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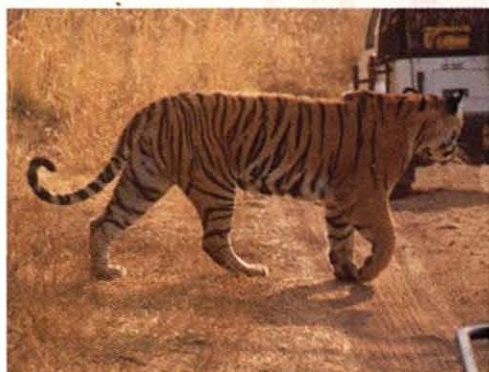
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4. Return to Ranthambhore
— Rivka Israel

Each day at Ranthambhore has so much to show that a return after the first visit is inevitable. The author also promised herself a return despite many such visits.

12. In Search of a Hidden Treasure
— Varad B. Giri

It was only much after actually unearthing the treasure that the author realised he made a valuable addition to the list of known caecilians in India.



30. The Misunderstood Ally
— Ashok Purohit and K.R. Senacha

Traditional beliefs need to be corrected, especially if friends are mistaken for enemies. The author introduces us to one such misunderstood ally.

34. Rescuing the Lord of the Nether World
— Satish Pande

It took a bit of convincing and caring from a group of friends before the Lord of the Nether World was returned to his domain.



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Published and printed quarterly

by J.C. Daniel for the

Bombay Natural History Society,

Printed at Sel Print India Pvt. Ltd.

Lower Parel, Mumbai.

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

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TWILIGHT OF THE GODS

VIEW POINT

J.C. DANIEL



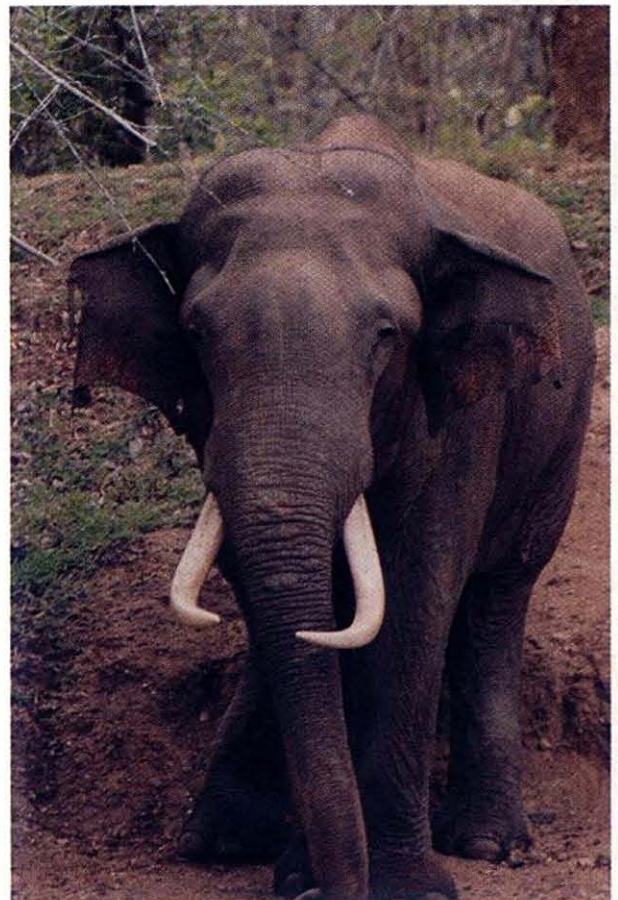
The elephant in spite of being a vibrant part of Indian culture, is in a much more parlous state than the tiger, and faces problems which seem to be insoluble.

India holds the largest of the Asian elephant populations. The elephant, unfortunately, is the most difficult species to conserve because it eats its habitat. All herbivores do, but not on the massive scale that a herd of elephants does. Therefore, corridors between habitats have to be maintained and for conservation several contiguous sanctuaries are needed to form, what are termed, elephant ranges. The problem is that contiguous sanctuaries are often interstate and an unified or single management does not happen. State egos and personal egos are not conducive to co-operation.

The elephant has not achieved its named reserves, the corridors for movements continue to be lost, and the situation is as precarious as ever. Tea has replaced the natural forest in elephant country. Tea and its pesticides make a green desert, bereft of birds and the insect life they live on. We also make these green deserts sometimes in our efforts to green the earth.

We do have a Project Elephant in existence over the last ten years, a low-key version of Project Tiger and without its external and internal funding and band of devotees who have made the tiger a conservation cult figure.

Elephants are fighting a losing battle for survival and the conflict continues. Let us hope that *Vighnesvara* (Ganesh, The Lord of Obstacles) will be able to overcome the problems that face him.



Credits: Elephant photographs, J. Sriram
Elephant Sculpture, Sun Temple, Konark, 13th Century, A.D., Hemant Datye

RETURN TO RANTHAMBHORE



MANISH AHUJA

■ RIVKA ISRAEL

Rivka Israel joined Marg Publications as an Executive Editor after many years with Oxford University Press. She is a member of BNHS, a keen wildlifer, and travelbug



SOONOO TARAPOREWALA



MANISH AHUJA

Sambar grazing and posing for photographers are among the visions that last forever

MUMBAI CENTRAL, December 17, 6.15 pm, 28 of us on the train to Sawai Madhopur. Doreen has organised a trip to Ranthambhore National Park. The journey gets us all acquainted with each other, sharing food, discussing the merits of various bird books, drinking tea and soup. That night we shiver as we enter the cold belt, get woken up at every station, and have our first sightings – several cockroaches and a rat!

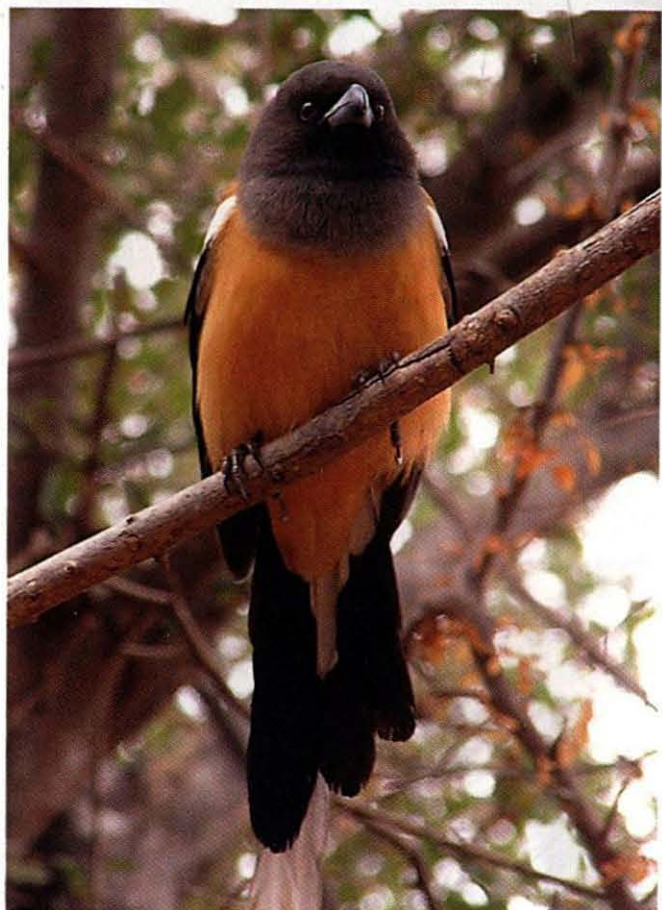
Shafi Mohammad, veteran Ranthambhore driver and guide, trained by the legendary Fateh Singh Rathore, is at Sawai Madhopur with his son Kalim, to take us to Hammir Wildlife Resort. Quick baths, and lunch in the garden sun with tree pies and red-vented bulbuls, then

the Canter and Gypsy arrive to transport us in two groups to paradise. This is the fourth time I'm in Ranthambhore, have enjoyed so much wildlife here, but am yet to see its great tigers.

The wind bites through us even in the afternoon sun as we zip towards the majestic gateway into the Park. The ramparts of Ranthambhore fort soon come into view. The thrill of entering the forest again never dulls, each time you go you re-experience the euphoria of being close to everything that matters most on earth. Rose-ringed, plum-headed, and alexandrine parakeets, and tree pies noisily usher us in, while the silvery coats of the langurs glisten as they play or sit around with thoughtful looks, hands on knees. The gentle chital lift their heads at the

Canter's sound, the males with velvety antlers. Sambar graze and a regal stag poses for the photographers. Nilgai gallop off at our approach, clumsily graceful, and a mongoose with a black-tipped tail scurries across the path. We stop to look at a family of spotted owlets – two little heads popping out of a hole, another on a branch of the same tree. Their half-open eyes widen and lovely yellow irises gaze at us. Then we come to the water, but this time the birds are fewer than I've seen before, though we do spot bronze-winged jaçana, purple moorhen, brahminy or ruddy shelduck, common coot, purple heron, and the ubiquitous red-wattled lapwing. Crocodiles laze on the banks of the jheel, some float just below the surface of the water.

Our Friday morning ride is eventful. First we see a pair of jackals leisurely cross the road behind our Canter. We see the owlets again, this time two in one hole, one in another. Then two collared scops owls – one sitting on a branch, another wedged between two branches, they turn their “horned” heads to peer at us. (On a later ride some of our lucky group see the Indian eagle owl.) More



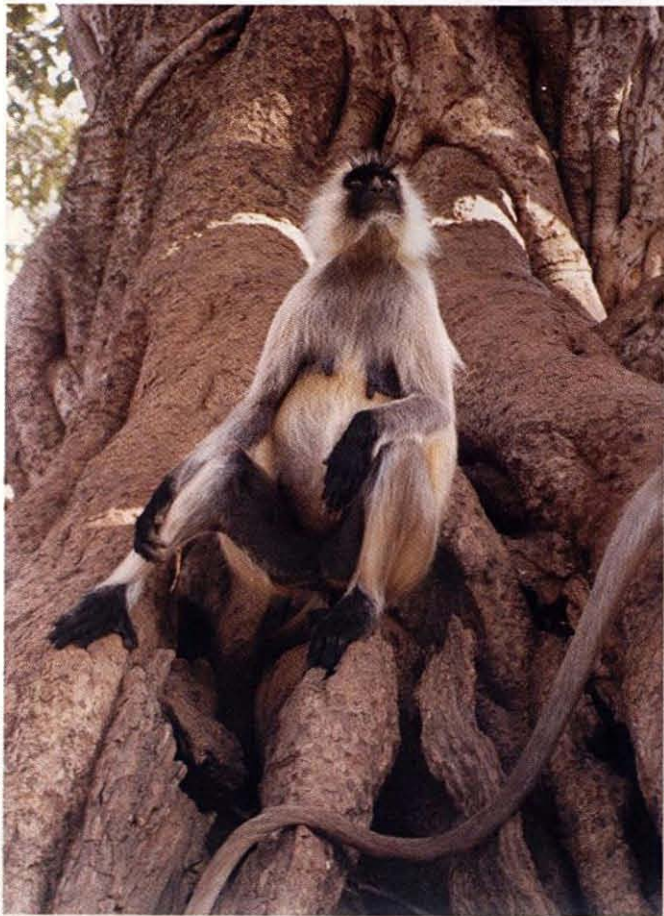
MANISH AHUJA



Sighting a treepie in the park is not very difficult



Langurs with glistening coats and thoughtful looks are a delightful bunch



SOONOO TARAPOREWALA

crocodiles, one of them in exactly the same position as yesterday, squat on a bank with snout in the water. An Oriental ibis dips for fish, while a darter stretches its wings, and a black-winged stilt stalks the water. As we drive around the Lakarda area, we stop to watch a white-breasted kingfisher on a branch near a rocky outcrop which leads down to a patch of water. At that time we notice nothing, but we soon return to the spot and there we see what we've all been longing for – a tigress on a rock. We watch her preen herself, get to her feet, and come down for a drink. Then she crosses over to our side, is out of sight for a bit, but makes a splendid reappearance, unhurriedly going into the trees behind us. We see her, lanky looking from the back though so broad and powerful in frontal view, the endearing white spots on the backs of her ears. She turns and stops again to



MANISH AHUJA

▲ The graceful nilgai galloped away at the sound of the approaching canter

Sighting a caracal in the park is indeed rare ►

give us another good look at her, raising her tail, then looks intently into the bushes raising her paw as if she's about to stalk prey. We get a breathtaking twenty minutes of her before she decides she's had enough. In high spirits we proceed on the drive, and Farida suddenly notices an animal overhead in the branches of a tree. Peacocks below are squawking at it in fear. It's a caracal, beautiful fawn coat, large startled eyes, ears pointed and feathery tipped, tail plump and stumpy. It stays frozen in the tree for a while, giving us a chance to enjoy the glorious sight, then slowly negotiates its way down and scoots off. And to add to our joy, another animal springs out of the undergrowth – a jungle cat, that takes the chance to run off behind the caracal. What can we ask for after this, but a troop of tiny buttonquail scurrying across the road, and a long-billed vulture circling above as we exit the Park.

