

## WALKING THE WILD PATH

### Foreword

About fourteen years ago, the two of us found ourselves at CEE (CENTRE FOR ENVIRONMENT EDUCATION, THALTEJ TEKRA, AHMEDABAD 380007, GUJARAT, INDIA), a national centre of excellence in environmental education, established in 1984. It must have been Fate, because this was not a logical step to take from the point of either our educational backgrounds or our previous jobs.

It is here that we met several others, almost all of them from as diverse and varied backgrounds as ours; and we found ourselves working together in what was then, the nascent field of conservation education. Finding our feet on this as yet unexplored path, we began to learn new things every day--about our work, but perhaps, more important, about ourselves and our own surroundings.

We were no doubt especially lucky to be able to work in an amazing natural environment. Where else would one be able to see a peacock walk nonchalantly by, as a staff meeting heatedly discussed budgets; or have a squirrel fearlessly dip into the empty tea cup on the window sill; or have a colleague walk into the room casually holding a snake that he found in the bushes just outside the toilet? Exciting days indeed! And every moment opened our eyes to the joy and wonder of "seeing", rather than just "looking" at the world around us.

And like the icing on the cake, we had wonderful opportunities to meet some incredible people--legends in the world of conservation and wildlife. They talked to us; showed photographs and films; shared their writings and their incredible knowledge and experience. They had different interests--birds, snakes, butterflies, medicinal plants, lions... And these interests led them to do different things - photography, field research, writing, teaching. But the one common factor was PASSION --passion for India's wildlife and its conservation. And that passion drove them to excel in whatever it was they were doing.

We also met many young people--bright and adventurous, who had made up their minds to work in this exciting and challenging field of wildlife conservation. They often had several options; they sometimes had difficulties in convincing others about their decision. But nothing deterred them.

We were inspired by all these people we were lucky enough to meet. We knew that not everyone would get opportunities to meet such people. But we felt that these stories had to be shared. So then we hit upon this idea--why not get some of these people to write their stories? If these could be compiled as a book, we could share this excitement--albeit second hand--with a whole generation of young people, many of whom are standing at crossroads and wondering in which direction to head off. We did not want to map out the routes, we wanted rather to open up the map so that you could see before you the many, many different paths inviting anyone with an open mind and sense of adventure.

So we put together a list from among our "heroes" and "heroines", a list which would give a flavour of the variety of passions and interests. And we wrote off to these people. And amazingly, almost all responded! And agreed to do the pieces. Of course persuading (bordering on nagging) had to be done! But we are sure you will agree that it has been worth every letter, e-mail and phone call! Not only are our heroes and heroines great in their own fields, they are great writers too!!

So here they are--fifteen stories from fifteen people across the country--each one WALKING THE WILD PATH. Write and tell us if these stories inspire you to follow in their footsteps. Or, even if you are only an armchair traveller, whether you enjoyed the book. We look forward to hearing from you. And, last but not the least, a big word of thanks to our authors.

### Editors

**Salim Ali** Salim Ali or the 'Bird Man of India' as he has been popularly called, is India's best known ornithologist. He was born in Mumbai in 1896. His interest in birds and bird watching started when he was eight years old. In addition to his tremendous knowledge about the subject, Salim All's special ability is his way of writing about birds. He has written several books, including **The Book of Indian Birds** which is considered the 'Bible'

for bird watchers. His autobiography *The Fall of a Sparrow* was written when he was 87 years old. Salim Ali died in 1987 at the age of 91.

### **The Inspiration for a Generation**

Salim All, in his own words 'contracted the germs of ornithology at a time when the disease was practically unknown among Indians, and nature conservation was a phrase only rarely heard".

Salim Ali lost his parents when he was very young. He grew up in a large loving family with uncles, aunts, cousins, relatives and friends in Khetvadi, which is now part of an overcrowded area around Charni Road in Mumbai. None of the relatives were interested in birds except, as part of a tasty meal! Favourite among the cousins' childhood pastimes was going out with an airgun to shoot at small birds in the countryside around which they lived. Remember, this was not the era of conservation. Rather hunting and shooting were very much considered a 'manly' sport.

At the age of nine, his uncle presented Salim with an airgun. This became Salim's most prized possession. He loved to show it off, and soon became quite an expert at using it.

