquarters. Here, forest guards, guides and drivers pool in their intellect and experience to predict which lion will be seen where the next day. Also the 'who saw what' stories are first told here.

But the morning predictions failed miserably. When we reached Kedembha Forest Naka, the end point of our route, ours was the third jeep there, and soon a fourth came.

A last good-bye before the lioness departed with her family



The place was abuzz with activity. A cow had been killed on the far side of the hill just behind Kedembha. And seven cats – six lionesses and a lion – were feeding off it!

Two of the jeeps left to try their luck elsewhere. We continued to pace up and down in the forest naka (checkpost) compound, littering the ground with our shoe prints. The two drivers who left were disappointed because they would not spot these cats anywhere that day – they would sleep here after they'd had their fill. And we were disappointed because we could not photograph the cats eating.

The two jeeps that had left stopped 100 m down the road – a third jeep coming from the opposite direction had stopped too. I thought the drivers were exchanging some information. Fifteen minutes later, Lalit jumped into his vehicle and was frantically calling us while he started the engine. All he said was “*Camera tayaar kar lo. Camera tayaar kar lo*” – keep your cameras ready – while he sped towards the three jeeps. Seven seconds later we saw a lion, the cause of the traffic jam. He was sitting on the road with his back towards us and looking at the single jeep that had come from the opposite direction. He got up and seated himself under a tree five metres off the road. He was sleepy, could barely keep his heavy eyes open, and yawned three times in the twenty minutes that he spent with us. He tried to put his head down and sleep, but the leaf litter stuck to his mane and made him uncomfortable. He yawned, panted and shook his head to clean his mane of the small leaves and dirt that now decorated it. He changed his place, but this too brought little relief to the sleepy king, and so he cut short


the photo session (there were five photographers in 3 jeeps) and took to the jungle for peace and quiet.

We could see him for some time, until the terrain hid him from view. Our guide thought of a dry stream, which the lion would cross. We decided to wait there. On the way, we came across some Maldharis with their cattle. Lalit asked them if they had spotted the lion. One of them said he had seen two young males that morning, they had cut across the road and gone behind the small hill on the other side. We had seen their tracks earlier in the day. Our wait at the dry streambed was futile.

Despite the rehabilitation of the population from within the reserve area, there exist two tribes – the Sidhis and Maldharis – that have learnt to live with the existence of lions and other predators as part of their habitat.

We had come to our last evening in Gir. I spent the last ride enjoying the forest and the abundant peacocks sitting by the road on low branches. On our way back, we spotted three female chowsinghas, a rare sighting in Gir. In fact, we got a good ten minutes to photograph them. As we

headed homewards, the sun slipped lower down the horizon, covering the forest in darkness. The bare trees gave an eerie and abandoned feeling – like all the animals had left and we were the last to leave.

Although the conservation drive at Gir has brought the lion numbers up to the respectable 300s (the 2001 census closed at 327), the concerned authorities feel that these numbers are not enough. One epidemic or another natural calamity, and the survival of this magnificent animal could be in grave danger. The only way to now increase the numbers is to translocate some individuals as base populations to other areas in the country. Two earlier attempts within the state of Gujarat have failed. Also in the offing was an attempt to translocate the lion to a suitable area in Madhya Pradesh. This project seems to have run into difficulties with the Gujarat state government reluctant to release any of its prized possessions to another state. Unless the Government of Gujarat realizes the true value of its lions and actively supports their translocation, Gir shall be the only home for the Asiatic lion. 

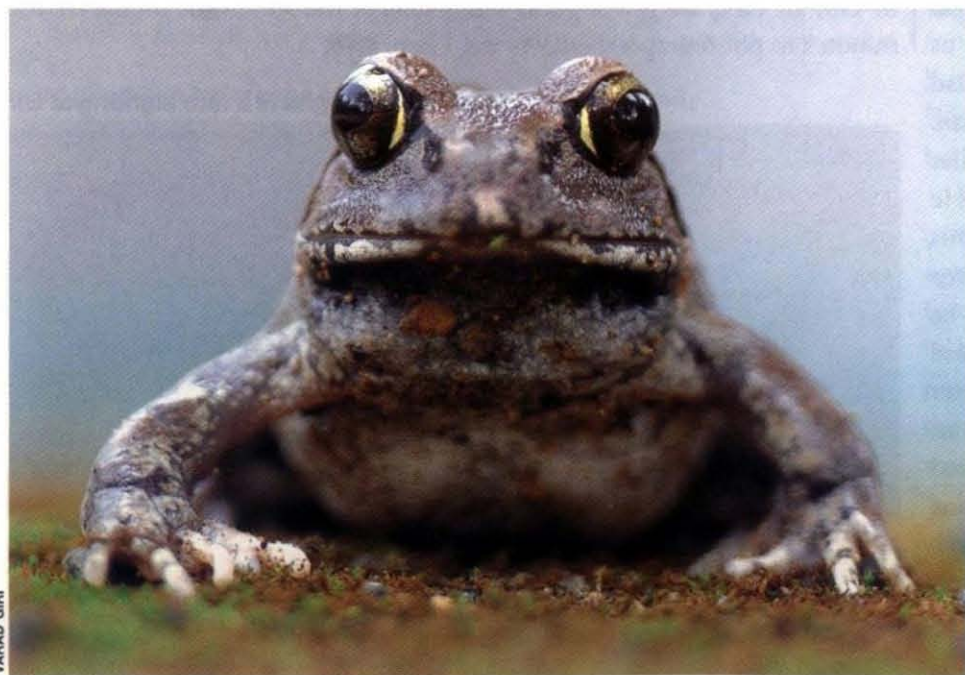
The chowsingha is a rare sighting at Gir



Herpetologists in the Making

Snuggled at an altitude of 690 m, in the southern ranges of the Sahyadri hills, is Amboli, the last hill station before the coastal highlands descend to form beaches. Pleasant views of lush green hills and fertile plains meet the eye. A rare view of the land all the way to the golden Konkan coast from Seaview Point, angling for fish at Hiranya Keshi, or a picnic at Nagatta Falls, Mahadev Gad and Narayan Gad, may sound like a pleasure trip, but it was actually a study trip! Along with 21 other members of the Herpetology Course conducted by the BNHS, now in its second year, I was in the forests of Amboli to study reptiles and amphibians.

Varad Giri, the convenor of the course, was our group leader. He is a great friend to me and a leader par excellence, who is studying the reptiles in and around Koyna and Amboli, from where he recently discovered a new species of Caecilian *Gegeneophis danieli* (*Hornbill* Jan-Mar, 2004). He has named this new species after J.C. Daniel, author of *THE BOOK OF INDIAN REPTILES AND AMPHIBIANS*. Vithoba Hegde, an excellent aide to Varad, with his ever-smiling face, was always ready with his bag of perforated bottles and pouches to store specimens, so that we could study them closely before releasing them.



VARAD GIRI

■ Sanal Nair

Sanal Nair is a member and has lead several BNHS camps and trails. A keen lover of trees, the Herpetology course has added frogs to his list.