Fateh Singh is an old friend of Soonoo's (she's on her 28th visit to this park which has hooked her ever since her first in 1983) and we're all invited to meet him at his home which is opposite Hammir. As we stroll in we're greeted by an amla tree laden with fruit, some of which have fallen to the ground. We eat as many as we can find, teeth-curling sourness followed by a strange sweetness. There's a frog and waterlilies in the garden pond, we stop to look at a metallic blue bug, then Fateh Singh comes out to meet us and we stand listening to this greatest of Ranthambhore's inhabitants, and get photographed with him. He tells us about the Ranthambhore Foundation and its efforts to protect the park, while as importantly looking after the interests of the people who belong here. We visit the Fateh Public School which is next door, and happy children wave at us from their classrooms. In the garden we spot Tickell's blue-flycatcher.

That evening, after watching a handsome male wild boar with a shiny pink snout for a while, we hear alarm calls. There are a group of jeeps and another Canter at



SOONOO TARAPOREWALA

the place, and our tiger of the morning is there, lying in the grass, but she refuses to let us see her in all her glory though she does raise her head from time to time, wave her tail, and lick her paws. She lies there, almost flat on the grass, her beautiful colour blending marvellously with the surroundings. It's time to leave and our Canter is the first to drive off, unluckily for us, because after that she gets up and crosses the path for all the others to see. Soonoo is in a jeep with another friend there and tells us about it later. Meanwhile our jeep group has had a bonanza on the Lahpur route. They are driving along when they see what they think is a cow(!) lying on the path. She rolls over – it's a pregnant tigress! She stares at them, gets to her feet and ambles away. They can hardly believe their eyes and drive on, still in a daze, when there she is lying on the road again! God, protect her. And there's no end to their luck. Next they see two sloth bears, "so cute" they say, and the icing on the cake – a ratel or honey badger, a lovely black creature with a white stripe down

the back, listed as "rarely seen" in Ranthambhore's flora and fauna! Why couldn't we all have been there ... (sob, sob).

Next morning I'm in the jeepload, with Salim, another of Shafi's three sons at the wheel. We go to the Sultanpur area. Here one gets to experience the forest at its best, driving down tree lined paths which open into scrub, grassland, rocky landscape ... peace and quiet. Salim's driving is smooth and effortless, his love for this place evident in his every word and action. He has had the good luck of driving a BBC photographer who has made a couple of documentaries about Ranthambhore. We see less animals in this part, just a few of the usual langur, peacock, chital, sambar, nilgai, and the delicate chinkara with their curly antlers. Near the water are a black-necked stork surveying the jheel and pond heron perched on a sambar. At one point a langur gives a persistent alarm call, and there are crows and treepies making a racket which makes Salim think there's been a

The ever alert chinkara is ready to run at the slightest hint of danger



MANISH AHUJA



MANISH AHUJA

▲
**The noisy plum-headed and rose-ringed parakeets
 usher all the visitors to the park**

▼
**A pair of spotted owlets rest peacefully, oblivious to the
 happenings in the park**

kill, but if the tiger's there he's not moving, so we drive on. The Canter guys too don't see much on their ride; their guide falls asleep on them!

That afternoon we climb up to the fort, getting spectacular views of the Park at each turn. Looking over the ramparts we see a horde of crocs sunning themselves on the little island in Padam Talao. A small brown snake slithers along the side of a wall and disappears into a



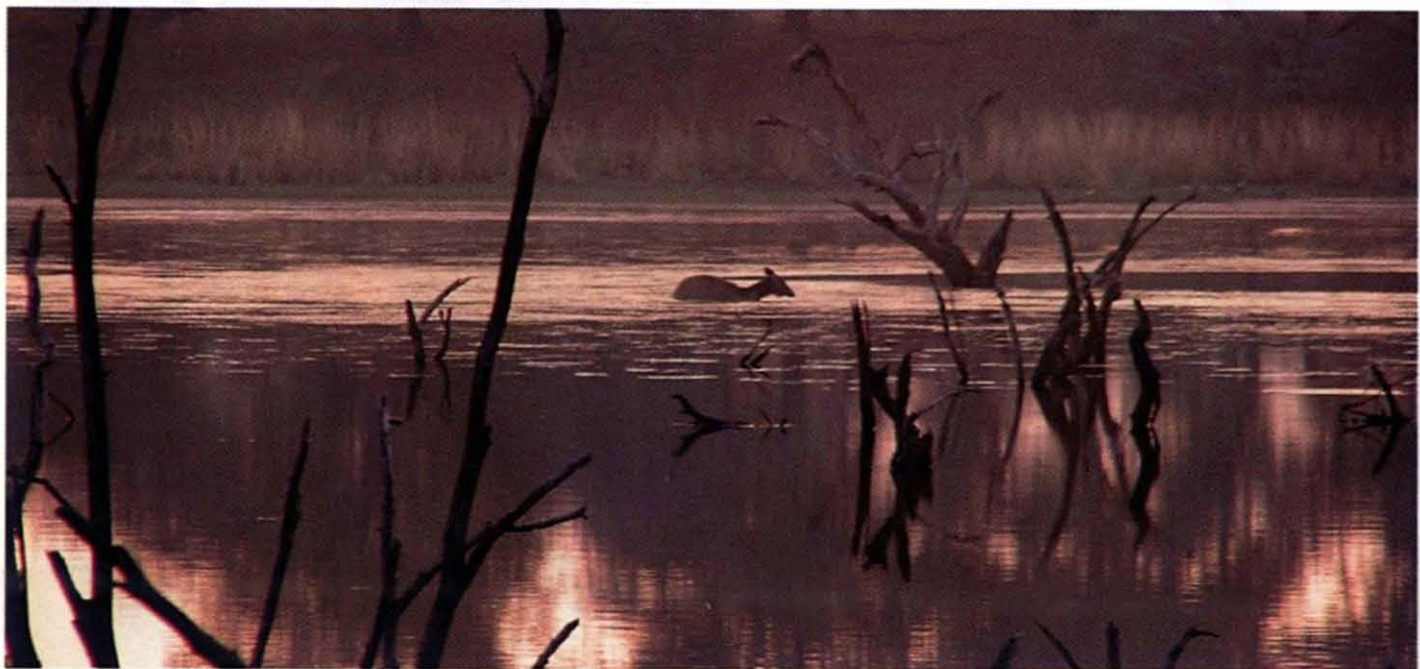
MANISH AHUJA

crack in the rocks. Langurs eye our bags, hoping to get a bite to eat. At the Ganesh mandir we pray for more sightings, though the elephant-headed god may not be too obliging where the tiger is concerned. We have lunch and visit the forest office's interpretation centre, from where we see a mongoose foraging just below the window. Then, with special permission, we spend some time at Jogi Mahal with its magnificent banyan tree, and Padam Talao with sambar, nilgai, and chital. We spy egrets, a grey heron, and cormorants, then a kingfisher on the branch of a spreading tree, another mongoose, and the good old crows. A raptor settles on a tall stump of a palm tree and after a lot of argument we conclude it's a crested serpent eagle.

After the dream ride of the morning I opt for the jeep again, this time with driver Ghaffar. We go on route 5, less frequented than the others, and the animals here are more startled by the jeep than elsewhere. Not much sign of movement, just a pair of mongoose scampering along and then crossing the road, a clutch of grey partridge frantically pecking at something by the path side, undisturbed by our being up close to them. More deer and antelope, and a beautiful sighting of male and female chinkara with young. It is a long drive and Ghaffar has turned back when Manish spots a vulture in a tree. The sun is getting low in the sky, and we can barely make

out the red head, but it is definitely a king vulture, imposing in its size and form. Just then a series of langur and chital alarm calls begin, the peacocks also joining in. Ghaffar turns around again, and sets off at a frantic pace towards the sound. We find a large group of chital scattered on both sides of the road, frozen, and looking terrified. The peacocks are complaining, we can hear the langur, and suddenly a group of wild boar gallops away in panic. Unfortunately it's getting late and we can't wait there, so hearts pounding we head back to the checkpost ... past that ... onto the road ... into a traffic jam. We could be back in Mumbai, with all the noise that's going on. Here we get a sight of humans at their worst. A tigress has killed a boar(?). And she's sitting not too far from the road having her meal. And all the jeeps and Canters possible have stopped to look. People are screaming at each other to get out of the way, the forbidden camera flashes are going off unrelentingly, the vehicle engines are making the most unholy din. Ghaffar has managed to manoeuvre our jeep into a prime position and we can see the tigress in the fading light, ignoring all the human madness, chewing on her food. But that evening we all reflect on human behaviour and feel ashamed. We visitors sometimes forget that the park is for the protection of wildlife rather than for our own selfish gratification.

A sambar wades across a stream in the dim light of the park




Every night we've been entertained by the hotel – first a video show of Valmik Thapar's *The Tiger's Fortress*, second night a cultural programme with Rajasthani musicians and dancers, joined enthusiastically by the jitterbugs in our group. Today Doreen has organised wildlife housie, and there's much shouting and excitement as each animal or bird name gets crossed off the cards.

Last day, last ride, a misty moisty morning. Great luck, Salim is at the wheel of our Canter. He sternly warns us all to be absolutely silent once we enter the jungle. Again one is amazed by the natural ease with which he handles the vehicle and his total oneness with the forest. He stops at Rajbagh, where he is convinced there is a tiger across the water. He tells us to look among the palm trees. And he's right. A large male sits at the foot of a V-branched tree. I take a long time to find him, my binocs keep fogging up, but finally there he is, and he's wonderful against the greenery framing him. There he sits for a while as we can't take our eyes off him, then he decides to take a walk. We follow him as he pads between the trees, then he is out of sight. We go on with our ride, and another pair of jackals cross our path,



MANISH AHJUA

The metallic blue scutellarid bug caught the eye of all who were present

more deer and antelope too. We stop at a checkpoint for breakfast, where treepies and babblers abound. The treepies take pieces of paratha and biscuits from our hands. The sweet biscuits are soon over and they don't like the salties so those are left for the jungle crows, with the babblers having a go at apple cores. We drive on, drinking in the beauty for the last time before we say "Goodbye Ranthambhore, we shall return." 