Even when they didn't go out, the boys used to show off their prowess by shooting at house sparrows. It is during one of these domestic hunting exercises that Salim Ali observed, and noted down, some observations about a female sparrow that was nesting in a hole in one of the stables.

The note reads thus: "1906/7 The cock sparrow perched on the rail near the entrance to the hole while the female sat inside on the eggs. I ambushed them from behind a stabled carriage and shot the male. In a very short while the female acquired another male who also sat 'on guard' on the rail outside. I shot this male also, and again in no time the female had yet another male in attendance. In the next seven days I shot eight male sparrows from this perch; each time the female seemed to have another male in waiting who immediately stepped into the gap of the deceased husband.

At that time Salim made the note mainly to record his skills as a hunter and not as any record of bird behaviour. But so sharp and systematic was the observation of this nine-year- old that 60 years later this note was

reproduced in the Newsletter for Birdwatchers, more or less in its original form.

During the summer vacations, the entire family moved to Chembur, which is today a busy part of metropolitan Mumbai, but was then surrounded by forests on the hills of the Western Ghats. The area was a rich in flora and fauna, especially bird life. One memory that Salim Ali carried with him throughout his life is that of the song of the Magpie Robin that he used to listen to, cosy in bed, in the early mornings of the summer holidays. Whenever he heard that song later, he was always carried back to those carefree vacation days of his boyhood.

As a school boy in the very early 1900s, Salim Ali was average in most subjects, and as he recalls, quite poor in mathematics. He liked hockey, tennis and badminton, and enjoyed football, as well as an occasional game of cricket. His favourite sport, however, was sport-shooting of birds, and he liked to think of himself as above average in this area.

Young Salim planned to take up zoology, specializing in ornithology as a profession when he grew up. He dreamed of becoming a great explorer and hunter. His reading too consisted mainly of books on natural history and birds, travel, explorations and shikar-- especially the thrilling adventures of big game hunting.

It was a hunting incident during one of the family summer holidays that sparked off in him a new dimension, and the first scientific interest in birds that was to grow and develop into a lifetime passion.

On one of the usual sparrow-hunting expeditions, 10-year- old Salim felled a sparrow. Just as the sparrow was going to be transformed into a tasty morsel, he noticed that the bird had an unusual yellow patch on the throat-- almost like a "curry stain" as he remembers it. Intrigued, he carried the dead bird back to show his uncle--the shikari of the family.

Now this uncle was also one of the earliest Indian members of the **Bombay Natural History Society** (BNHS), and an active participant in its work. He too agreed that the sparrow was somewhat unusual, and felt that it would be interesting to find out more about it. He wrote a letter of introduction to the Honorary Secretary of the BNHS, Mr. Millard, and asked young Salim to take his bird there to show to the experts. This was in 1908. It was Salim

All's first contact with BNHS - an institution which was to play a very important part in shaping his life and career.

In those days, there was very little contact between the white-skinned Britishers and the 'natives', as the Indians were referred to. Salim Ali was very nervous about having to meet a foreigner face-to-face. Fumbling with the dead sparrow inside a paper packet, the young boy passed through the rooms of the BNHS, full of showcases displaying a fascinating variety of natural objects.

When he finally met Mr. Millard, his nervousness vanished. He found a kind and gentle man, who not only identified his specimen as a yellow-throated sparrow, but also showed Salim Ali several similar stuffed specimens from his collection. Mr. Millard also gave him some bird books to read, books that Salim Ali was to read again and again over the next sixty years.

Mr. Millard introduced Salim to others in BNHS, encouraged him to make a collection of birds to learn about them, and offered to have him trained in skinning and preserving specimens, proper notes.

The incident of the yellow-throated sparrow opened up a whole new world. Ali began to read books on natural history voraciously, especially those on birds. In those days there were hardly any illustrated books on Indian birds and a beginner found it difficult to identify birds. But the young boy's interest grew more and more serious until it literally became his very life.

Later, when he became widely known as the Bird Man, Salim Ali was often asked to talk about his adventures as a birdwatcher. In response to this, he explained that bird watching, by nature, was a most peaceful pursuit. But the excitement lay in searching out clues, and following them up step-by-step, to prove or disprove one's hunch.

It was this attitude that led Salim Ali to arrive at the first correct interpretation of the breeding biology of the Baya Weaver Bird.