Burrowing frogs have a small organ on their hind legs which they use for burrowing

We had started for Amboli around 8 p.m. from Mumbai in a sparkling new red bus and reached around 10 a.m., after brief halts for dinner and morning tea. Our residence for the next few days was Hotel Green Palace. Just as I was settling down in my room, an excited sound from behind the hotel called my attention. I looked out of the window and saw that a monitor lizard *Varanus bengalensis* had been sighted by some of our members. The lizard vanished into the woodpile behind the hotel before it could be caught. The camp had begun and soon a shrill whistle from Varad Giri signalled us to assemble in the hotel porch. He began by emphasizing that each member should find at least four different specimens or treat the others to ice cream! Our future plan of action decided, a typical Malvani lunch accompanied by delicious 'sol kadi' (a drink made with coconut milk and kokum) for our stomachs, and we were ready for our first walk.

The trail was a rocky patch, with sparse growth of trees due to disturbance by locals and picnickers. We saw hare droppings on this patch. Soon we were looking for reptiles and amphibians. The first catch of the day was a Brook's gecko *Hemidactylus brookii* caught by me from under a rock. Just as the scorching heat became unbearable, a snake skink *Lygosoma punctatus* surfaced, which too was bagged and handed over to Vithoba for safekeeping. A dwarf gecko (*Cnemaspis* spp.) at the hotel was last catch for that session.

In the evening, we had a brain storming session where the scientific details of herpetology were discussed. Thereafter, we set out again along the forest track: this time we were rewarded generously. A fungoid frog *Rana malabarica*, Malabar pit viper *Trimeresurus malabaricus*, checkered keelback *Xenochrophis piscator*, white banded gecko *Geckoella albofasciatus*, Travancore wolf snake *Lycodon travancoricus*, cat snake *Boiga* sp., forest calotes *Calotes roulei*, and the common garden lizard *Calotes versicolor* were among many herps that we sighted. We bagged a few representative species from what we sighted for closer observation later and returned for dinner, only to embark on another long walk, but all we sighted was

Amboli has a cool and invigorating climate – a welcome respite in summer. It is accessible from Belgaum (nearest airport) 64 km away, or Sawantwadi on the Konkan Railway. From Mumbai it is 549 km by road. State Transport buses ply from Vengurla, Sawantwadi, Ratnagiri, and Belgaum to Amboli.

The venomous Malabar pit viper is a rare sighting for Maharashtra



AMIT RANE

a toddy cat. Disappointed, we returned to the hotel for some much needed sleep.

Next day, early next morning, we set out for Parikshit Point, a trail lined with trees and shrubs. This is one of the undisturbed patches of the forest close to the village which culminates at a rocky plateau on top. Here we saw beautiful flowers of the climber flaming spike *Moullava spicata* and bear scats also. Despite desperate efforts, we only got a common skink *Mabuya carinata*, and a Lacertid this time. After a group photograph, we turned back. As we approached the gate of the forest trail we chanced upon a bronze back tree snake, which is yet to be properly identified.

After every field trip there was an interesting indoor activity, where we were familiarized with the taxonomic details of the specimens collected during the field trips. Some interesting features, like the lamellae of geckos, different scale patterns in lizards and snakes, were pointed out to us during these sessions. The smaller groups that we had divided ourselves into for this purpose would then gather to exchange and discuss experiences. Some of my friends were a bit excited in the beginning, as it was their first close encounter with

these beautiful creepy crawlers. These sessions were a great help to understand and see reptiles and amphibians close up, our reason for joining this course. The common species were released immediately after our observations.

On the last day, we set out again on the forest trail, but this time to release the rest of our catches of the last two days into their respective habitats. The release was delayed for at least an hour, as many of us wanted to capture these beautiful animals in our cameras. The joy of seeing them all free again was immense.

This field trip was an eye opener for us because we learned many interesting facts. We came to know that members of the Family Agamidae, like the common garden lizard and forest lizard, dwell on trees. Family Gekkonidae – Brook's gecko and Prasad's gecko – can be seen on rocks, buildings, and trees. Family Varanidae – the monitor lizard – dwells in rock crevices, tree hollows or burrows. Genus *Gekkoella* – the banded gecko – dwells among rocks and on the forest floor

Interesting facts come up, like the forest rock gecko, which dwells under rocks and trees, lays eggs communally i.e. two or three females lay their eggs under

The white band of a juvenile white-banded ground gecko turns yellow once it is an adult



ISHAN AGARWAL

the same rock. Family Scincidae, the common skink is found among leaf litter; the snake skink is so called because of the distance between its forearms and hindlegs and presence of four fingers and toes.

Amphibians, we were told, are divided into three Orders Caudata (with tail), Anura (without tail) and Apoda (without legs). We had only collected specimens of Anura.

Among the frogs, species of *Indirana* can be identified by the dilated fingertips on both the limbs. This helps them to get a proper grip on rock cliffs with streams of water trickling down, where there they breed. The cricket frog *Fejervarya* sp. is a terrestrial species, while the most familiar bull frog *Hoplobatrachus tigerinus* is found near water bodies. We also saw bush frogs *Philautus* spp., which belong to the Family Rhacophoridae. The frogs of Family Microhylidae are basically burrowers and have a well-developed metatarsal tubercle, a small organ on the hind limb, which they use for this habit. We saw an interesting species *Ramanella marmorata* from this family and its dilated fingertips suggested that it was an arboreal microhylid. Finally the common Indian toad *Bufo melanostictus* is identified by its warty dry skin and the parotid gland on its back, just behind the eye. This outing did teach me that one should know where to look and then surely disappointment would not track one that easily in the field.

Along with the herpetofauna, Amboli is also rich in flora like the gela *Randia spinosa*, curry leaf *Murraya koenigii*, hirda *Terminalia chebula* and anjan *Memecylon umbellatum*, and is a home for many medicinal plants. Mammals like bears, porcupine, pangolin, bison, and sambar, and birds like the crested serpent eagle, which unfortunately we could not see, and the grey junglefowl, which we heard. We sighted the white-throated thrush,



SIDDHARTH KATJU

The herpetologists take a break at Amboli

pied bushchat, paradise-flycatcher, blackbird, kingfisher, small bee-eater, and yellow-browed bulbul.

In the evening, we downed our last glass of 'sol kadi' with dinner, and after packing our bags came down to another revision session by the indefatigable Course convenor. Soon we retired, as we had to leave early the next day to visit a turtle hatchery project on the beaches in and around Dapoli. Amboli was soon behind us – a place that had taught us a lot about herpetology. A long drive brought us to Harne beach where we were shown the breeding spot of olive ridley turtles and the poaching problems they face on account of their meat and eggs.

The thought of the battle that lay ahead to save the olive ridley turtles ended that night on a sad note. The trip, however, had ended on a happy note as we managed to bag 22 specimens, one for each member. Varad Giri, Vithoba Hegde and the members of this camp made it eventful and memorable, and BNHS has done a great job in starting this most interesting course. Thank you, All! 🐸

For details on the Herpetology course contact Mr. Varad Giri at the Bombay Natural History Society.

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MEHTA SCIENTIFIC EDUCATION & RESEARCH TRUST

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 to support the publication of *Hornbill*



BLACKBUCK

MEETHIL MOMAYA

DUSTY
DUEL



Tiger Trouble 



I have just returned from a visit to Kanha National Park, where we had several wonderful sightings of tigers from a jeep, without any need for the “tiger show” on elephant back. There are said to be about 40 tigers in the area open to tourists, the prey base is visibly large, there are several tigresses with 3-4 cubs, a forest obviously in good health and full of birds. This is clearly a well managed park where poaching is under control.