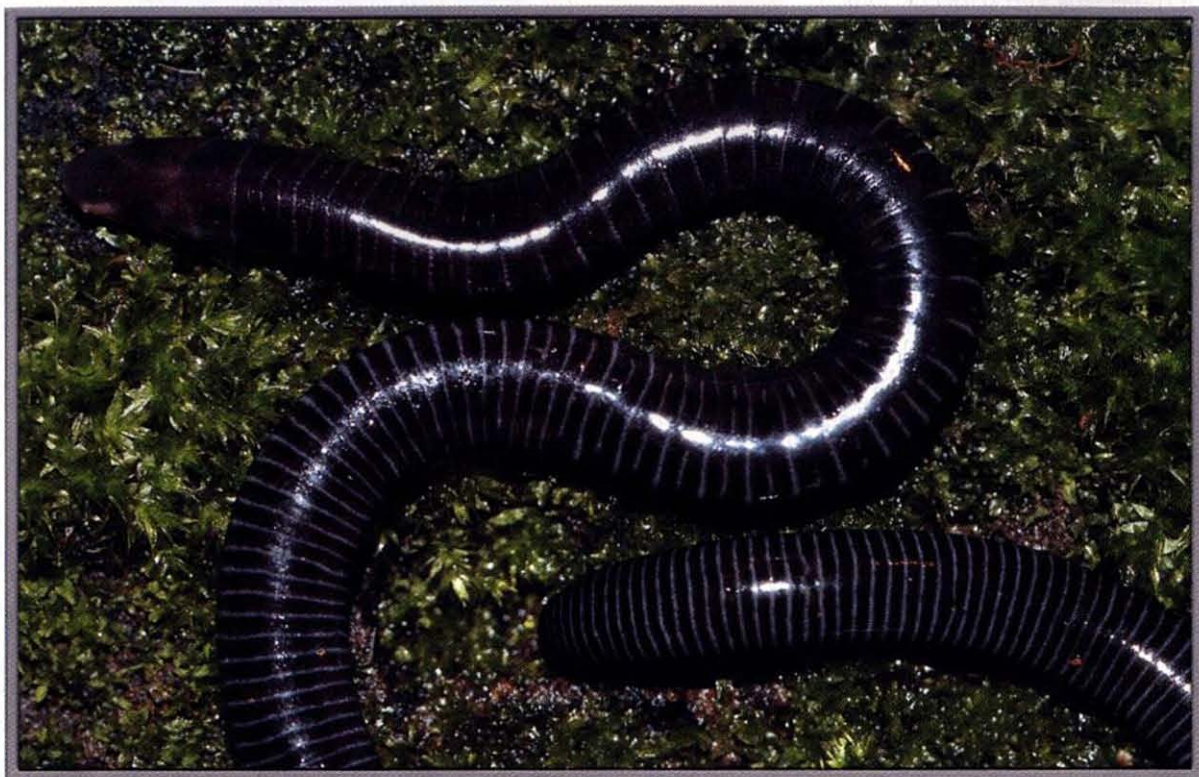
The setting sun seems to promise that the next day will have more to show making return to this park inevitable



MANISH AHJUA

In Search of a Hidden Treasure

VARAD GIRI AND SAMEER KEHIMKAR



WHEN A TREASURE HUNT BEGINS THE EYE STARTS SEEKING KNOWN
BOOTY. BUT THE SEEKERS IN THIS CASE DID NOT KNOW THAT THEIR
HUNT WAS GOING TO UNEARTH A TREASURE THAT HAD REMAINED
HIDDEN FROM MAN UNTIL NOW.

■ **TEXT: VARAD B. GIRI**

Varad Giri is Research Assistant, Herpetology Section at the
Bombay Natural History Society

“Varad, what is your menu?” Sameer asked me in the bus as we headed towards Goa, while Vithoba sat anxiously awaiting the rains! Although we were in the first week of June there were no signs of the monsoon. Sameer is a good friend, an enthusiast in herpetofauna, excellent field worker and above all a dependable field companion. Vithoba Hegde, my colleague in the Collection Department of the Bombay Natural History Society (BNHS), is an excellent assistant in the field. With him around I am free of all ‘domestic activities’ right from booking of hotel rooms to packing the survey kit. Besides, his role in the field is always noteworthy. The three of us were on our way to Amboli for a survey.



The open patch of grassland where the treasure *Gegeneophis danieli* (inset) was first discovered

VARAD GIRI



VARAD AND SAMEER

Herpetofauna, which includes amphibians and reptiles, is one of the less explored groups of vertebrates in India. To know more about their current status in India, the BNHS started a small project, "Preliminary Survey of Herpetofauna in the Western Ghats region of Maharashtra". Our survey was part of this project and was funded by the Charles McCann Fund for research on vertebrates.

We selected Amboli for this trip, as it is located in the southern part of our study area. A well-known hill station in western Maharashtra, Amboli is close to the borders of Karnataka and Goa. This region receives heavy rainfall, about 350 to 400 cm per year, and the forest is a semi-evergreen haven of delight. Due to favourable climatic conditions and habitat this region supports a unique diversity of herpetofauna and is the northernmost limit

for many species of amphibians and reptiles of the southern Western Ghats.

I was thinking of an answer to Sameer's question, while he desperately awaited it. "Malabar pit viper, Malabar gliding frog and Koyna toad," I finally replied. Our "menu" for this survey was the unique herpetofauna, hidden treasures waiting to be found. When I asked Sameer what he longed to see, he promptly replied, "A caecilian".

Caecilians are leg-less amphibians belonging to the Order Apoda (poda = legs). These are burrowing animals, and in India they have been reported from both the biodiversity hotspots — the Western Ghats and northeastern states. India has 23 species of caecilians belonging to three families and four genera; of these, 18 are endemic to the Western Ghats region of Kerala, Tamil



The Famous Five:
(above L-R) While
Vithoba, Varad and
Sameer's efforts were
instrumental in finding
the caecilian it was Mark
and David (below R-L)
who proved that their find
was a new addition, to the
caecilian group

Nadu and Karnataka, and only one species *Indotyphlus battersbyi* has been reported from Maharashtra. Though richly diverse and endemic in nature, their secretive nature has resulted in meagre information about caecilians. Sameer's reply helped me correct my list; I realised that I had missed an important member. Now our "menu" was perfect and we were looking forward to this field trip.

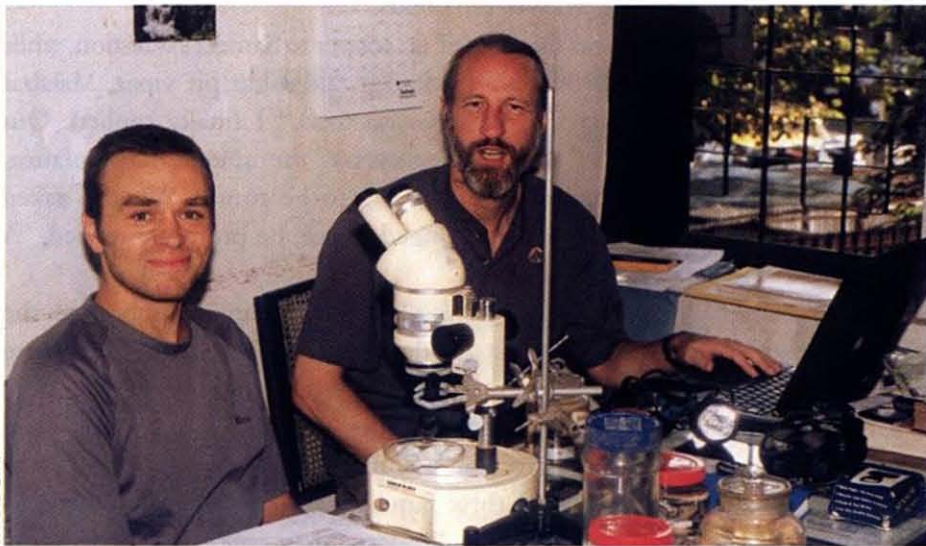
We reached Amboli in the morning and to Vithoba's amazement the most awaited monsoon showers were there to receive us. Vithoba was finally a

happy man. We landed in the hotel room and immediately after a good breakfast and tea embarked on our 'mission'. Locals informed us that the monsoon had arrived four days earlier, which was good news for us, because amphibians become highly active in the beginning of the rains. As this survey was only for five days, we wanted to spend most of our time in the field.

The morning and afternoon we spent in one of the forest patches very close to the village. It was not so productive. The night trail we started a bit early. The first calls we heard were those of the Bombay bush frogs *Philautus bombayensis*, their monotonous "tik... tik tik... tik tik tik..." was a good omen for us.

In the next four days, we spotted most of the items on our menu, the Malabar gliding frog *Rhacophorus malabaricus*, Malabar pit viper *Trimeresurus malabaricus*, an unidentified species of dwarf gecko and Koyna toad *Bufo koynaensis*, but our quest for the caecilian was still on. We tried all possible means, searched day and night in all the possible habitats, but despite all our efforts the hidden treasure eluded us until the last day.

On the last day, we decided to intensify our efforts — a more active search — we knew that time was running out. This time we chose an evergreen patch of forest to the east of Amboli village. As it had rained for the last few days, the leeches were active; this trip was Sameer's first exposure to these tiny bloodsuckers and he was very excited. We started at around 7.30 am. As usual, it was raining heavily and we were eagerly looking for caecilians under rocks and fallen



logs, and among the leaf litter that lay scattered under our feet as we walked.

We reached an open patch of grassland just before a plateau at around 11.30 am. There was a temporary rainwater pool with a small trench close by, probably made for draining rainwater, bordered by rocks. As this patch was full of big rocks, Sameer and Vithoba were busy turning over and looking beneath the rocks for signs of a caecilian, putting the rock back in its original position if nothing appeared.

I thought of looking under the rocks bordering the trench. Under the second rock I saw something like an earthworm, which we had seen under most of the rocks earlier. But this was something else, because the colour of this animal was unlike that of an earthworm. I took the specimen in my hand for a closer look and was bewildered. The animal in my hand was actually a caecilian! "Hey, I got it," I called out to Sameer and Vithoba. One look at the specimen and they joined me in the celebrations. As usual Sameer asked me, "Is it a common species? Has it been reported from Maharashtra before?" ...a chain of questions! "I do not know, but to my knowledge there is a published report of only *Indotyphlus battersbyi* and an unconfirmed report of *Ichthyophis beddomei* from Maharashtra and this specimen is surely not matching either of them," I replied, with my limited knowledge. Finally, our menu was complete. I was enjoying the moment, while Sameer and Vithoba had resumed their search. Then I realised that we had very little time, so I joined them again in the search. We searched the area for some more specimens, but luck seemed to have run out on us. We photographed the habitat and then rushed towards the plateau to resume our search. Eventually, we returned to the hotel, a triumphant procession of three.

After reaching Hornbill House in Mumbai, I tried to match the specimen with those available in our collection. I checked all the available literature by renowned workers like Ravichandran and Pillai, and Dr. G.K. Bhatta in this field. I observed the specimen carefully, prepared some illustrations after taking morphological and morphometrical details, and finally placed the species under genus *Gegeneophis*. But my observation was superficial and based on external characters. *Gegeneophis* has four species in India and this one was not fitting among them. I had reached this far alone, but the road ahead required a guide.

My solution walked into BNHS one day. Herpetologist Mr. Ashok Captain came to study the specimens of snakes. I told him about my observations and immediately he suggested that I discuss it with Dr. Mark Wilkinson and Dr. David Gower of the British Museum Natural History, London, the experts on caecilians whom I had met earlier during their visit to the collection to study specimens. We had a brief discussion and they had suggested that I initiate some work on the caecilians of Maharashtra. This was my first exposure to caecilians and I think that discussion was in some way responsible for this find.

The next day I e-mailed the details to Mark and David, and within two days I got a reply. It was an overwhelming response! Both of them assured me that this was an interesting species. After a prolonged e-mail discussion I received a mail one day from David saying that they were coming to India to study some specimens collected by me. I was only too happy, as I wanted to learn more about caecilian taxonomy. And one fine morning both of them were at Hornbill House. After the initial formalities Mark asked, "Where is the specimen?"