During one stay at a seaside cottage, Salim Ali spent several hours every day for weeks, in a hide, perched ten-feet up on a step ladder, making notes and diagrams of the behaviour of weaver birds. He observed closely how,

when the male bayas have half-constructed their nests, a party of female bayas visit the site, inspecting all the nests. Whenever a female approves of the nest-to-be, she her mate. The male then completes", occupies it, and accepts the baya as the nest, and leaves the female to lay and incubate the eggs, while he proceeds to start a new nest nearby. The same pattern follows and once more, another female baya is settled in the new nest. In this way, an entire baya nest colony takes shape .

These observations are, till today, accepted as a breakthrough in the study of baya behaviour. An example of what Salim Ali felt when he wrote that "with the richness and variety of bird life in India, exciting discoveries of a similar kind are awaiting to be made by any birdwatcher who has the requisite enthusiasm and perseverance".

Salim Ali was not only a great ornithologist. His life and work in natural history have inspired a whole generation of Indians towards environmental conservation. Based on 'The Fall of a Sparrow' by Salim All, Oxford University Press, 1985.

**Kartikeya V. Sarabhai** After his basic education in Ahmedabad, Kartikeya V. Sarabhai did his Tripes in Natural Science from Cambridge University, U.K. and Post Graduate Studies at MIT, U.S.A. Kartikeya's initial work in education was at the Vikram A. Sarabhai Community Science Centre. He established VIKSAT (Vikram Sarabhai Centre for Development Interaction) in 1977, and Sundarvan Nature Education Centre in 1979. He was instrumental in starting the WWF branch in Ahmedabad in the early 1980s and was Chairman of the WWF North Gujarat Branch Committee till a few years ago. Kartikeya is the founder director of Centre for Environment Education, a national centre supported by the Ministry of Environment and Forests, Government of India and affiliated to the Nehru Foundation for Development. He is the Regional Chair of IUCN's Commission for Education and Communication.

### Discovering a New World

In the early-seventies, if someone had asked me what I was interested in, the words 'wildlife', 'nature' or 'environment' would certainly not have been mentioned. My interest in all this started during this period, but it is difficult to identify a single event that sparked this interest, for many things in that period were significant.

But if I had to identify an 'event' it perhaps started with a pair of Spotted Owlets (*Athene brama*) in our garden, My wife, Rajshree (Raju) noticed a pair of owls sitting on a branch of a *Peltophorum* tree (*Peltophorum roxburghii*) in our garden at Ahmedabad. They seemed like babies and turned their heads in the most delightful way. We would observe them every evening for a few days. Raju's birthday was coming up in a few days and I thought I would get her a book on owls.

The small Pocket Bookshop near the Natraj cinema actually had such a book. On the cover was a photograph of an owl in flight, carrying a dead rat in its beak. I was a bit horrified. Not quite the cuddly little owlets of our garden! My aesthetics at the time were not quite so deep into nature, as to be able to appreciate the photograph and I ended up not buying the book. 1976, we had just moved back to Ahmedabad after a few years in Bombay and Boston. Our elder son Mohal was six years old. He used to be fascinated with planes. We used to have an illustrated book that listed practically every type of aircraft that was currently in use. We would leaf through the book practically everyday. Mohal knew the names of all the planes by heart. But there were only so many types of planes one could actually see in India.

Back in Ahmedabad, Mohal started noticing birds in the garden. He would point to a bird and ask what its name was. I realized how much I did not know. In fact, in many cases I had never even noticed the bird before. Having recovered from the owl book experience, I started looking for a book on birds, the equivalent of the aircraft guide.

It was at about this time that there was a Council meeting at the Vikram A. Sarabhai Community Science Centre (VASCSC). One of the members wanted to go to a book fair, which was then on at the Sanskar Kendra. I asked him if he could suggest a bird book. At several of the stalls he enquired about a book by a Dr. Salim All. The reply was fairly standard. The current edition was out of print but they were expecting the new edition to come in soon.

It was news to me that a book on Indian birds existed and was so much in demand that it was out of print! Over the next few months I kept a look out for the book. Finally, the 10th edition was out.

Mohal and I now had a new toy and immediately started using it around the garden, discovering new birds. I remember the first few. Yellow Wagtails (*Motacilla ~flava*) on the lawn just outside, and the Hoopoe (*Upupa epops*) that we all used to think was a woodpecker. We must have been a week or so into this, when Raju joined. We were leafing through the book sitting on the lawn. She was lying on my lap looking up at the trees. She heard this beautiful call and was looking for the bird when she saw this very handsome looking small black and white bird. We quickly looked it up and were introduced to the Magpie Robin (*Copsychus saularis*).