We were struck by how knowledgeable the guides were. One of them explained food chains and the loss of topsoil due to deforestation very nicely in *shudh* Hindi. They were good at spotting and identifying the birds and common trees, as well as animals, and fluently reeled out statistics. There was an obvious pride and identification with the Park. They pick up litter left by others, and practise the principle of “What is brought into the jungle must be taken out”.

On Saturday the 13th March, we saw a tigress with four 14 months old cubs crossing the road. This should have been the high point of

the visit. Unfortunately it was the exact opposite – it was a horrible experience.

As word got around, at least 20 jeeps converged on the spot, cutting off the road on both sides of the animals. Pandemonium broke out, with shouting and jeep-drivers jostling for position. In some places, there were four jeeps abreast on the narrow track, making it impossible for the people in front to turn back or give way to those behind. Shockingly, it was the guides who were making the most noise, calling across to their counterparts on the other side of the road, and to latecomers. Several tourists turned around and photographed or videotaped this melee. This is surely not the kind of publicity we want for our Protected Areas.

A jeep with some forest officials was also stuck in the midst of this, and to do them justice, they closed this particular route the next day.

However, the incident should never have happened. The tigers, under severe provocation, ignored the disturbance and went about their business. But if they had become irritated or frightened it could have been extremely dangerous, and someone could have been mauled. That they behaved with such unconcern is also worrying. Have they become so tame that they can easily be killed by poachers if they stray out of the PA?

These noisy and unruly guides were the very same who had impressed us earlier by their discipline and knowledge. Why then can they not be trained to cope with this type of situation?

Respect for the tiger and its environment must be enforced at all times. Silence must be maintained in the presence of the tiger, and some kind of sign language can be developed for communicating with other jeeps and guides at these times. There must also be a single line of jeeps, with a minimum distance between them. This would make it possible for those in front to move away and make room for others. There should also be a limit to the number of jeeps allowed on each of the routes. This is of course not easy to enforce, but the Park is so large that it should be possible to work out a system.

We want large numbers of people to enjoy nature, and to understand why it is so special to see a wild tiger in nature; otherwise conservation will never have a popular base. But there has to be an effective code of behaviour to prevent us from despoiling that which we seek to protect.

Rachel Reuben
Mumbai



Splendid Plumage Indeed



Jagmohan Mahajan's work *SPLENDID PLUMAGE — INDIAN BIRDS BY BRITISH ARTISTS*. 1st ed (With descriptions of birds by Bikram Grewal). Timeless Books, New Delhi, 2001 was reviewed in *Hornbill* 2002 (Jan.-Mar.): 14.

I have since had occasion to go through the work in detail and realise, with considerable dismay, that there are several errors of fact therein. I write this letter primarily to bring these mistakes (listed below) to light so that the readers of *Hornbill* are aware of them.

The vignette on p. 21, credited to "Elizabeth Gould", is actually by John Gould & H.C. Richter and was published in Gould's *THE BIRDS OF ASIA* and not, as captioned, in *A CENTURY OF BIRDS FROM THE HIMALAYA MOUNTAINS*. Elizabeth Gould's work was quite different in style, without the elaborate backgrounds in the plates of *THE BIRDS OF ASIA*.

Pl. 2 (p. 31) is that of an orange-breasted green pigeon *Treron bicincta* and not, "Green Pigeon *Treron phoenicopyera* (sic)," as captioned on p. 30.

The artist of pl. 4 (p. 35) is James Forbes alone. Not, "Aquatint by W. Hooker after a drawing by James

Forbes," as captioned on p. 34. The original at the BNHS library has truer colours, but the flowers therein are depicted as purple.

Pl. 5 (p. 37) is from John Gould's *THE BIRDS OF ASIA*. The artists were John Gould & H.C. Richter, not "Elizabeth Gould", as captioned on p. 36. Neither is the work from Gould's *A CENTURY OF BIRDS FROM THE HIMALAYA MOUNTAINS* (p. 36). The figures were "taken from specimens precisely like the bird which formed the subject of one of the illustrations in my 'Century of Birds from the Himalaya Mountains...'" (Gould, in *THE BIRDS OF ASIA*).

Pl. 7 (p. 41) is printed upside-down.

Pl. 8 (p. 43) is by John Gould & H.C. Richter, from the former's *THE BIRDS OF ASIA* and not, as captioned (p. 42), "by Elizabeth Gould. Gould *A Century of Birds from the Himalaya Mountains*".

Pl. 10 (p. 47) is by W. Hooker. Not by "W. Hooker after a drawing by James Forbes," as captioned on p. 46. Forbes was not as accomplished an artist as Hooker, as is evident in pl. 4 (p. 34).

Pl. 11 & 12 (pp. 49, 51) are by John Gould & H.C. Richter, from the former's *THE BIRDS OF ASIA* and not, as captioned (p. 48, 50), "by Elizabeth Gould. Gould, John. *A Century of Birds from the Himalaya Mountains*."

Pl. 18 (p. 63) is by John Gould & H.C. Richter and not "Elizabeth Gould", as captioned (p. 62). It is from the former's *THE BIRDS OF ASIA*, not his *A CENTURY OF BIRDS FROM THE HIMALAYA MOUNTAINS* as captioned.

Pl. 19 (p. 65) illustrates two species of which only one is identified in the caption (p. 64). The other is the rufous woodpecker *Celeus brachyurus*.

Pl. 20 (p. 67) is rendered by Christopher Webb Smith & Charles D'Oyly, whose signatures are clearly visible on the plate, and not by "Elizabeth Gould", as captioned (p. 66).

Pl. 23 (p. 73) depicts both sexes of the chestnut-bellied nuthatch *Sitta castanea*, and not, as captioned (p. 72), "Chestnut-bellied Nuthatch and Velvet-fronted Nuthatch."

Pl. 24 (p. 75) depicts two species of jays, *Garrulus lanceolatus* (top) and *G. glandarius* (bottom).

Despite these blemishes, the work is a valuable addition to an ornithologist's library for the quality of its illustrations and Mr. Mahajan's Introduction (pp. 11-26) on the history of early Indian ornithology.

Aasbeesh Pittie
Hyderabad

Plant and Remember

Serious consequences can come from sentimental attachments to old trees. A death was caused by the fall of a decayed, dead tree. The suit for damages, which ran over 30 years, ultimately ended in a judgement by the Apex court, awarding a compensation of about a lakh of rupees, which was claimed by the heir of the deceased. Shri Bulu Imam's letter (*Hornbill* Jan.-Apr. 2004) is welcome only when the "Plant and forget" is replaced by "Plant, protect and harvest, to be replaced by the kind felled". Once urban avenue common tree property resource management is accepted, there will be enough returns to meet the cost of replacement, protection against disease, fire, and vandalism. Pruning, thinning and tending is a must to maintain tree ecosystems.