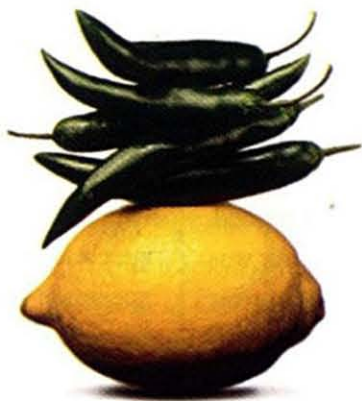
Our work lasted for two days. Mark is a splendid teacher! In two days I learnt a lot about caecilian taxonomy from him. Both he and David took all the morphometrical and morphological details of the specimen. I was amazed by the way Mark dissected the specimen to observe the skull. For this small operation, he painstakingly worked for three hours with the microscope. Real patience! Now he was happy and it was confirmed that the species from Amboli belonged to genus *Gegeneophis*. On the evening of the second day, during a tea break, Mark told me, "Varad, this is an undescribed species." This was rewarding news for me.

I was in high spirits because this was our first new species. Mark asked my opinion of a name for the species. I am thankful that he gave me this chance. It was my dream to name my first new species in honour of Mr. J.C. Daniel, a renowned naturalist and Honorary Secretary of the BNHS. I regard him as my first guide in the field of Indian amphibians and reptiles. Mark readily approved of my suggestion and we named our new species *Gegeneophis danieli*.

One day I received an e-mail from David that our paper had been submitted to the journal *Zootaxa*. It finally got published in November, 2003. The paper completed one more step in the long journey that I have undertaken into the fascinating world of Herpetology. ☺



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BIRDS OF DELHI

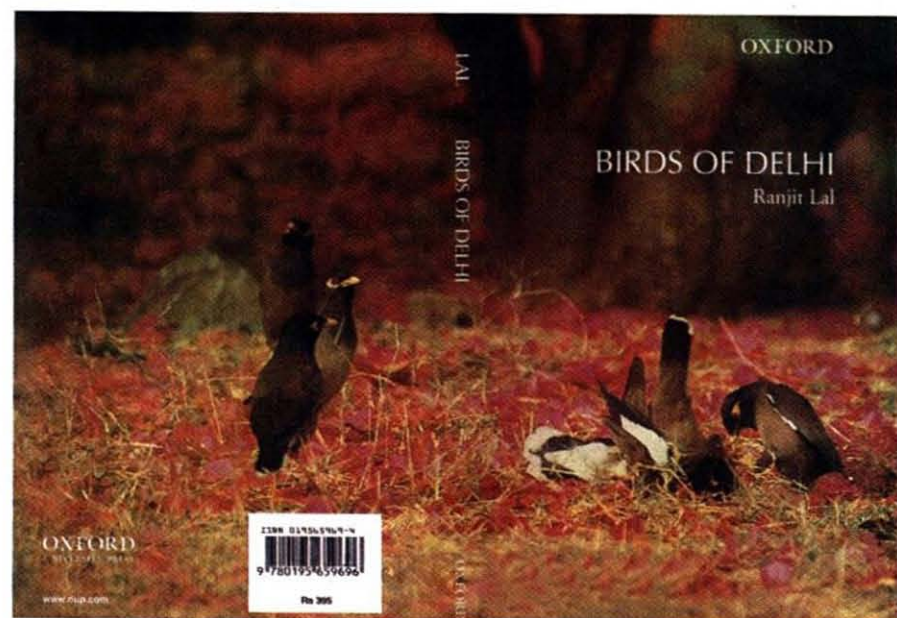
By Ranjit Lal

Oxford University Press, New Delhi, 2003. Pp. 150 (22 x 14 cm),
Hard Bound Price Rs. 395/-

REVIEWED BY ASAD R. RAHMANI

One of the first few scientific books that I read in my early bird watching days was Usha Ganguli's *BIRDS OF THE DELHI REGION*. Due to her unfortunate death at a young age, for a long time there was no update or sequel to her highly commendable book. I was delighted when *BIRDS OF DELHI* landed on my table for review. Ranjit Lal is a regular columnist in Delhi newspapers, enthralling readers with his quirky descriptions of birds, their behaviour and distribution in the Delhi region. His other books include *THE CROW CHRONICLES*, *ENJOYING BIRDS* and *MOSTLY BIRDS, SOME MONKEYS AND A PEST*.


This book is certainly for amateurs. In what he calls 'The Rogues' Gallery, he describes 158 of "Delhi's more colourful, interesting and remarkable inhabitants". Sadly, it does not include Delhi's politicians! Many are quite colourful, some are interesting, and a few are remarkable, but perhaps none of them are as cheerful as the perky ashy wren-warbler or ashy prinia *Prinia socialis*, inhabiting the sprawling bungalows of these politicians. While many of us question the bonafides of human inhabitants of these large colonial-period bungalows, perhaps no one would question the presence



of a flock of jungle babbler *Turdoides striatus* peacefully foraging on a lawn, or a red-vented bulbul *Pycnonotus cafer* silently raising her brood in one of the ornamental plants.

The description of each species is written in a simple and lucid manner without scientific jargon. Sometimes, Ranjit Lal gets carried away and falls into anthropomorphism ("met a rather sad and morose looking pair", p. 99). How does he know that the little cormorants were morose? He is at his best while describing the morphological character or behaviour of a species (papaya-orange legs, p. 40). The book is also full of phrases, for example, "goose-stepping grotesquely on the ground" while describing the Egyptian vulture's walk (p. 93). Another gem: "waterhen

dressed up as a sultan" about the bronze-winged jacana (p. 82).

Photographs are the only drawback of this delightful book. Some are very bad, and worse still, the captions have been mixed up. We have a female black-necked stork *Ephippiorhynchus asiaticus* called southern grey shrike *Lanius meridionalis*, and vice versa (Plates 35 and 37). Bad printing has spoiled many photographs. Plate 44 shows the black redstart (*Phoenicurus ochruros*) with a white forehead, almost like that found in the white-capped redstart (*Chaimarrornis leucocephalus*). Instead of rufous, the picture shows yellow underparts. This book is not a field guide. However, if you are looking for more on common garden birds of Delhi region, this book will not disappoint you. 



Unusual bonds 📧

An interesting and uncommon phenomenon of a female langur (*Presbytis entellus*) carrying its dead baby for almost forty days was reported from the Tadoba National Park in the Chandrapur district of eastern Maharashtra State. The Park, spread over an area of 116.25 sq. km, is predominantly a dry deciduous forest. Langurs are common in the Park and the female mentioned belongs to a troupe of eight adult and seven subadult females, an adult male and seven young that reside near the forest guesthouses at Tadoba.

A resident of Tadoba forest colony first noticed the female langur carrying its dead baby on April 29, 2001. I observed the langurs along with forest guards for the next forty days. It was evident that the female had no intention of letting the dead baby go. Summer was at its peak, with temperatures touching 46 °C, the baby's body had shriveled up, and loss of tissue had caused the skin to stretch tightly over the bones. But the female was indifferent to the fact that the body was decomposing. More interestingly, the other members of the troupe were also indifferent to the rotting body. The female attended to regular social activities like grooming, and getting groomed, during the period. She even groomed the dead baby. Incidentally, there were no maggots on the dead body as the female drove away the flesh flies that approached it to lay eggs. The female did not display any hostility towards other young in the group.

Attachment for dead young has been reported in the gorilla (*Gorilla gorilla*) and chimpanzee (*Pan paniscus*), among other primates. In African

elephants (*Loxodonta africana*), the whole herd of relatives is known to grieve at the death of one of their kind, not leaving the body for several days. In the case of the gorilla, the female does not leave the young for several days and cuts herself off from the rest of the group and even stops feeding. But the situation here is distinctly different from those reported. It was just transportation of a dead baby for almost forty days by a mother that behaved normally. It is not known whether this incident is an isolated case or widespread among monkeys and other primates, or among other mammals. It is also not known if the same female displayed similar reactions for other young she may have lost. It is, however, a strong case for the existence of shock caused by grief and attachment, in the langur at least. 🐾

Rahul Marathe

Pune

Born different! 📧

I appreciate beautiful fishes with their gorgeous colouration and appearance, and still more so their bizarre habits like designing their own nightgown every evening.

I would like to know why some change their colour pattern so drastically. Many birds have dull coloured young that turn into gaudy adults, but in these fishes the young are as pretty as the adults?

Monali Waghmare

Mumbai

Beefsea replies: Unlike the peaceful butterflyfish (*Chaetodon*) that swim together in shoals, angelfish (*Pomacanthus*) are loners. The adult males establish a territory in which they do not allow conspecifics (angelfish of their own kind), fending them off with vicious lunges of the dagger-like spine on the cheek.

Juvenile angelfish, with their different colour pattern, are not recognised by adults as belonging to their own kind and are thus not attacked. 🐾

ACKNOWLEDGEMENT


We are indebted to the US Fish and Wildlife Service who with their usual generosity sponsored the travel of our foreign guests during the Centenary Journal Seminar.

Changing times

The article "Of Bluethroats and Ruby Throats", in *Hornbill* January-March, 2003 by Lt. Gen. Baljit Singh was very interesting.

My father was posted at Phalodi town of the then Jodhpur (Marwar) State in the winter of 1936. En route to the railway station from the dak bungalow during his morning walk he used to see thousands of demoiselle cranes in the courtyard of a school. The town people fed them grain.

Half a century later, in 1989-90, I was posted as an Executive Engineer (Irrigation) in Phalodi town. During winter, I heard the trumpeting of cranes that reminded me of what my father had told me. However, I was surprised that the cranes had shifted their feeding ground from a school in Phalodi to Kheechan village (about 5 km from Phalodi). Now the demoiselle cranes had a specially constructed *Chugga ghar* (feeding ground). The villagers were still feeding them grain, and Shri Ratanlal Maloo fed them bags full of grain (not Malulal Jain as mentioned by Lt. Gen. Baljit Singh). The expenditure was borne by the Maloo Charitable Trust. My article on the cranes of Kheechan was published in *Hornbill*, July-September 1990. Since then, village Kheechan has become a tourist spot.

Rising population pressures in Phalodi town led to the shifting of the feeding ground of demoiselle cranes from Phalodi to Kheechan within half a century. Will the urbanisation of Kheechan force it to shift again? 

Narendra Singh
Jaipur




HIRA PUNJABI

A vanishing jheel

West Bengal is dotted with a large number of major and minor wetlands that support thousands of waterfowl. The Santragachi jheel is one such famous wetland, with an area of c. 13 ha, situated beside the Santragachi railway station c.10 km from Kolkata City. This small, shallow water body is surrounded by railway yards, small shops, small factories and human habitation, and supports c. 5,000-6,000 waterfowl of various species, most of which are lesser whistling-duck *Dendrocygna javanica*, in winter. This wetland has been declared the South Eastern Centenary Sanctuary for Migratory Duck.

This unique wetland, probably the best place to watch waterfowl in lower southwest Bengal, is under threat. Investigations revealed that the bird population is dwindling because of industrial pollution and garbage. This has reduced the area of the jheel and the quality of its water. As no big roosting trees are available for the migratory birds, they fly on to other distant destinations.

Apart from man-made problems, water hyacinth is slowly engulfing the jheel. Local efforts with help from the Forest Department of West Bengal and a huge sanctioned amount for cleaning and maintaining the jheel annually has not made much headway.

Urgent management plans are required to protect this wetland. Absence of immediate constructive action may result in a fall in numbers of migratory birds visiting this beautiful wetland, which we may soon lose. 