We became busy discovering several new birds in our garden and looking them up in the book. It was often difficult because many of the illustrations did not quite match the field observations. The names too were strange then. Often we would refer to the birds only by the page number in 'The Book'. For Mohal, birds had almost replaced the interest in planes and he started looking at the new book with the same intensity as the book on planes.

The hunger to see new birds started taking us to new places. Once, driving back from the Little Rann of Kachchh where we had gone to see the Wild Asses, Mohal got us to stop the car. He had spotted a huge congregation of vultures - Whitebacked (*Gyps bengalensis*), Longbilled (*Gyps indicus*), and a lone Egyptian Vulture (*Neophron perenopterus*) trying to break in among the larger vultures.

Those days we had a Super8 film camera, and Mohal insisted that the two of us creep up really close and film the vultures at the carcass. His favourite birds, he said. Made me realize how in a rather short period our aesthetics had changed!

I used to go to Mumbai regularly in those days. The WWF office at the Great Western building became a place to visit. That's where I met Lavkumar Khachar'. He used to be the Education Officer and was the pioneer of the camping movement in India. We signed up for some of his camps at Hingolghat and later at Pirotan Island in the Gulf of Kachchh.

Bird-watchingwise, Hingolghat was a wonderful experience. Mohal was now about seven and our second son Samvit was two years old. We met Salim Ali for the first time at Hingolghat in September 1977. He inscribed for the children, our copy of **The Book of Indian Birds** (simply referred to as 'The Book' much to the annoyance of Lavkumarbhai!).

We also came to know Darbarsahib -- Lavkumarbhai's cousin and the 'prince' of Hingolgadh. It used to be a treat listening to him and Salim Ali discuss birds. I remember the time when a bird had been caught in the ringing nets at Hingolgadh. Dr. Salim~ Ali quickly identified it as the Lesser Whitethroat (*Sylvia curruca*). For a while Darbar shabeb who was walking next to him, did not say anything. Then gently, as was his style he said, "I beg to differ, it is a *Sylvia cummunis* -- a Whitethroat", and went on to point out some feathers on the bird he was holding. "Quite right, quite right" went Salim Ali in his charming, almost musical, tone.

Over the years Raju, the children, and I had many opportunities to go bird watching with Dr. Salim All, Darbarsaheb and Lavkumarbhai. Salim All's humour was always a delight.

Once when Raju and I went to Borivalli with Dr. Salim Ali and Dilnavaz Variava (who then headed WWF-India) we heard the call of the large green barbet. It was a new sound for us and Raju was very excited. She tried an imitation to ask Salim Ali what bird it was. He made a serious face as if he was thinking and then to tease Raju said, "I think you have heard a Hyena!" That is the last of any bird imitations Raju has tried.

By 1976, Raju and I had already started working on the NFD-VIKSAT campus at Thaltej Tekra. We had taken up from the essentially Neem (*Azadiracta indica*) plantation the year before, that my mother Mrinalini Sarabhai had done with the help of the Gujarat Forest Department. Raju especially had become very interested in plants. We used to collect tree saplings from forest nurseries wherever we went. Seeing the regeneration of the Thaltej campus over the next few years was a tremendous experience.

Bird watching had led us into observing nature more holistically. Our sense of aesthetics was also changing rapidly. We would observe something beautiful in nature and would want to recreate that feeling on the campus. I would usually sketch it out and then explain it to Ramsingh our head mall at the campus.

The main difference we found was the very different concept of 'order' that you found in gardens, and in nature. In the wild, one saw things growing one on top of another, in seeming randomness and chaos --well, just wild! The garden seemed to have visual order. With an understanding of nature came

the realization of the much deeper 'order' that nature represented. An order based on synergy. Nothing was, in fact, random and purposeless.

Lavkumarbhai would 'interpret' why a particular tree or a creeper generally grew next to another. Even the shapes and colours had meaning. "Form follows function", my colleague Dhun Karkaria<sup>2</sup> would tell me. Once when Dr. Salim Ali was visiting NFD, he asked if the Crimsonbreasted Barbet (*Megalaima haemacephala*) had been spotted. He felt the environment was just right. Two months later we saw it for the first time! One was slowly becoming conscious of the intricate relationships in nature.