S.S. Chitwadi
Bhopal



Text and Photographs: Sudhakar Kurhade

Sudhakar Kurhade is a member of the Society and Honorary Wildlife Warden, Ahmednagar district

Flame of the Forest

The Flame of the Forest (*Butea monosperma*) is widespread throughout the Indian subcontinent. The tree is leafless in February, and attracts immediate attention with its flaming orange flowers, which announce the advent of summer. When in full bloom, the tree is truly living, because of the number of beautiful winged creatures whirling and humming around the tree. Among the beautiful wings, the birds are of great interest. The tree in bloom hosts a conference of birds. Parakeet, myna, bulbul, oriole, black drongo and sunbirds are seen circling and fluttering around the tree. While photographing the tree, I noticed and then enjoyed this conference of birds for hours together. Anyone who wants to observe birds at one site only must spend a couple of hours with *Butea* in bloom. ❀

Missing neighbours



It was January 2002, I was out in my garden, when I saw something dark stuck to the underside of the coconut leaf hanging just overhead. I was sure that they were bats, but they were too small and so I got my binoculars out to get a better view. Indeed they were, the short nosed fruit bats, which I was seeing for the first time. The group I saw and photographed was probably a family of seven, a parent and six young. The adult (?) may have been a male as it had a bright reddish-brown collar. The family roosted in my garden till the last week of February, thereafter only one bat was seen flying in the late evening in search of food. I still have no clue on the new whereabouts of my missing neighbours. ❀

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Mother and Child



Turtle Snout

Trembling Leaves

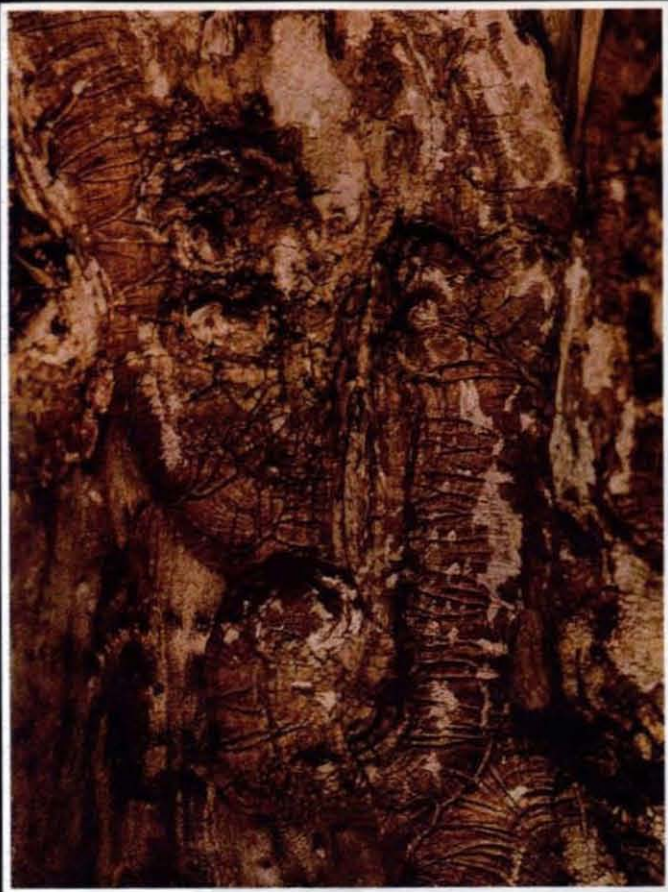


Chiaroscuro

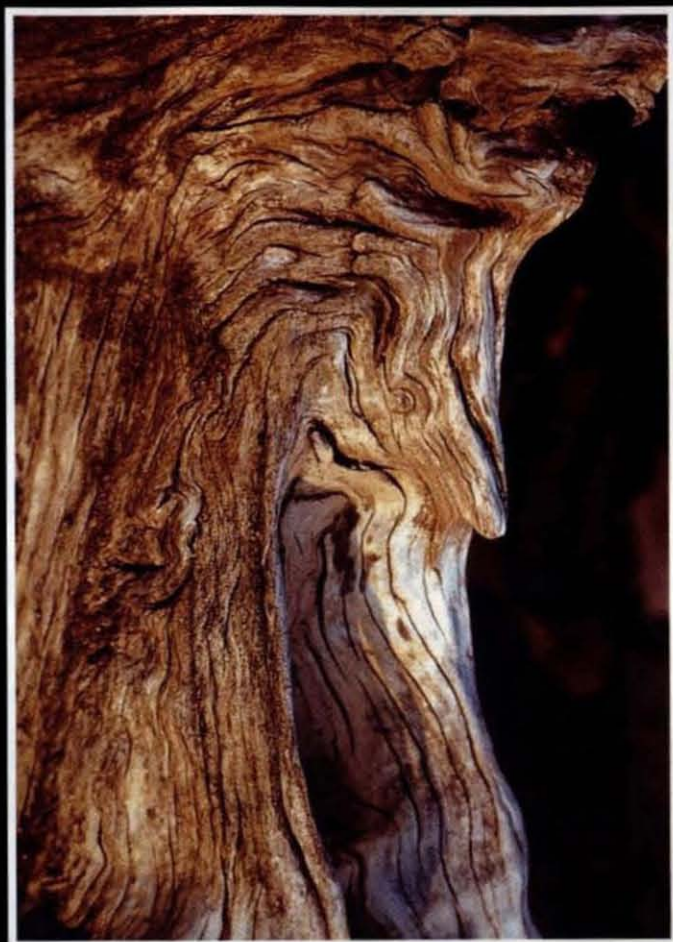
Pradip Datta

Pradip Datta is a photographer with a difference. He sees strange forms in nature as if by magic.

Light creates shadows that produce a likeness to an animate or inanimate object. It is this play of shadow that Datta captures, to reveal the unknown within the known.



The Wise Elephant



Bearded Old Man

Mighty Bull



THE Snakes of Mumbai's Sewers



AARON S. LOBO

■ Aaron Savio Lobo

Aaron Lobo has recently completed his Masters from the Wildlife Institute of India, Dehradun, and has a keen interest in sea snakes

“Snake!” This word always generates more than its fair share of excitement; and after a stunned moment, a person would ordinarily run away from the scene. I, for no reason other than my obsession with herps, ran towards the snake – or rather plunged obliviously into muck and attempted a clumsy run, which thankfully was good enough, and soon I caught the glossy marsh snake or Gerard’s water snake (*Gerarda prevostiana*) before it slithered into a crab hole, a strategy usually employed by the species to escape predators. I then held up my prize catch and beamed.

My adventure had been planned a day earlier, when after a couple of phone calls I had managed to squeeze in a trip to the mangroves during my short stay in Mumbai. The Gorai-Dahisar stretch was ideal, as my friend and fellow snake lover Kaivalya lived there and was most familiar with the species present. He also told me that though the water would be polluted, as in most other parts of Mumbai, it definitely appeared cleaner.

As always, appearances could not have been more deceptive! I’ve seen my share of filth, but nothing could have prepared me for what I finally saw. The mangroves at Gorai, like the other mangrove habitats of Mumbai, are sinks for the pollutants of that area. Besides a large garbage disposal yard, which could possibly be mistaken for a small hillock, located adjacent to the Gorai creek, the area was polluted with human faeces and domestic waste. There was also a fair amount of chemical pollutants. To avoid the regulatory authorities and due to easy access to water, illegal breweries manufacturing local alcohol had sprung up in and around the area. Their by-products were released into the waters of the creeks, polluting the water and destroying aquatic life, and were a hazard to human health. All this constituted the muck in which I was now waist-deep!