Arunayan Sharma
West Bengal



■ TEXT AND PHOTOGRAPH: N.A. NASEER

N.A. Naseer is a life member of the Society and very interested in wildlife photography

December 2001, had an amazing experience in store for me in the evergreen forests of Parambikulam Wildlife Sanctuary. I was trekking through the Orukomban range of the Sanctuary, when my attention was drawn to a patch of land that appeared burnt. As forest fires are uncommon here, I approached the area rather confused. What waited for me was an incredible phenomenon, the 'burnt leaves' were actually thousands of butterflies belonging to two species — the Common Crow (*Euploea core core* Cramer) and Blue Tiger (*Tirumala limniace exotica* Gmelin).

To see a few Danaid butterflies like the Common Crow, Blue Tiger and Plain Tiger hovering over plants like Indian turnsole (*Heliotropium* spp.) or *Crotalaria* spp. or even the common floss flower (*Chromolaena odorata*), during certain periods is common. I have read elsewhere that these plants provide the necessary alkaloid pyrrolizidine to meet specific biological requirements of the insects. But in this case, all the trees and shrubs irrespective of species, were covered with thousands upon thousands of butterflies. My curiosity was aroused since none of these plants were food plants, nor were they sources of alkaloid. I observed closely and was surprised to see some of the butterflies mating.

During the first week of January, I saw a replay of this phenomenon, but this time in the adjoining evergreen forest in Karimala range. Here too, I saw a large area full of butterflies clinging to every tiny space that the surface of the branches and twigs could offer. I sat there watching them, puzzled and bemused for quite a long time. I didn't want to return, but even a beautiful dream has to end.

Finally when I did, there was a fury of questions raging in my mind. Was this a natural or common occurrence or is it something bizarre? Was it a safety measure or response or indicator to some climatic or ecological transformation? My questions still remain unanswered.

Editor's Note: Extreme temperatures and strong wind often make milkweed butterflies cluster in sheltered plantations. It is thought that they impart a distinct odour to the roosting tree and the immediate area, which attracts other butterflies to the cluster. Cluster formation gives the butterflies advantages in foodplant exploitation, reproduction, energy conservation and defence. Predation of a cluster is inversely proportional to its size. The cluster disperses as soon as favourable weather returns.

The butterfly congregations were seen again by the author in the Aralam Wildlife Sanctuary in December 2002 and in the Kuriyarkutti-Medanchal area in December 2003

AN UNUSUAL BUTTERFLY GATHERING

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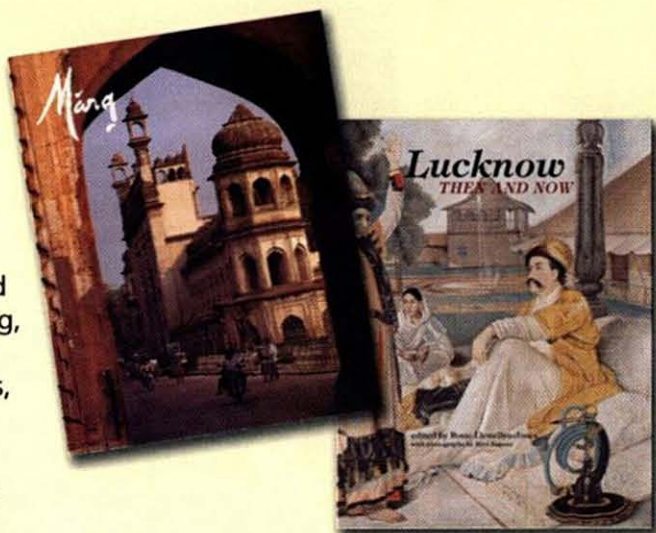
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The barasingha's
return from the edge



ELEPHANT WAYS

■ **TEXT AND PHOTOGRAPHS: J. SRIRAM**

Sriram is a wildlife photographer and nature enthusiast and is a member of the BNHS

Elephants are continually being compared to man in favourable terms.

This is supposed to be some great compliment.

Yet surely to these extraordinary creatures there can be nothing more demeaning.

- Bill Canning
Elephant Days



During musth the temporal gland of the male swells and secretes a fluid

A musth male indicates that he is
ready for combat ▶

We had been dreaming of going back to Kabini since our visit last year.

My family loves elephants (for that matter anything wild!) and no place can better Kabini to observe, enjoy and photograph Asian elephants. The greatest attraction here is the convergence of elephants to the banks of the river Kabini during summer, when the backwaters recede, and fresh grass sprouts in meadow patches, ushering in a huge congregation of large mammals, like the elephant and gaur.

On one of our morning trips, we had opted to stay on a watch tower near a water hole called Tiger Tank. Ravi our driver, who had dropped us there promising to pick us up after an hour, came rushing back before we could settle. He had run back to the tower to take us back to see a big tusker in musth that had blocked his way.

The tusker was still there, as if waiting for us, when we reached. He was in full musth and we could see the discharge from the glands between the eyes and ears. Musth is a period of behavioural, physical and physiological changes, and the bulls become more aggressive towards each other and towards humans. During this period, they also seek out and mate with cows. Musth is sometimes described as “an instinctive desire in the male





The period of musth varies with the age of the elephant

elephants to fight and even kill, before mating". Some experts feel that the condition has never been fully understood and explained. Some naturalists have also encountered harmless and unaggressive elephants in musth. Tame bull elephants also come into musth regularly. It is during these times that they are often dangerous and sometimes even try and kill their mahouts.

Many bulls also have a continual discharge or dribble of urine, with damp patches on their hind legs, which we noticed when we

Musth males often ignore human presence ▼

encountered another bull in musth the next day. Cow elephants have musth glands too and very occasionally come into musth. But they do not get aggressive like the bulls during this period. This is why most zoos and circuses keep cow elephants.

Well... the tusker we saw was very angry on being disturbed and charged at a tree many times. It wound and unwound its trunk around the tree and tried to push it with its head and tusks in anger. It looked at us several times and warned us. We were reluctant to leave the spot, but when it started banging its trunk on the ground we decided to quit as we could no longer ignore the warning! 🐘

"Excitement, swiftness, odour, love, passion, complete florescence of the body, wrath, prowess and fearlessness are declared to be the eight excellences of musth"

— Matangalila
Nilakantha





A mixed colony of the greater mouse-tailed bat and Egyptian tomb bat roosting in the Mandore tunnel in Jodhpur

THE MISUNDERSTOOD ALLY

TEXT AND PHOTOGRAPHS:

ASHOK PUROHIT AND K.R. SENACHA

The authors are presently working in the Department of Zoology, J.N.V. University, Jodhpur

The Great Indian Desert or Thar is a fascinating place to study biodiversity for a number of reasons in India, one of them being bats that are the most alluring creatures of the wild that adorn the nights of the Thar. Freely flying bats can be seen in large numbers in the spacious sky above Jodhpur, one of the major cities of the Thar. A glimpse of the undulating flight of these small wonders of nature is itself a great pleasure. The dark line of bats emerging from their roosts is overwhelming, while their *chewick chewick* adds to the grandeur of the silent nights of the Thar. Besides their aesthetic value (you might not agree with this), bats play a vital role in the agro-ecosystem of the Thar.

Bats are reported from almost all the geographical areas of the world except the Arctic, Antarctic and a few isolated oceanic islands. They belong to Order Chiroptera, the second largest of Class Mammalia. Chiroptera is further divided into two suborders, Megachiroptera and Microchiroptera.

Bats show an extensive adaptive variation in their size, habit and diet. Most bat species including most of the Microchiroptera are insectivorous, some are generally carnivorous, a few piscivorous and three species of vampire bats feed on blood. Megachiroptera are predominantly frugivorous, but also consume nectar, flower, leaves and occasionally insects. Bats are the only mammals with a capacity for powered flight. The Microchiroptera together with a Megachiropteran genus *Rousettus*, have evolved a well-known system of echolocation, which helps them to find their way in the dark and also to find food. It has also enabled them to roost in situations where light intensity is low. Megachiroptera have good vision.

Like many other mammals, bats have fur to protect them from extreme weather. Their wings have bones similar to a human arm. The skin stretches between long finger bones and the sides of the body to form a wing membrane. The wings are delicate and

richly supplied with blood vessels and so any injury to the wings heals quickly. Bats that live in crevices and among bamboo have flatter skulls. They hang in the roosts by their feet and most of them roost with their wings wrapped around their body. Bats vary in size from a few grams to over a kilogram, with a wingspan up to 1.7 m. The largest bat in the world *Pteropus vampyrus* has a wingspan of *c.* 1.5 m and weighs 1 kg. In South Asia, it is found only in the Nicobar Islands. The smallest bat in the world is the hog-nosed bat or bumblebee bat *Craseonycteris thonglongyai* of South and Southeast Asia. It fits into a matchbox, weighs about 2 gm and has a wingspan of about 15 cm. The smallest bat in South Asia is the Indian pygmy bat *Pipistrellus tenuis* that weighs about 2-4 gm. Bats come in amazing shapes, sizes and colours. They are mostly black or brown, but a bright orange, yellow, silver, white or grey bat are not novel. Some have spots or stripes on their body or wings. Salim Ali's fruit bat *Latidens salimalii* is endangered and endemic to Tamil Nadu and Kerala. These flying nocturnal mammals do not build nests like birds. They live in pairs or in huge colonies called roosts. Sometimes thousands of bats live in a single roost. Some insectivorous bats hibernate in winter, as less food is available then. They find a place, free from disturbance, sometimes a cave or a tunnel and ensconce themselves in a crack or crevice. They save their energy resources to stay alive till the climatic conditions are favourable again. Some species move seasonally to places where food is abundantly available.

The young of a bat is called a pup. The female usually gives birth to only one pup a year, but twins

are not uncommon. Most females leave their babies in nurseries when they go in search of food. The pups are kept warm in the nursery as they share body heat with other pups. This helps to resist weather changes and reduces the risk of being preyed upon. Each mother can recognise her own pup by smell even when there are thousands in a colony!

It is worth considering that thousands of bats are like a vertebral column, the backbone of the agro-economy of any country. Microchiroptera consume thousands of insects in a night, thereby helping farmers to save millions of rupees annually, whereas Megachiroptera play a vital role in dispersing seeds of various plant species. Apart from this, they are a valuable source of biofertilizer. The guano of these animals, which they scatter over the crop fields during their foraging activity, is rich in micronutrients like phosphate and nitrogen derivatives and enhances soil fertility. They are in reality allies and not enemies, as they are sometimes perceived because the guano leaves an indelible odour in their roosting sites inside buildings.


Unfortunately, the public and farmers of the region know little about the facts and significance of these much maligned creatures. Too many misconceptions exist among different communities regarding the nature of bats. Some believe they are carnivorous and are afraid of their bite, while others are of the opinion that bats are aggressive in nature and attack humans on the nose. Most consider them a sign of sin. In fact, they would prefer to have no bat roosts in their vicinity. This ignorance has led to the extinction many bat species, which is a great loss to the

biodiversity of any region. Besides, the scientific community too does not emphasize research on bats.