The Diwali holidays of 1975 and 1976 were the years when we had organized The Shreyas Holiday Camps on the beautiful campus of the Shreyas School, which my aunt Leenaben had developed. Hugely successful, they reintroduced me to my old school campus. Being involved in developing our own campus, I could appreciate much better the way this unique campus had been developed. The majestic Ardoosa trees (*Alianthis excelsia*) and the igloo like Piloo trees (*Salvadora persica*), in the shade of which we could conduct some of our classes. Here too was a campus that had grown indigenous trees and not relied merely on the typical "garden trees" with textbook clas

sifications' of beauty.

'Life on the campus' was one of the modules we ran for the children. It was here that I met Anil Patel<sup>3</sup> who was then the sports coordinator at the school. Anil soon became a close friend and started joining us almost every weekend as we went exploring new areas. We visited most of the sanctuaries and national parks in Gujarat and elsewhere. Lavkumarbhai would also tell us of interesting places to go to which were not designated as parks. One of these was the hill at Idar. With the ragged beauty of large boulders, it became one of our favorite places to visit near Ahmedabad.

In the peak of the heat in May 1977, Anil and I decided to go to the Gir Sanctuary. Mohal and my niece Aparna, both about 7 years old, were knocked out from the heat and slept on the back seat all the way. Raju could not come because of Samvit who was still only two.

We had with us Suleman Patel, the wildlife photographer who had become famous with his shot of eleven lions drinking water at a stream in the Gir. He was an excellent guide and showed us how to recognize pug marks.

I think it was Dr. Salim Ali who had once remarked that had there not been lions at the Gir, it would have been known as a bird sanctuary. Among many other things, we saw the Paradise Flycatcher (*Terpsiphone paradisi*) for the first time. It was a bird we had often looked at in the book and wondered when we would see. So I was quite excited to tell Raju about it. She really felt she had missed a great trip. Then, just a week later, literally from the blue and to our complete surprise, a male Paradise Flycatcher appeared on the Khljada (*Prosopis specigera*) tree just outside our bedroom window. We had made this sixteen-hour journey in the blistering heat of May and the bird suddenly appears at home! We all felt there was a little divine help being given to Raju in her bird watching!

Also around that time Anil told us about a person called Lalsinh Rao<sup>4</sup> who visited Shreyas on Sundays all the way from Jamnagar, and took students bird watching around the campus. Out with him, one saw so many new birds, which in spite of so much bird watching, one had not noticed. He seemed especially good at finding the little birds that hid in the bushes and grasses.

Around Ahmedabad, the park at Indroda was a regular destination for Sunday visits. It was here that we saw our first Great Horned Owl (*Bubo bubo*) on a trip with David Fernandes who had taken over from Lavkumarbhai as Education Officer of WWF. Lavkumarbhai's camps at Pirotan islands opened up yet another world. The world of the oceans and the coral reefs. Sitting on those islands even to just experience high and low tide was an amazing thing. Water seemed to recede for miles and then come back like a giant water yo-yo. We saw a variety of corals and starfish and, of course, the amazing octopuses that changed colours to give a live demonstration of camouflage. On the mud banks, the mudskippers among the mangroves took me back to illustrations I had seen as a child, of primordial life, the earliest amphibians on land.

In 1978, I had to make a trip to Madras. I had heard of Romulus Whitekar and his Snake Park at Guindy. At the time he was staying at a place on the beach on the way to Mahabalipuram. We could not get in touch with him, so early the next morning my cousin Revati said she would drive me up there.

Bird, trees, corals was one thing, snakes and crocodiles was something else. I was enormously impressed by what Rom was doing. The Crocodile Bank was in its early days. When we were there, Revati's Labrador just jumped into one of the enclosures --giving us quite a fright! Luckily the enclosure had Gharials and not full-grown crocs.

As it turned out, Rom was going to come to Ahmedabad the next month for the Indroda Park. I invited him to stay at home. It was monsoon and the first showers had come. We would finish dinner early, pick up a torchlight and go 'snake watching' on the highway--our eyes glued to the rain soaked roads like we were going to see tigers. There were many false alarms and Rom would say things like "that's a tire snake" or "see, rope snake". Most others were snakes run over by trucks and cars. But we also saw quite a few live snakes crossing the roads. Those night-drives in the rain, coming home at 2 am, were really a thrilling experience.