Walking along bunds adjoining the mangrove swamp, scanning the edges of the creeks, I pondered the possibilities of any creature surviving these toxic



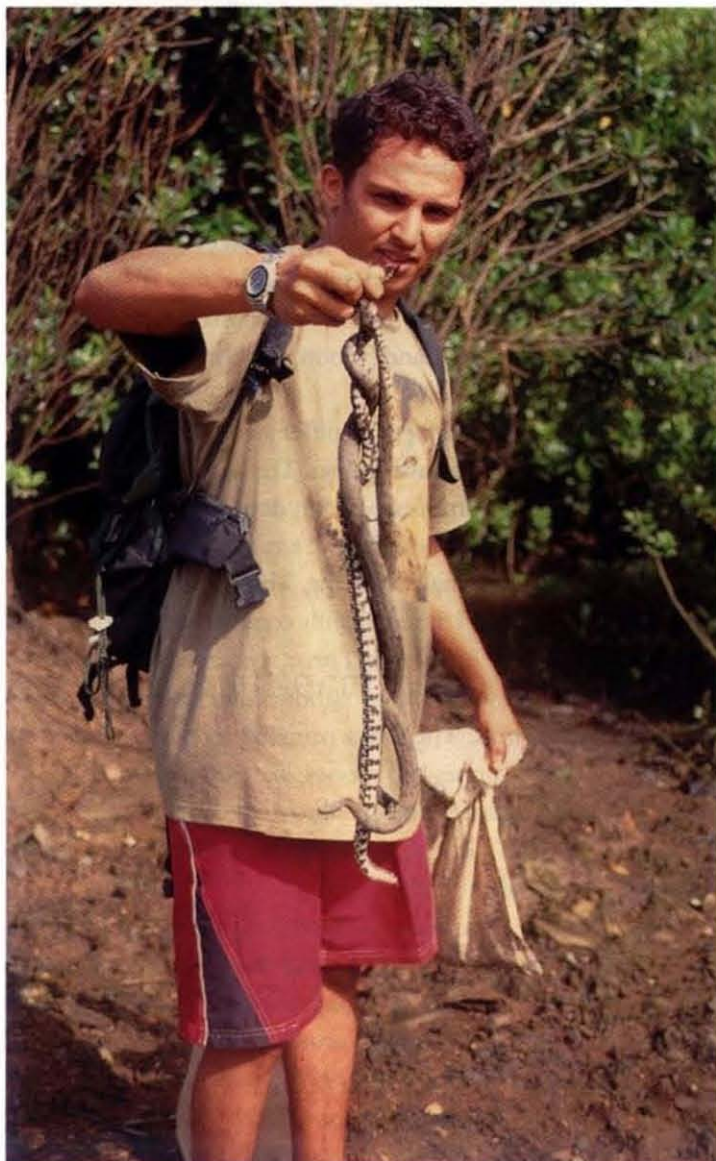
AARON S. LOBO

**Above: A glossy marsh snake slithers through the mangrove pneumatophores
Below: Aaron with a handful of dog-faced water snakes**

waters. "Snake", I heard my friend call out, putting an abrupt end to that line of thought. What transpired next you have already read.

The marsh snake is a docile creature, and did not attempt to bite me. The local fishermen commonly encounter snakes on their fishing lines. They gently remove the hooks from the snake's mouth and release them. In less than an hour we had five individuals, which included a dog-faced water snake (*Cerberus rhynchops*). Both the glossy marsh snake and the dog-faced water snake are two of the six species of subfamily Homalopsinae that occur in India.

After the exhilarating experience of the day, I couldn't resist another excursion in the murky night, as both the snakes are nocturnal, and I expected to see many more individuals at night. Moreover, I hoped to sight the wart snake (*Acrochordus granulatus*), which is commonly encountered in these habitats. As it turned out, I was right. Not only did we see many more snakes, we were lucky to see several dog-faced water snakes feeding. I had earlier witnessed this species in captivity, foraging with open mouth to strike at schools of fish. Most of the snakes had congregated at the narrow mouths of streams, which opened into larger streams; these areas had a large number of catfish. The catch was taken to the nearest muddy bank by the snake and swallowed headfirst, as the catfish possess venomous spines, which could inflict fatal injuries if swallowed otherwise. Moreover, the spines would be erect if swallowed tail first,



SHASHANK DALVI



AARON S. LOBO

A large number of dog-faced water snakes had congregated for a catfish meal

preventing the snake from swallowing the fish. Snakes do not restrict themselves to swallowing their prey on land and I have often observed them swallow fish and frogs underwater. The fish struggled only for a while, as the mild venom produced by the Duvonroy's gland (venom gland in these species) had its effect soon.

Homalopsines differ greatly from other aquatic and semi-aquatic species. The head of these snakes is slightly compressed, with dorsally oriented eyes and nostrils. The nostrils have a valve which remains closed while the snake is diving. The scales of the body are keeled, and the tail slightly compressed, enabling them to swim efficiently. These species have mild venom which they use to subdue their prey and also in digestion. Their diet primarily consists of fish and frogs, but several species, like the glossy marsh snake and white-bellied mangrove snake *Fordonia leucobalia*, known to occur in the Andaman Islands, are known to feed on crabs.

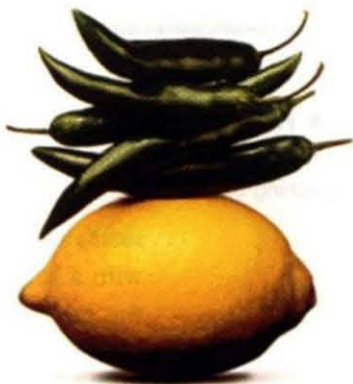
I was amazed that the snakes survived at the Gorai mangroves; that they actually thrive is unbelievable. Not just snakes, but several other species of molluscs, crustaceans and fish (including catfish and mudskippers) which are the prime prey items of the dog-faced water snake are in plenty here. I was told, and would like to believe, that the

level of pollution was much lower in the past and had increased dramatically in recent years. The increase in population has aggravated reclamation of wetlands on this city of Islands, further decreasing the fast vanishing homes of these beautiful species.

Despite pollution, the area has great potential for thorough ecological studies on little known species, such as the glossy-bellied marsh snake. However, to study a species if the habitat in which it lives cannot be protected appears futile to me. Besides supporting an array of life forms, these wetlands are also essential for our continued existence. They generate food in the form of fish, and other useful plant and animal produce such as honey, beeswax, and herbal medicines. Statistics reveal that 45% of all Indian wetlands are moderately to highly threatened. Saving or restoring wetland areas is expensive, and in Mumbai even more difficult. The Ministry of Environment and Forests, Government of India is known to provide financial assistance to states for conservation and management of wetlands. This assistance could help fight the odds contaminating the environment, and save habitats such as the Gorai mangroves and ultimately the snakes of Mumbai's sewers. §



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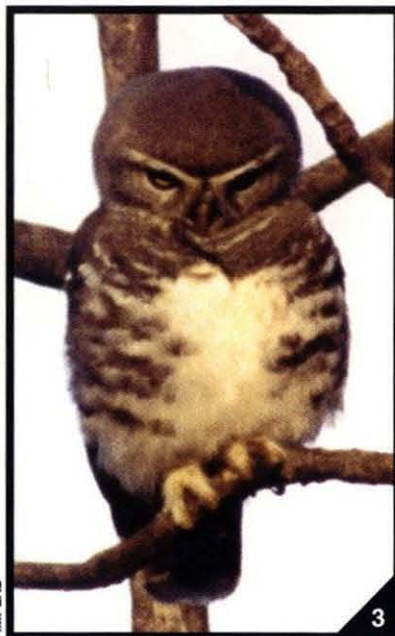
Spot the owlet