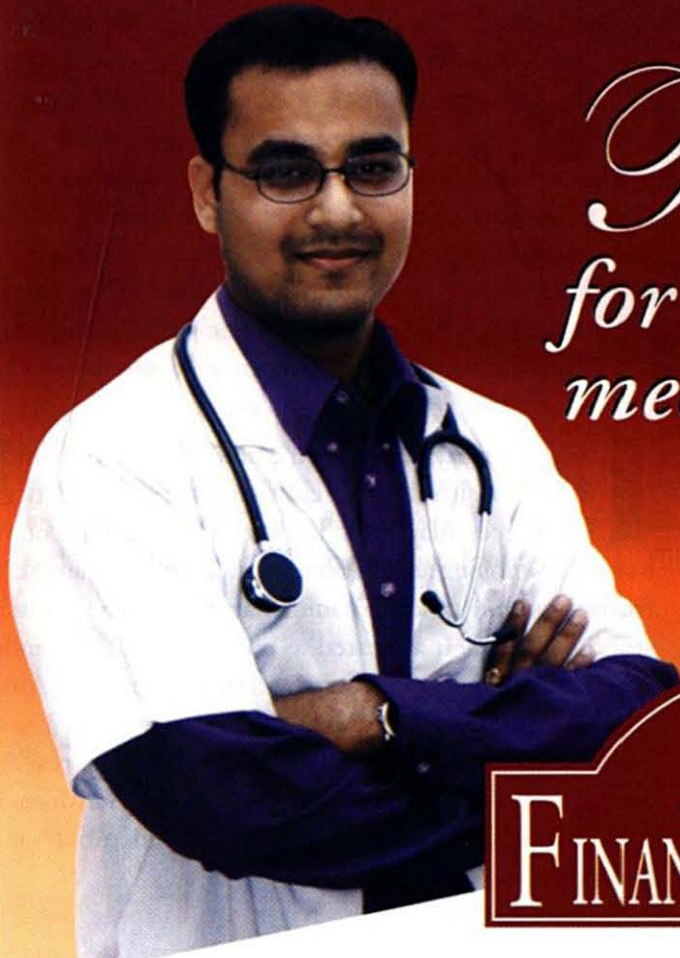
Tremendous increase in the human population, urbanisation, renovation of forts and *havelis* and misbeliefs are presumed reasons for the drastic decline

An Indian flying fox catching a good 'morning's rest' before dusk sets in



in the number of Microchiropteran bat species. It's time we thought of conservation measures and public awareness programme to save these most enthralling nocturnal flying mammals. Efforts should be made to educate the public about the significance of bats in their vicinity. It is necessary to hold talks with the authorities of forts, *havelis* and temples to ensure the survival of the existing bat roosts in their premises. Let us hope that this misunderstood ally gets the place that it deserves in our society soon. 





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Rescuing the Lord of the Nether World

■ TEXT AND PHOTOGRAPHS: SATISH PANDE

Satish Pande is a member of the BNHS and the co-author of the recently released *Birds of the Kokan and the Western Ghats* – including *Birds of Goa*. He is a surgeon by profession

The Lord of the nether world was treated quite roughly before he was rescued by some friends

It was Saturday, August 9, the time was well past midnight. We waited silently for a few minutes in a pitch-dark garage. As my eyes adapted to the shadows, the faint outline of a stealthily moving animal became apparent. A strange creature from forgotten times, an animal as if from the Jurassic era, stood before us. It appeared to be a miniature descendant of the extinct dinosaur. The rare and unique mammal, the scaly anteater of the Old World, was soon faintly visible. The feeble rustle of its body scales, as it moved in the dark, reached my ears and a chill of excitement ran down my spine. Mesmerized, I looked at one of India's rare, old and most secretive mammals, the pangolin!

This thrilling episode began on August 6, 2003 in the remote village of Takali-Sikandar near Sholapur in Maharashtra. It had rained heavily the previous night. The first stormy rain of the season, in this perennially dry area, had drenched the parched land. Puddles of water and slush were everywhere. At 6.30 in the evening, Zakir Shaikh, a young farmer, was returning home from the fields, when a stealthy movement caught his eye. Under a bridge, over a small canal, the farmer noticed a strange scaly creature, about a metre long. He thought it was a crocodile, as they are often seen in the Bhima river near the adjacent villages of Takali and Sarkoli. Fearing the presence of a crocodile in his field, he summoned

help. Soon a crowd gathered, but began pelting stones at the animal. Surprisingly, the stones bounced off the animal's body, and it sank deeper into the slush. The immobilised animal was then tied up with steel wires. It took four people to pull it out of the mud and drag it to the village square. A mob gathered

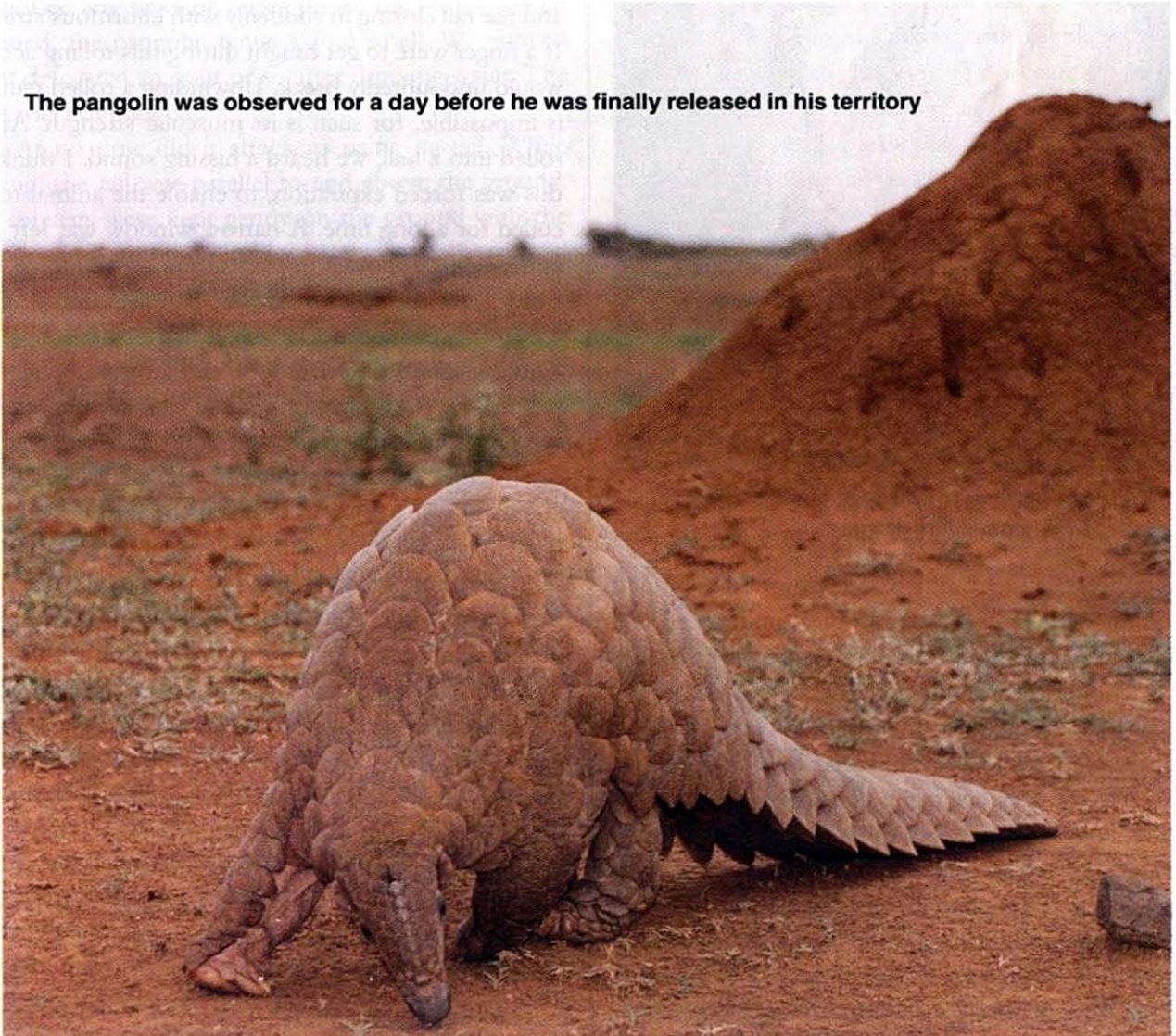


around the mud covered, tied up living bundle, which was lifted and thrown to the ground twice. The plight of this helpless creature was first noticed by Bandu Khaire, a local nature lover, at about 8.30 pm. He intervened and requested the villagers, who were not interested in his pleas, to refrain from assaulting the creature. That is when he called my friends Bharat Chedda and Shashikant Chincholi of the Nature Conservation Circle, Sholapur for help. The duo left for Takali, about 45 km from Sholapur, immediately and reached there by 11.30 that night. On reaching, they first poured a bucket of water on the muddy animal to be able to identify it. With the mud washed away, they realised that the mud-covered animal under assault was a pangolin and not a crocodile. The villagers were then convinced that it was a harmless animal, and the hapless pangolin bundle was brought to

Sholapur. Only after 90 minutes of laborious and careful work, so that the scales were intact, could the pangolin be freed from its bonds. I was in Pune when Shashikant informed me about this strange incident. He requested me to come to Sholapur and guide them. They had never seen a pangolin earlier and did not know how to manage it!

On receiving the news, I immediately informed the Chief Conservator of Forests, Sholapur circle, Mr. Prakash Thosare of Pune, so that the pangolin could be released in its habitat as early as possible, but only after attending to its injuries. I decided to observe it for at least one night, to which Mr. Thosare agreed. Amit Pawashe, an Environmental Science student, nature lover and conservationist, and I left for Sholapur, and reached Bharat's house at 10.30 in the night, on August 9. We

The pangolin was observed for a day before he was finally released in his territory



RESCUING THE PANGOLIN

immediately headed for his garage, for that was where the lord of the nether world — the Indian pangolin *Manis crassicaudata* (Latin: *Manis* - Greek god of the nether world and *crassicaudata* - thick tailed) was kept. It was alert and appeared unhurt. We broke two poultry eggs in a plate for its dinner, which was lapped up by the hungry pangolin, but only after it was left alone. The termites



The pangolin would coil up at the slightest possibility of threat

and ants infesting the rotting wooden furniture dumped in the unused garage, the temporary quarters of the pangolin, were apparently not enough for the pangolin. The cement between the floor tiles had been dislodged, illustrating the strength of its claws. I am sure that if it had more time, it could have burrowed its way out. Bharat told me that the previous night, he had mistakenly left a gap of an inch or so between the rolling iron shutter of the garage and the ground. The pangolin had managed to push up the heavy shutter from inside and come out. The noise of the shutter inexplicably rolling up at midnight had alerted Bharat. He secured the shutter well this time. A scale on the pangolin's face had been dislodged, leaving an ulcer and there was another abrasion near the ear. We

treated both the injuries, which were, surprisingly, after so many assaults, minimal. This was proof enough of the excellent safety accorded by the scaly armour of the pangolin. Any other animal would have died in these circumstances.

The pangolin was about 109 cm long (Body - 63.5 cm, tail - 46 cm) and weighed about 9 kg. The under surface of its tail was covered with scales. The scales at the edge of the tail were pyramidal with sharp margins. F.W. Champion has mentioned that the sawing action of the tail can cut through a rope. A few coarse hairs could be seen between the scales that covered the entire body except the neck, part of the face and the under surface of chest, underside of the leg and abdomen. There were two mammary glands on the chest and no testes were visible. On the slightest hint of a threat, the pangolin would immediately roll into a ball with the head going in first and the tail closing in suddenly with enormous strength. If a finger were to get caught during this rolling action it would undoubtedly break. Unwinding a rolled pangolin is impossible, for such is its muscular strength. After it rolled into a ball, we heard a hissing sound. I think that this was forced expiration, to enable the animal to stay coiled for a long time. A narrow window was left open at the side, to allow it to peep at the surroundings in its coiled state and to breathe. The pangolin uncoiled only when we remained motionless. It dug a 1.2 m long tunnel with the blunt, powerful long claws of its forelegs and pushed out the soil with the hind legs. Whilst digging it ate black ants, termites and soil, somewhat like an earthworm! The droppings of the pangolin showed abundant soil, grass and remnants of termites and ants. When placed on a branch of a tree, it demonstrated its tree climbing prowess, also revealing the use of its prehensile tail. We have a video and still camera documentation of this rare event. It climbed down in two ways. It would either roll up into a ball and drop to the ground, with the scales erect or reach the end of a branch, if not very high from the ground, and then slowly bend the branch with its weight. When close to the ground, it would hang upside down, with the branch held in the tail, and gently land on terra firma. In both cases it landed uninjured! When left in the open garden during the day, it dug a tunnel, and having burrowed about 1.2 – 1.5 m, huddled up and went to sleep.