One of the mornings, Rom came to the Thaltej Campus and from a path we walked on all the time, pulled out two huge Cobras (*Naja naja oxiana*). The entire team at NFD- the office staff, the gardeners, everyone--was walking behind him. It was not difficult to understand the tremendous captivating power of snakes and the educational value when they were interpreted. Even little Samvit could not resist touching the harmless snakes.

We were convinced that we should do a snake show at Ahmedabad. I had just started the Ahmedabad branch of the WWF and was its first Honorary Secretary. We needed to collect funds to run the WWF programme and I thought the Snake Show was the best way to launch the activities. The Snake Show, held at the VASCSC in October 1978, proved to be a huge success. Almost all the newspapers gave it front page publicity with large photographs. We had collected over 70 volunteers. 58,000 people bought tickets to see the snakes.

At one stage, the crowds outside became so unmanageable that the police threatened to close the show. We quickly got people to stand in queues outside and as people had to wait for almost an hour to get in, I spent a large amount of my time demonstrating a harmless snake to the people standing in line.

One of the volunteers was Vijayraj Jadeja. A small snake had been caught that morning near the Thaltej campus. Vijayraj was carrying it in his hand and showing it around as a Cat Snake (*Boiga trigonata*). As soon as Rom saw this, he asked Vijayraj to quietly put the snake down before it bit him as it was not the harmless Cat Snake but the very similar looking but poisonous Saw-Scaled Viper (*Echis carinatus*). The snake had already bitten Vijayraj and soon he was in hospital for an anti-venom injection.

I went to see him there. I asked him what he did otherwise, and what his interests were. He was very interested in wildlife, especially birds of prey, but was doing some marketing job without much satisfaction. I said we had this mango orchard near the Space Applications Centre and looking to the success of the Snake Show, we could develop a Snake Park there. Would he like to join? Vijayraj said yes, and the next year Sundarvan was started.

We had to build up a team. The three eldest children of Amar Singh, the old watchman at the mango orchard from my father's time, were interested, Natubha, Keshubha and Gulab all became part of the team, They all became experts at catching snakes and slowly we built up a collection of snakes, from responding to the many calls we would receive.

But feeding the snakes was a problem. There were many nights when we would all go out catching frogs, I never could do this but Mohal and Anil became experts. Mohal would always be ready with his gumboots and torch to go frog catching in various water bodies that spring up around Ahmedabad in the monsoon.

On October 18, 1979, Dr. Salim Ali formally inaugurated the Park. As if to get us national press coverage, one of the larger Cobras swallowed a smaller one the day before the opening and then, after about five minutes, not being able to retain it, threw up the whole snake. The swallowed snake was alive, and started moving about as if nothing had happened!

Some of the excitement of those years of discovering nature was what we wanted to share, Sundarvan, we thought, could be give us this opportunity. A park from which many people, and especially children, could start their own discovery of nature,

Lavkumar Khachar, an eminent naturalist belongs to the royal family of Jasdhan state in central Kathiawad. Several years later, I requested him to

take over the responsibility of Sundarvan. He accepted and was Director of Sundarvan from 1986 to 1995.

2 Dhun Karkaria started the Graphic Design Studio initially at VIKSAT and then at CEE. He became a part of the core team that founded CEE and developed the interpretation project at the Centre.

3 Anil Patel took over as Director of Sundarvan from 1984 to 1986, and as Honorary Secretary of the North Gujarat Branch of the WWF-India from 1984 to 1995.

4 Many years later when Lalsinh Raol retired from Government service, I asked him to write a series of definitive book on birds, in Gujarati, for GEE. Three of the volumes have been published and have had a very good response, including winning awards.

5 Vijayraj Jadeja later joined the Kamatibaug Zoological Gardens at Vadodara as its Curator.

## Growing up in a Zoo

### Esther David

Esther David, is the daughter of a famous zooman of India -- Reuben David. Reuben David set up the zoo at Ahmedabd and was its superintendent until his retirement. 'Reuben Uncle' as he was popularly called, devoted a lifetime to the care of animals and did pioneering work in zoo management and animal behaviour. He was awarded the Padmashree by the Government of India. Reuben David died in 1989. Esther David is an artist and author. She also writes stories for children based on wildlife. She has written two novels based on Ahmedabad. All her work is based on nature.