PAMELA C. RASMUSSEN



FARAH ISHTIAQ



P.M. LAD

■ P.M. Lad

P.M. Lad is a former Chief Conservator of Forests, Madhya Pradesh. He enjoys watching and photographing birds

Navendu and I were out photographing forest owllets *Athene blevis* in northern Maharashtra in April 2002. We got some good pictures of two owllets the first day, but still wanted more, so we were back the next day. After a short search, we saw a forest owllet with a lizard held in its claws. Navendu photographed the bird and wondered aloud if it was the same one that we had photographed just a day earlier. The breast markings were indeed identical to one of the birds that we had photographed the previous day! A little effort and we soon located the other one too.

We had good reason to believe that these birds were the same as the ones of the previous day. While setting up Van Vihar National Park in Bhopal, we had observed many tigers from close quarters and could recognize them easily from their facial markings. Used to identifying tigers by facial markings, we could easily recognize the birds by their breast marking. Our observation was, however, limited to two birds. Forest owllets have a whiter breast and belly compared to other owllets, so the dark markings are bold and easy to record. But could the breast markings of forest owllets help to identify an individual, I wondered. On returning to Bhopal, I



NAVENDU LAD



NAVENDU LAD

CAN YOU TELL ONE INDIVIDUAL from another in these photographs? P.M. Lad, a BNHS member wonders if the dark markings on the breast of a forest owlet could help identify one forest owlet from another. Do you, our readers, agree with this?



6

P.M. LAD



7


P.M. LAD



8

P.M. LAD

compared the new photograph with the earlier three in my possession. One taken by me in November 2001, another by Farah Ishtiaq which was sent to me by Asad R. Rahmani, and one which appeared in *Hornbill*, March 1998, by Pamela Rasmussen *et alia*. All the five birds had different markings.

A year later, in March 2003, I was back in the forest owlet area. This time Kishore Rithe accompanied me. We photographed two other birds this time. In the evening, we heard the birds calling, sounding like they were challenging one another. In May 2003, we photographed three more birds and found that the markings were different. I had photographs of 10 birds with obvious differences in breast markings. I discussed my observations with some bird watchers in the hope that this could be of some use to science. But they felt that the markings could change with time! I hope other bird watchers will shed light on this issue. I was hopeful that at least one bird species would have individuals that could be recognized in the wild. But it seems that more work remains to be done. Would it not be interesting to study changes in marking in forest owlets? 



9

P.M. LAD



10

P.M. LAD



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for HORNBILL readers

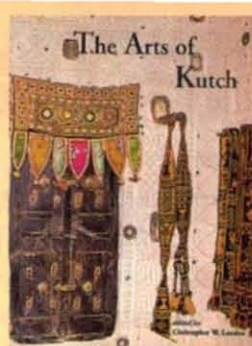
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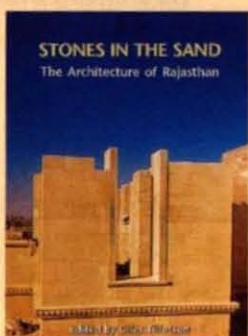
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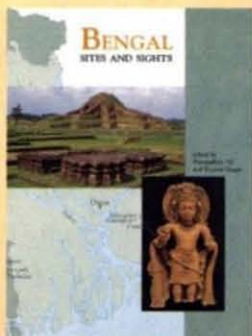
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On the Trail of the Wild Buffalo

Rushikesh Chavan

Rushikesh Chavan is the Assistant Conservation Officer at the BNHS

IT TOOK US SIX HOURS to reach Indravati river from our Kamalapur camp, a mere 20 km away. But we had no regrets, for the forest patch that we were traveling through was towering with bamboo clumps and interspersed with gnarled trunks of ancient forest giants. Using the axe in this dense forest, to clear the road, hurt me more than it must have hurt the branches ... I guess! But this act was essential as we were looking for the elusive wild buffalo of India.



P.M. LAD / SANCTUARY PHOTO LIBRARY

The wild Asiatic buffalo *Bubalus bubalis* is one of the most threatened species of wild herbivores, with its last few populations found only in some parts of Central India and the Northeast, their numbers now remain less than hundred in Central India. They are the wild stock for our domestic buffalo, and the security of the Rs. 80,000 crore dairy industry (figures for 1995). According to the Ministry of Food Processing Industries, India, the second largest milk producing country, had an anticipated production of 78 million tons during 1999-2000. Fifty percent of the buffaloes and twenty percent of the cattle in the world are found in India, most of which are milch cows and milch buffaloes. If these were to succumb to a disease, imagine the catastrophe it can cause to the industry. We need to be prepared for such an eventuality and take urgent steps to protect the third largest terrestrial mammal of India. The only hope for the buffalo is conservation on the basis of sound science.

And so we set off on a survey. Our objectives were clear, to determine the presence of wild buffalo herds in peak summer in Gadchiroli, Sironcha Division

(Maharashtra State) and northern boundaries of Andhra Pradesh, map the actual and potential wild buffalo habitats and its continuity, collect information on poaching pressure, major disturbances and habitat loss of the species.

We began early at 5:30 a.m. on the first day to avoid the scorching summer heat of 48 °C. With every metre that we traveled inside the forest, it turned denser and richer! Pratap with his hawk-like sight spotted various flycatchers, high-flying vultures, peafowl and giant squirrels. Kishor stopped the Gypsy and slowly moved out to snap a pair of nimble giant squirrels. Further on, the forest more full of wildlife, spotted deer, sambar, gaur, even a mouse deer that had a perfect habitat among those large trees, where they make their home. As we reached the Indravati, its gentle waters had a soothing effect on our senses in the hot afternoon. We divided ourselves into two groups and searched for hoof marks and other evidence to confirm the presence of the wild buffalo. We had to return that day with sightings of just old hoof marks and dung.

Next morning, we set out on the same route again, but this time the forest felt different. We first found a dead ground thrush on the road, then a racket-tailed drongo just further ahead, a rodent, peacock and then sunbirds! Did the heat take this toll? Unsure, we decided to use one of the hand pumps and created a small bund, collected water in it, hoping to bring some relief to the wildlife. But heat was probably not the only one to strike that day. As we went further, we saw five people running, and all of us knew that something was wrong. We immediately got out of the Gypsy and hurried to the spot to see our worst fears come true – a handsome male sambar with his intestine and stomach out and sticks brutally pierced through his legs! I was frustrated and depressed. We collected dry wood and set the deer ablaze in it, seized the seven knives, a couple of axes and utensils, then moved on as we didn't want to miss the buffaloes that are known to visit Indravati near Makhanpalli during the early hours of the day. We reached our destination, and looked delightedly first at each other and then the buffaloes! Our eyes were glued to them, but the binoculars soon spoiled the fun. The buffaloes were domestic, not wild. "We are late", said Ashish Fernandes, the wild buffaloes had already visited the area!