Pangolins appear to have poor vision, but good hearing. However, they largely rely on their keen sense of

smell, an ability we appreciated only after the following incident. We had gone out to arrange for its return journey. What amazed us was that it had found water that was kept in buckets behind the door of the bathroom, which was not bolted. It had pushed the door open, climbed into the smaller bucket and had drunk 2.5 litres of water from the other bucket by lapping it noisily with its tongue, in a matter of 5 minutes.

The scales on its body were firm to hard and on close inspection revealed a fine pattern of linear convergent lines, reminiscent of the design on a seashell. The scales are supposedly conglomerated hair. The design was obliterated in the centre, where the proximal scale slid over the distal scale, while moving. Some scales were frayed. We attached an aluminium ring to one body scale after drilling it, which did not evoke any pain. The punching was tiring, as we had to do it manually. We did not notice any ticks or mites under the scales. When confined, the pangolin emits a foul smell. We noticed that it defecated an hour or so after drinking water. The urine was not pungent.

At no time did it attack us using its tail. While walking, the tail was parallel to and above the ground. The forelegs were kept gently on the ground with the claws inwards and the hind legs appeared to bear most of the body weight. The sole pads were leathery and free from scales. The foreleg claws were long and blunt, the longest measuring 6.4 cm. Saliva dribbled sometimes when it was on the move. It sniffed constantly, as it walked briskly with a light gait, faster than we expected, and we had to actually run to keep up with it. From time to time, it stood partially erect on the hind legs, to look around.


After observing the pangolin for one day and night, we were satisfied that it was fit for release. All its reflexes were active and it ate and drank well. It was ready to return home. The pangolin had the best chance for survival in its own territory. It may also have had a mate. What was of utmost importance now was to educate the locals and take them into confidence to avoid any further trapping or injury. We wanted them to release the pangolin so that they could assist in protecting the pangolins. For them it was a new animal, which had appeared suddenly, as if from a magician's box! Ignorance had led them to believe that it was a crocodile.

We reached the Takali-Sikandar on Sunday evening in Shashikant's car. Bharat gathered the villagers and the men who had actually caught the pangolin. We also called

Bandu Khaire, who had intervened to rescue it. The gathering was then shown that the toothless pangolin was in fact harmless and was their friend, since it ate termites, the dreaded crop pest. The villagers admitted their mistake and wanted the pangolin to be released in their area. They promised not to molest or catch the animal in the future.

That night, well after dark, Zakir who had first caught the pangolin, released it in our presence. His fear had disappeared. The pangolin, however, did not seem to be in any hurry to uncoil. When it remained coiled for a long time, we realised that we were sitting upwind of the animal. We moved downwind, and the pangolin immediately uncoiled, walked slowly and vanished into the darkness as if nothing had happened. It was the night of 'Narali-Poornima' - a full moon night in the month of 'Shravan', when fishermen offer coconuts to the stormy sea. It is believed that after this night the turbulent monsoon sea slowly calms down and the fishermen can safely start fishing again. On this particular night the clouds were obscuring the moon. The ocean of turbulent thoughts, that was disturbing us for the last two days, had definitely calmed down after the release of the pangolin. The pangolin was free once again and with its departure, our journey to the Lost World had come to a pleasant end.

In all probability, we may never see this pangolin again. The rescue and release of the pangolin was widely publicised by the media. This is a vivid example of thoughtless torture of a harmless animal, the intervention of an enlightened nature lover, who made all the difference, and thoughtful action, which finally led to the release of the pangolin. But most importantly, it shows that if taken into confidence, and shown the right path, individuals do correct their mistakes. Ignorance is our biggest enemy. Today, the responsibility for the safety of pangolins in Takali-Sikandar lies on the shoulders of the locals who have voluntarily accepted it. The pangolin that silently rids land of termites now appears to be safe here.

As far as crocodiles are concerned, a new approach of precaution, vigilance and education needs to be adopted. 

I thank Bharat Chedda and Shashikant Chincholi of Nature Conservation Circle Sholapur. Thanks are due to Amit Pawashe who accompanied me. I thank Chandrahas Kolahatkar of Ela Foundation for the video camera without which video documentation would not have been possible. I also thank the forest department and Mr. Prakash Thosare, CCF Pune, for their support.



◀ **The spotted owllet chose a home that had a big entrance with lots of room inside**

Building New Bird Homes

■ **TEXT AND PHOTOGRAPHS: SATTYASHEEL NAIK**

Sattyasheel Naik is an Orthopaedic Surgeon by profession, and a life member of the BNHS who enjoys the company of his winged friends

The houses in the Cantonment area of Pune are single storeyed, and have big compounds with numerous trees. My new Camp residence too had two huge tamarind trees and one pipal, ficus and banyan tree each, all of which were about 100 years old.

I am a doctor by profession, and enjoy watching birds, and capturing them in my camera, which may be why the number of winged visitors that I saw in my backyard disappointed me. I planted some more trees like the Singapore cherry,

mulberry, figs, coral and others in addition to the ones already standing in the compound to tempt the birds.

My efforts paid off, and soon the avian community started visiting the trees in larger numbers. But again, this pleasure was short-lived as these guests stayed only during the day, and returned to their homes in the evening.

One way, I thought, of ensuring their permanent stay in my compound was to provide homes on the trees that they visited during the day. The houses that I provided were simple,

but they served my purpose well. I got ten earthen pots (*matkas*) about 30 cm wide with an opening of about 10 cm, and drilled small holes at the base to allow rain water to drain out. I also added some wooden boxes using ten lovebird boxes sold in pet shops that had a smaller hole – 5 cm wide, and tied both – the pots and the boxes – to the branches in the first week of May.


The very next day I observed common, jungle and brahminy mynas inspecting the boxes thoroughly. The houses were occupied without any further delay. Two pairs of common myna and spotted owllet, and a pair of blue rock pigeon occupied the earthen pots. Not wanting to lose this opportunity, a squirrel and some bees also claimed their rights over one *matka* each. The wooden boxes housed two pairs of magpie-robin and jungle myna, a pair of brahminy myna, and squirrels.

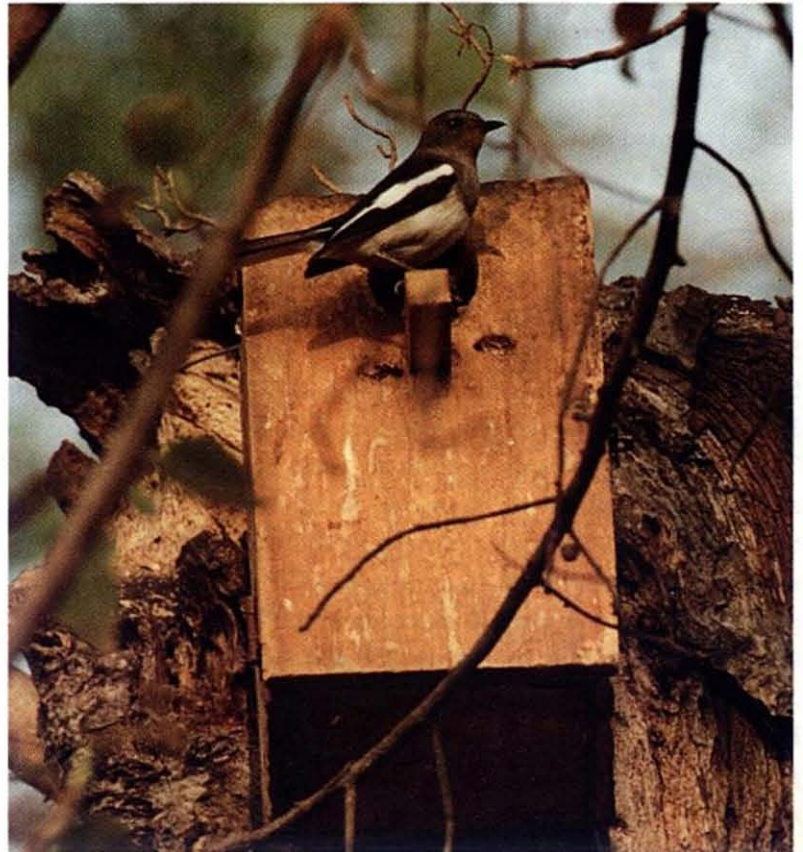
By the second week, the nest building activity was at its height. The jungle, common, and brahminy mynas carried plastic, especially thin pieces of plastic bags to cover their nests.

The reason for using plastic, I thought, was easy availability, and its light weight, which helped to carry it in flight. The plastic provides insulation for the nest and is hygienic as the droppings of the chicks do not adhere to it, making nest cleaning an easy job.



A notable feature was that only those birds which usually breed in small crevices, used the nest sites provided. Bulbuls, tailor birds and sunbirds preferred to build their own homes and were not attracted to my artificial nests.

The number of huge old trees that provide holes and cavities for nesting in our concrete jungles is not enough. Man has built houses for man for centuries, but building homes for our winged friends, I am sure, will be both more satisfying and pleasurable. 



(clockwise from top left)

- Myna chicks would occasionally peep out from the safety of their nest boxes
- The brahminy myna inspected the nest boxes thoroughly before finally settling into one
- Not willing to be left out, the oriental magpie-robin soon occupied one of the last empty nest boxes



Tungreshwar — a success story

COMPILED BY: DEEPAK APTE

Conservation Officer, BNHS

On October 24, 2003, an area of 8,570 ha of the Tungreshwar Reserved Forest was declared as the Tungreshwar Wildlife Sanctuary via the Gazette Notification No. WLP.1002/CR-47/F-1 by the Government of Maharashtra, but only after a tenacious and persistent follow up by the Bombay Natural History Society with the Government of Maharashtra and Forest Department along with Bombay Environmental Action Group. Studded with deciduous and evergreen patches, Tungreshwar besides its biodiversity value harbours perennial water sources, vital for the economic stability of the region, which recharge thousands of freshwater wells in the Vasai Taluka. The water security of this entire region depends on this forest and its natural surrounds. With its new protected status, Tungreshwar will now have the peace and seclusion it needs. Records in the BNHS suggest that the forest hosts over 600 species of plants, more than 250 species of birds, 150 species of butterflies, over 36 species of herpetofauna and many more are yet to be documented. It is also the largest breeding site for the atlas moth *Attacus atlas* around Mumbai. The leopard *Panthera pardus* is the predominant predator and thrives on spotted deer *Axis axis*, barking deer *Muntiacus muntjak* and sambar *Cervus unicolor*. It was as recently as May 2003 that a tiger *Panthera tigris* was reported from Tungreshwar.

Top: Tungreshwar temple is situated amidst an evergreen backdrop



The Tungareshwar forest harbours perennial water sources that are vital for the economic stability of the region. Now protected, the forest will get a chance to revive, giving hope to some of its endangered members, like *Ceropegia oculata*, and our national animal, the tiger that was sighted quite recently



S.P. YADAV

Over the last few years, the systematic and illegal expansion of roads and diversion of natural streams had destroyed large patches of pristine forest. A cart track (from Sativali to Tungareshwar Mandir) as shown in the forest topographical sheets has now been illegally converted into a 20 m wide road that provides vehicle access to all and sundry. Declaration of Tungareshwar as a Wildlife Sanctuary is just the beginning of the conservation and restoration process of this forest.

We are grateful for the generous financial support from Sunjoy Monga and DSP Merrill Lynch to the Citi Forest Fund, which enabled us to systematically document and conduct several field surveys. ♻️

Encouraging alliances



(L-R) Mr. V. Leeladhar, Chairman and Managing Director, Union Bank of India and Deepak Apte, Conservation Officer, BNHS during the former's visit to the BNHS

THE most important partners in the BNHS Green Governance Programme are financial institutions and corporate houses. The programme primarily aims at sensitising the captains of industry and financial institutions to integrate biodiversity concerns at the planning and financing phase. Several rounds of meetings with many senior members of this segment of decision makers were encouraging. The first two site visits are scheduled for Orissa and Andaman Islands in April.