I grew up in a zoo! It sounds like a dream but it is true. I am sure most of you enjoy reading stories about animals and birds. I also used to like all that, but for me, wildlife was a part of my life --because my father made a zoo in Ahmedabad. His name was Reuben David. He was a very famous zooman of India,

My earliest memory of Daddy is that he was kind and very handsome. Before creating the zoo complex, he worked at home with his dog business and rifle repair factory. And my mother Sarah worked as a school teacher, so Daddy looked after me. In a large sense he was my baby-sitter till I was seven years old. Then he made the zoo, And even then, whenever I had a school holiday, he took me along and brought me closer to all that he valued most. He gave me rich and invaluable opportunities to grow up with wild animals and birds.

When I was small, I used to ask my father as to how he became a zooman. He told me many stories about his childhood. At that time, my grandmother was also there and she told me many more stories about her son, that is my father.

My grandmother told me that when my father was small he was very fond of birds and animals. In their house there used to be a bull terrier, a deer and a parrot. Before going to school, my father used to play with them and help his father in looking after them--feeding them and cleaning them. And in the evening, after school, instead of coming back home, my father would rush off to the Sabarmati river.

Here he swam, and watched all the animals, and birds which came to the river for a drink. In those days the river was clean and there were trees and plants on its banks. The animals which came for a drink to the river were our common animals like cows, bulls, bullocks, buffaloes, horses, donkeys, dogs and goats. Sometimes there would be elephants from the temple. And there were many birds like peacocks, sarus cranes, egrets, crows, parrots, doves, pigeons, bulbuls, mynahs and ducks. My father liked to watch them. When he was late from school my grandmother did not worry-- because she knew that he was at the river.

My grandmother was very kind hearted and also loved birds and animals. So when my father left for school, she would give him his tiffin box with snacks, but she also gave him another box of grains and old bread for his bird and animal friends waiting for him at the Sabarmati river.

My father told me of an unusual experience he had in the walled city area of Ahmedabad. This incident took place when my father was a teenager. He was helping his mother with the shopping when he heard the 'whoop-whoop' calls of langur monkeys. He saw that a baby monkey had

fallen on the road as it had received an electric shock from an electric pole, and died. And suddenly there was a traffic jam as the mother monkey rushed to the place where the baby had fallen and took it in her arms. All the monkeys collected around her and sat there, as they did not know what to do.

My father, who was then a young boy, was deeply touched by this scene. That day he was very sad. And he felt very small. He felt helpless then. But he did know that when he grew up, he would do something for animals. He wanted to grow up quickly. But when he grew up and became a young man, suddenly his interests changed. He became interested in body building and guns. He kept birds and dogs but he felt a need for adventure. At that time he made friends with many young princes of Gujarat and went on shikar with them. People came looking for him as he was very good at locating animals in the forest.

He also had a very good knowledge of guns and rifles. Like all young people of a certain age he did not think that what he was doing was bad or wrong. Although my grandmother was upset, he was stubborn and did not listen to what she had to say.

But then everything has a reason in life, and three incidents changed my father's life. The first incident involved a panther, in the jungle. Suddenly father was alone, and face to face with a panther. They looked at each other, and then the panther just disappeared into the forest, and my father did not want to kill him. Neither harmed the other.

The second incident was when someone had shot a rabbit, and my father tried to save it. He could not, because the rabbit was trapped in a thorn bush. This really upset him. The third was when his friends killed a pregnant deer. This scene upset my father so much that he decided that he would never ever kill anything.

So he returned to Ahmedabad and sold all his guns and started studying veterinary sciences on his own. And as he was very good with dogs, people brought their sick dogs or birds to him for treatment.

It was then that the Ahmedabad Municipal Corporation had decided to make a zoo. By then my father was very well known, but how he was invited

to make the zoo on a mound next to the Kankaria lake is itself an interesting story.

One day the Mayor, the Commissioner, the Standing Committee Chairman, and some officials of the Ahmedabad Municipal Corporation came to our house. My father was dressed in his work clothes-- that is striped pyjamas and a bush shirt, and he asked them to wait as he was in the process of giving an injection to a sick dog. I was then six, and holding the dog for my father. I saw that my father did not have the faintest idea as to what they wanted. My mother offered them water and asked them if they would have tea or coffee. When he finished with the dog, my father took his time to wash his hands, and only then did he speak to them.