We decided to wait until it was dark and looked for a good spot before settling in the shade beside the rocks. I looked out for the crocs that we had seen earlier. The sun was blazing and the heat was unbearable with every passing minute. By evening Pratap and I had decided to take a plunge in the water. Kishor warned us that the crocs were still around, but the heat won and we plunged into the cool, dangerous waters. We were thrilled and felt privileged to be able to swim with the monarchs of the waters. We waited and waited, but the buffaloes did not come.

Dejected, we decided to return, as the forest guards were worried about Naxalite activities. At night, we sat with the forest department staff and gathered information and identified the potential sites where buffaloes could be sighted.

In our search, we moved up to the Somnur confluence in Asarali, where the two magnificent rivers Indravati and Godavari embrace each other. A beautiful sight, but the wild buffalo was still eluding us. Kishor skillfully gathered information from the fisher folks that buffaloes had started coming only during the night and used the forest patch to move between the adjoining forests of Chattisgarh and Andhra Pradesh. Biotic pressures had undoubtedly restricted the buffalo so it came out to the water only in the dark. We abandoned the idea of patrolling at night to avoid the confrontations that occur between naxalites and police. The forest guards were very apprehensive too. We surveyed the entire area the next day and collected some useful data.



It was too late to save this handsome male sambar

Time was running out and we had to move on. The next day we crossed the Chintawaghu river and were most fortunate to see vultures near Bhopalpatnam. Depila, Tarlaguda, Venkatapuram, Kuttur, Gadekkal, Nayapara all surveyed, we finally rested in the Venkatapuram Rest house after an exhausting day. Early the next morning we left for Cherla, met the DCF North Bhadrachalam and moved on to visit the corridor between Subbampeta to Idra.

At Subbampeta we met an old villager Narsingh, who went for hunts with his British Officer when he was young. He recalled incidents when they had hunted buffaloes. We didn't want to leave any area uncovered, so we decided to visit Pushgupa, a settlement that the forest department calls an encroachment. We were

RUSHIKESH CHAVAN



RUSHIKESH CHAVAN

enjoying bird calls when we saw four or five men walking with some luggage in hand. We stopped them and found bows and arrows. They were *gonds* from Bastar, who walk great distances through the forest of Bastar in search of employment. On their way they hunt whatever passes by. It was amazing to see the different heads on the arrows, a flat heavy head for small birds and sharp razor edged arrows for mammals. We confiscated their arrows and moved on.

Humans are not far away when you see clear jungles with burning trees



RUSHIKESH CHAVAN

The thick forest soon started to thin, the first sign of human settlement, followed by clear felled areas for farming and a tree burning at the base, a popular method of felling trees. All one has to do is collect some twigs and set them on fire at the base of a tree; in a couple of days the tree comes down silently. We walked to the settlement which was just 100 m away. As Kishor and Ashish engaged the villagers in a chat, Vishal, Pratap and I went around the houses and found animal trophies mounted on the wall. The villagers confirmed that buffaloes used to visit the adjoining hills, but for the last eight to ten years they had not seen any.

After ten days of intense survey in the burning heat and suffering sunstrokes, it was time to leave. None of us wanted to say goodbye to the forests and the crystal waters of Indravati and Godavari. My parting thoughts were "How can we protect this magnificent animal? How could one stop people from venturing in to the forests, to collect tendu leaves and mahua flowers, which not just disturbed the wildlife but cost people their lives?" Our major concern was to stop poaching, the growing encroachments and saving wildlife corridors, the main hope for the wild buffalo of the Peninsular population, confined for the last two decades to the four protected areas specially set up for them in Madhya Pradesh - Udanti Sanctuary, Bhairamgarh Sanctuary, Pamed Sanctuary and the Indravati National Park - Tiger Reserve. BNHS with support from its Green Card members has managed to survey these areas and will continue to take action based on scientific research. I take this opportunity to thank all the Green Card members who made this survey possible and also to seek their continued support. 🐃

Indian Coast Guard

The Green Guards on water



DEEPAK APTE

AS A PART OF THE PROJECT funded by the Vasant J. Sheth Memorial Foundation, a two-day training programme was arranged at the Andaman Islands from April 30, 2004 for the Indian Coast Guard personnel. Vice Admiral Sureesh Mehta, Director General, Indian Coast Guard, generously supported the programme. Comdt. Srinivas and Dy. Comdt. Pankaj Varma, helped finalise the programme which was attended by 41 officers.

Commander Coast Guard, Andaman and Nicobar (A&N) Region, DIG S.P.S. Basra inaugurated the programme, held at Port Blair. Applauding the work done by the Bombay Natural History Society (BNHS) in environmental conservation, he made an illustrated presentation on the Coast Guard activities in environment protection, such as controlling oil spills, prosecuting illegal wildlife traders and rescuing stranded large mammals, such as whales. He emphasised the need for better coordination between NGOs and government organisations, such as the Coast Guard and assured his continued support to the programme.

Mr. Deepak Apte, Conservation Officer, BNHS made a brief presentation on how the Coast Guard can help BNHS in its conservation efforts for globally endangered species. Three globally important species, namely dugong, giant clam and leatherback turtle were identified during the workshop. The strategy being:

1. With a small number of species as priority species, documentation can be effective, if not easy.

2. Focus over the coming year on these three species, will draw the attention of a large population to their conservation needs.

The species list could be increased in subsequent years, if the documentation process is found useful and effective.

Mr. Sameer Acharya from the Society for Andaman and Nicobar Ecology (SANE) gave a detailed perspective about the conservation issues of Andaman and Nicobar Islands. Mr. Apte gave a detailed presentation on giant clams and their recent inclusion in Schedule I of the Wildlife (Protection) Act, 1972, besides providing deep insights on ecological and biological aspects of giant clams, and conservation issues related to them.

Dr. Ambika Prasad Tripathy, Andaman Nicobar Ecology Team (ANET), who is working on turtle conservation in Andaman and Nicobar Islands, provided a detailed account of turtle nesting and congregation activities in the A&N Region. He emphasised on the conservation issues of turtles, especially the leatherback and hawksbill turtles. He highlighted the vital role of the Coast Guard in documenting nesting beaches inaccessible to researchers, but not to Coast Guards, due to their extensive facilities in terms of communication and accessibility.

Mr. Deepak Apte spoke on the status of dugong in India, followed by a presentation by Ravi Chandran, Deputy Conservator of Forests, Wildlife, A&N Islands on wildlife trade of endangered species. Mr. Chandran also briefed the audience about national laws and

DEEPAK APTE



The Indian Coast Guard can play an important role in the conservation of the Andaman region

international conventions related to the protection of endangered species.

The second day was fully devoted to a visit to Ritchie's Archipelago. The entire group sailed by S.S. Laxmibai on May 1, 2004. The first halt was at Havelock Island. Dr. Tripathy briefed the participants about nesting behaviour of sea turtles, while the locals informed of a dugong sighting a few days earlier on

the reef of Havelock Island. In the afternoon the vessel sailed back to Port Blair via Neil Island, which is also known to have dugong. This site visit aimed to understand the complex habitat association between tropical rain forest, mangrove forests and reefs.