Mr. V. Leeladhar, Chairman and Managing Director, Union Bank of India visited BNHS as a part of the BNHS Green Governance Programme. He extended his support for this initiative.

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A Fish that Walks

■ TEXT AND PHOTOGRAPH: RANJIT MANAKADAN

Ranjit Manakadan is a biologist of the Society who has worked on the great Indian bustard, grassland fauna and waterbirds. He is currently working on vertebrate fauna biodiversity

Do fishes walk? Well, some do, but only to a certain extent. The climbing perch *Anabas testudineus* is one of the best known walking fish. A freshwater species, it is common in the fish markets of India. It is a very hardy fish, growing over 25 cm in the wild and is found in marshy areas, pools and village ponds. It has a wide distribution, occurring from Sri Lanka, India, Pakistan, and Bangladesh to the Philippines.

Coming to its so-called walking abilities, unlike the majority of fish species, the climbing perch belongs to the group of fishes that breathe air. These also include gouramies, snakeheads and some species of catfish. Such species cannot absorb the oxygen in water. Instead, they gulp atmospheric air from the surface of the water. If denied atmospheric air, as when kept in a sealed bottle filled to the brim with water, they literally drown to death. The air-breathing habit enables them to survive for some

time out of water. Along with this, and helped by their tubular frame, hard scales and spiny pectoral fins, they can trudge on land for some distance. The climbing perch takes to 'walking', leaving drying pools in search of better wetlands. Hence, it is also known as the walking fish in some Asian countries.

In some vernacular languages of India, its name translates to palmyra climber (e.g., *Panna Eri* in Tamil) as the fish is said to climb palmyra trees! There are reports of toddy tappers finding the climbing perch at the bases of the fronds of palmyra and coconut trees. As the species logically does not benefit from climbing trees, in all likelihood it lands up there after escaping from the clutches of crows that had taken it there for a meal. The fish probably tends to get discarded or escapes from the crow by virtue of its overall hard, spiny and slimy exterior. Its air-breathing qualities help it to survive there for some time – to the toddy tapper's astonishment! And, hence its English name, climbing perch.

So next time, don't be surprised if you find a fish going for an evening walk or enjoying the breeze up in palm trees! ←



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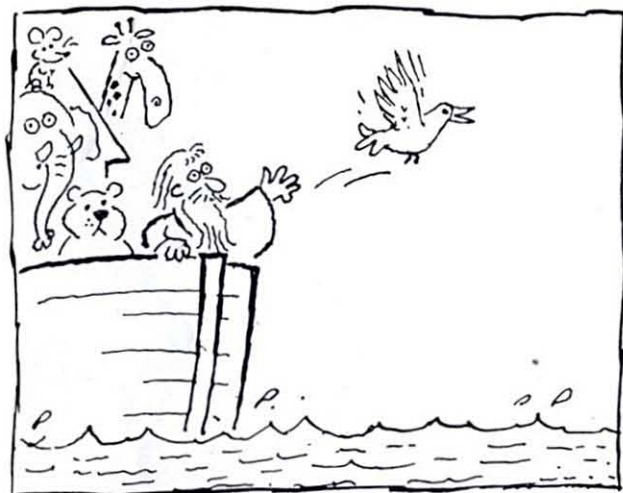
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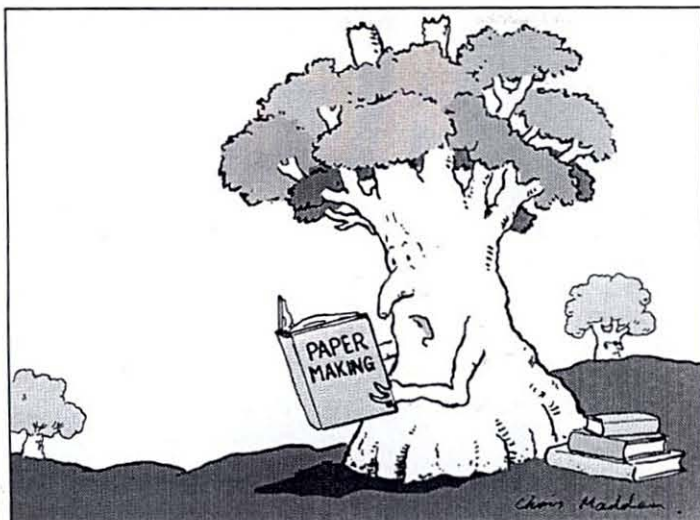
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EDITORS' CHOICE



Courtesy: Green Cartoons for Care / Earthscan Publication



The Tree of Knowledge discovers what books are made from

Courtesy: Cartoon by Chris Madden, Earthscan Publication

Life in Peril

Perhaps every society must learn for itself that massive conversion of landscapes, the pollution of waters, and other abuses lead to losses of productivity in the long run.

Nature most often is not vanquished in one mighty battle, but is taken in a series of minor skirmishes. Today we have global civilization, a network of increasingly interdependent societies, heedlessly destroying eco-systems everywhere, one bit at a time.

— Anne Ehrlich and Paul Ehrlich
Excerpted from: *Extinction: Life in Peril*

The Bombay Natural History Society held an exhibition of Rare Books – Treasures of Indian Wildlife – at Hornbill House as part of the Kala Ghoda Art Festival 2004 from February 10-14, 2004. Dr. J.J. Bhabha, Chairman National Centre for Performing Arts inaugurated the exhibition.

These rare and valuable books, published as early as 1785 on wildlife, art and culture were displayed again after two years. Some of the star attractions of this exhibition were the large volumes of John Gould's CENTURY OF BIRDS (1832), BIRDS OF ASIA (1850), ORIENTAL MEMOIRS (1813), GAME BIRDS OF INDIA (1867) and several such treasures. About 100 old and rare books were on display this time. Some of them were very recent acquisitions and not displayed earlier. Most of these rare books have been received as donations from personal collections of members. The exhibition was certainly a rare treat for the connoisseurs of antique books, art and nature. ♣

Treasures of Indian wildlife displayed



(L-R) Dr. Ashok Kothari Chairman Library Subcommittee, Dr. J.J. Bhabha Chairman NCPA, Mr. B.G. Deshmukh President BNHS and Dr. A.R. Rahmani Director BNHS were among the first few that admired the rare collection that was displayed for a week

Marine mammals are now within our reach

Dolphins, whales and dugongs are among the most fascinating creatures in the wild. They continue to intrigue man because of their intelligence. Unfortunately, several marine mammals are now endangered due to increasing pollution and poaching.



KIM URIAN

Marine mammals like this bottlenose dolphin are now within easy reach through this new book

Surprisingly, not many are aware that these marine mammals can be seen in the seas around the Indian coastline. This is mainly because not much information is available. MARINE MAMMALS OF INDIA by Kumaran Sathasivam brings them within our reach by providing information on their distribution and how to identify them. The book aims at generating awareness on the plight of these mammals of the sea around us. More than 30 species are described, with information on their interesting behaviour.

The book jointly published by the World Wide Fund for Nature – India and University Press was released at the Hornbill House on February 28, 2004 by Mr. Jamshyd Godrej, President WWF-India.

Kumaran Sathasivam is a B. Tech in Naval Architecture and a recipient of the Global Fellowship for studying marine mammals at Duke University Marine Laboratory in the USA. His first book, A FOREST IN THE CITY won the first prize in the 1989 All-India competition "Our Environment". ♣

They be Few and We be Many!

The World Social-Forum (WSF) turned four as the caravan of delegates from over 100 countries reached Azad Maidan, Mumbai, for the curtains. The finale was preceded by a hectic week of debates, conferences, panel discussions, film screenings, street-plays, cultural shows, exhibitions by NGOs and activists at the Nesco Ground in Goregaon. Bombay Natural History Society occupied a place of pride by setting up one of the few nature conservation stalls.

There was enough open space for everyone wishing to express themselves, which enshrines the spirit of the WSF:

“an open meeting place for reflective thinking, democratic debate of ideas, formulation of proposals, free exchange of experience and interlinking for effective action, by those opposed to the domination of the world by a handful.”

Even after de-colonisation the superpowers have devised ways to exploit the poor and developing countries of the world. And they are hell bent on usurping our natural resources, water, forest and land. But if the presence of 1,00,000 people at one place is something to go by then the message was loud and clear - they be few and we be many!

People engaged in struggles, conflicts went back from the WSF re-invigorated to take their cause and action on to a higher level. ♣

Union Bank supports our prized collections



Mr. K.L. Gopalkrishna presents the cheque to Mr. B.G. Deshmukh, while Mr. J.C. Daniel and Dr. A.R. Rahmani look on

Since its inception in 1883, BNHS has been involved in the study of the flora and fauna of the Indian subcontinent. The study included collection of natural history specimens, which are today some of the rarest and finest in Asia. As the collections were made during pre-independence days, they include specimens from the Oriental region, mainly present day India, Pakistan, Bangladesh, Nepal, Bhutan, Myanmar and Sri Lanka. The pink-headed duck, now extinct, is a prized possession in the Collection of the Society, which houses many specimens of rare and extinct mammals, birds, reptiles, amphibians, butterflies, beetles and other insects of the Subcontinent. The bird, mammal, reptile and amphibian collections have been catalogued and computerised for easy accessibility. A total of 29,000 birds, 20,000 mammals, 7500 amphibians and reptiles and 50,000 insects are maintained within the Society's Collection, which has been accorded the status of national heritage, as it is a precious asset of our nation.

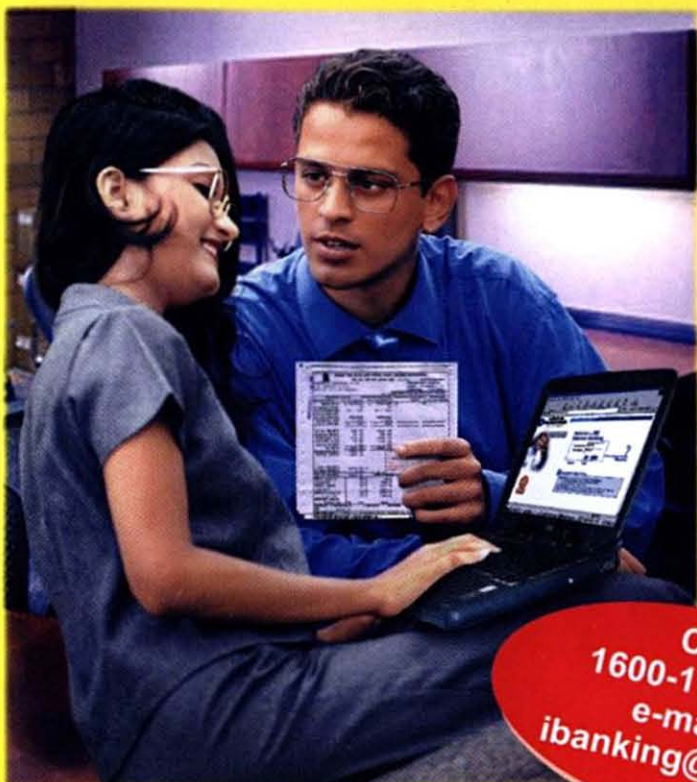
To conserve this prized collection of our nation, the Union Bank donated Rs. 10 lakhs to the BNHS. Shri K.L. Gopalkrishna, General Manager, Human Resource Management, Union Bank of India presented the cheque to Shri B.G. Deshmukh, IAS (Retd.), President, BNHS at a function held at the Hornbill House on February 24, 2004. ♣

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