The next two sessions of two days each in Andaman and Nicobar will be conducted by the BNHS in December 2004-January 2005. 🌳🌳

EDITORS' CHOICE

Courtesy: Earthscan Publications Ltd., London
Cartoon by: Chris Madden



Banding at Pong Dam



S. BALACHANDRAN

A colourful blue-throated barbet at Pong Dam

THAT BIRDS MIGRATE is a fact that has been known to man for a long time. But no conclusive answers are available to the mystery of bird migration. Marking birds with an aluminium band has helped to answer some of the queries, but a lot still waits to be unraveled. The BNHS is the only organisation in the country that has been banding birds for the last four decades by employing professional bird trappers. The birds are trapped using mist nets, thin nylon nets setup against a dark background. The trapped birds are then carefully disentangled from the nets, weighed, measured and banded with an aluminium ring that has a serial number and BNHS marked onto it before setting them free. When the bird is caught in a different part of the world, or in the same place on another occasion the ring answers questions, like the route and time of migration of the birds among other things. Banding also helps to keep a check on the health, age and breeding profile of the bird and the health of a wetland. If the same bird is trapped again the next year it indicates that the wetland is more hospitable and healthy, and the birds will keep coming back.

The State Council for Science and Technology and Environment, Shimla recently invited the BNHS to band birds at the Pong Dam, an internationally well-known

Ramsar site in Himachal Pradesh. The Pong Dam has a waterspread of 15,662 ha. Dr. S. Balachandran of the BNHS, and his team along with some representatives from local organisations, gathered at Pong Dam from January 20 to February 9, 2004 to trap and ring birds, this being the first time at Pong Dam.

The migratory birds seen at Pong Dam start their southward journey sometime in October. Some species can fly up to 48 hours at a stretch. En route to their final destination, these birds stop at various points to rest and rejuvenate themselves. They usually spend about two weeks at a resting point before flying again.

What was unique about this camp at Pong was the abundance of the bar-headed goose, over 20,000, about a third of the world's population! Among the several birds ringed at Pong this year were six European chiffchaff. These birds weigh only 6 gm, but travel for about 6,000 km from Europe. The pintails and common teal that come from the Arctic, the cormorants that fly in a V-pattern covering about 1,000 km in a day, ducks, waders, flycatchers, chats, barbets, wryneck and warblers were among the 328 birds of 50 species that were banded on this occasion. This camp received good support from the locals and was widely publicised by the media. 🐦



The bird banding team at the Pong Dam



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Promoting Nature on Wheels

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(SBI) has made a generous donation of Rs. 10 lakhs to the Bombay Natural History Society (BNHS) for a fully equipped educational van. Mr. A. Ramesh Kumar, Chief General Manager, State Bank of India handed the cheque to Mrs. Pheroza Godrej, Vice President, BNHS at a function held at Hornbill House on March 25, 2004.

The SBI, one of the leading banks of the country, reaches out to the remotest corners of India to serve people from all walks of life. It has a long tradition of exemplary work in carrying out its social responsibility, and has become a hallmark of excellence.

The SBI and BNHS have joined hands from time to time, to broaden the understanding for protecting the environment and conserving nature. The BNHS recognises that in India, the need of the hour is to educate people and win them over, to help conserve our biodiversity. The van will enable the BNHS, through its Conservation Education Centre at Goregaon, to build bridges to reach people



Mrs. Pheroza Godrej Vice President, BNHS accepting the cheque from Mr. A. Ramesh Kumar Chief General Manager, SBI, with Mr. J.C. Daniel then Honorary Secretary, BNHS and Dr. A.R. Rahmani Director, BNHS

– forest dwelling tribals, farmers, school children, teachers, corporates, and government officials – and make them partners in conservation. ■

Salute Mumbai 2004 for BNHS



Dr. Rachel Reuben Honorary Secretary, BNHS receiving the Salute Mumbai 2004 award

IN MUMBAI Television channel has instituted awards to recognise the achievements and contribution of citizens and institutions to the city of Mumbai.

The 2004 Salute Mumbai Award for institutions was awarded to the Bombay Natural History Society (BNHS), in recognition of its contribution in the area of environment protection, nature conservation and awareness. Dr. Rachel Reuben, Honorary Secretary, BNHS received the award on behalf of the Society during a ceremony on April 14, 2004. The award ceremony was telecast on the IN Mumbai Channel. ■

Nature Information now at your doorstep

MUMBAI'S RENOWNED Sanjay Gandhi National Park (SGNP), popularly known as Borivli National Park, has a new Nature Information Centre (NIC). The Centre was inaugurated on World Earth Day, April 22, 2004, by Mr. Ashok Khot, Chief Secretary, Forests, Government of Maharashtra.

This Centre is a joint effort of the Maharashtra Government Forest Department, Bombay Natural History Society (BNHS), and BG India (British Gas), an international natural gas company.

In addition to the Park being home to many endangered species of flora and fauna, the Tulsi and Vihar lakes within it are Mumbai's main source of drinking water. The NIC was created by revamping the Park's primary information centre. It aims at raising awareness and addressing the need for nature conservation, and highlighting the importance of the SGNP to Mumbai through colourful and informative exhibits, slide and film shows and guided nature trails. A specialist team from the BNHS and the Forest



(R-L) Amit Chavan Project Coordinator escorting the guests Mr. David Wohlschlegel MD British Gas, Mr. B.G. Deshmukh President, BNHS and Mr. Ashok Khot Chief Secretary, Forests, through the exhibits displayed at the NIC

Department will conduct these programmes. The project has been sponsored by BG India. The new programmes are expected to benefit the over three million visitors to the Park each year, as well as to attract budding nature enthusiasts. ■

Water concerns and World Environment Day

FORESTS AND WATER was the theme of the photography exhibition by Mr. Pallava Bagla for this World Environment Day. Mr. Hemendra Kothari, Chairman, DSP Merrill Lynch Ltd. inaugurated the exhibition on June 5 at Hornbill House. While some of the photographs captured the stark reality of environment degradation, others displayed undisturbed nature in all its glory.

Also present during the inauguration were Mr. Ashok Khot, IAS, Additional Chief Secretary, Forests, Government of Maharashtra, Dr. Digvijay Singh, former Minister for Environment, Government of India and Mr. Mathew Cherian, Executive Director, LEAD-India.

Mr. Pallava Bagla is an award winning photojournalist who was conferred the global award for 'Outstanding Journalism' in 2003. He is currently India-correspondent for the American weekly *Science*. For Mr. Bagla, documenting the celebration, politics and use of water has been a passion for the last two decades.

The exhibition was held under the aegis of the City Forest Fund, BNHS and is a joint programme of



(R-L) Mr. Hemendra Kothari and Mr. Pallava Bagla at the exhibition at Hornbill House

LEAD-India and BNHS. Leadership for Environment and Development (LEAD) is an international NGO, which strives to create and sustain a global network of leaders who are committed to promote change towards patterns of economic development that are environmentally sustainable and socially equitable.

On the same day, at the newly inaugurated Nature Information Centre, Mr. Prem P.S. Yaduvendu Chief Conservator of Forests (Mumbai) burnt the animal trophies confiscated by Forest Officials on World Environment day. While speaking on the occasion Mr. A.R. Bharati Deputy Conservator of Forests (SGNP) appealed to the public to stop encouraging wildlife trade. ■



OUR MISSION

Conservation of nature, primarily biological diversity, through action based on research, education and public awareness

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