In the meantime, the civic authorities had taken the decision to appoint my father as the superintendent of the zoo--just because he had not left the sick dog to attend to them!

Daddy first started the zoo collection with some tropical fish, parrots, a tortoise and a peacock. I remember the first time he brought a panther to the zoo; to make the animal feel comfortable, sometimes he brought him back home. It was a young animal and very friendly with me and the dogs. I felt a great thrill when I first touched a panther and it licked my hand. This is how I learnt to understand wild animals.

Slowly my father expanded the collection with lions, tigers, deer, zebras, kangaroos, all types of birds and snakes, to make a very big zoo. It was the best zoo in Asia, because my father took personal care of each one of the zoo animals. It was a common sight to see him enter the cages of wild tigers and lions. Sometimes he did experiments of co-existence where dogs, monkeys and lions lived together without harming each other.

Every morning he left the house at eight and returned at eight. He never accepted housing in the zoo, because he valued our undisturbed home life. Yet there were moments of tension. When an animal was sick, Daddy was restless and could not eat; and if it died, there followed days of mourning.

He was so fond of his animals at the zoo that when Montu the Lion was sick, he could not eat and was sad till he saw to it that Montu was in good health.

Then there were the chimpanzees, Emily and Galki, for whom he specially made jelly. I often roamed about in the zoo with Galki sitting on my shoulder. He encouraged me to teach Galki how to draw with a ball pen. I have happy memories of holding Galki's hand and helping her to draw!

Sometimes there were tense moments at the zoo. Once, two tigers walked out of the cage, and with his helper Babu. Daddy guided them back to their cage. Or, there was the time he captured two panthers which had walked into the city!

Then there was the man-eater crocodile he caught from the Kankaria lake. In all these incidents he never used a rifle.

And the most important part of these stories is that all through his life, my father was never hurt or harmed by a wild animal.

Besides all this Daddy was a practical joker. Once a politician was curious about the huge ostrich eggs on his table and he told him with a straight face that they were buffalo eggs from a certain part of the world!!

In our house there used to be a singing canary over an aquarium and he convinced a friend that fishes could sing like birds! Another time, when the trophies in our house were being registered by the Forest Department, he convinced the official that a glass bottle painted like a rooster was in fact a rare bird.

Even when he lost his voice after an operation, my father was still close to his pets and he could control them and show them affection with a pat of his hand. And they returned his love. My father taught me to respect, love and protect nature.

Growing up with Daddy, was in itself an education. He created in me a love for everything that is important for a human being, and that is nature, literature, painting, sculpture, ceramics, music, poetry, history, anthropology, architecture, archaeology, folk arts, dance, cinema, culture, dogs, trees, seasons, and, above all, humanity.

For me--my father was like Tarzan, he taught me to tackle life with strength, tact, and good humour.

## Reflections of a Botanist

### Prof H. Y. Mohan Ram

Professor H. Y. Mohan Ram is a man of many parts. Born in 1930, he taught Botany at the University of Delhi from 1953 to 1995 and has guided 35 doctoral scholars in many areas of plant sciences. He has served the cause of science in India in a wide spectrum of roles -- educator, editor, producer of text books and educational films; popularizer of science, promoter of talent, and as a thinker and planner. His inputs to the functioning of educational institutions, learned societies and granting agencies are legion. He is a fellow of all the four major Science Academies in India. He has been Chairman of the Programme Advisory and Implementation Committee of Botanical and Zoological Surveys of India and Man & Biosphere Programme (1990-1996). Prof. Mohan Ram has received several prestigious awards. He is presently INSA (Indian National Science Academy) Senior Scientist at the Department of Environmental Biology, University of Delhi.

Born in the picturesque city of Mysore, I was brought up in a home with music, books, and several siblings. Visits to Aane Karoti (Cajashala), where over forty elephants of all ages were kept and trained were exciting. Interest in plants was aroused in me by my mother, an enthusiastic gardener. At high school our biology teacher Mr. R, S, Chakravarty made us collect frog-spawn and tadpoles and introduced us to the miracle of metamorphosis, Staying at the Biligiriranga Hills with my uncle was my first exposure to wildlife, I saw herds of elephants attacking a farm, being driven away by children on tree tops by shaking split bamboo culms which made an enormous noise.

As an undergraduate student in Mysore, I came in contact with Dr. M, A. Rau and Mr. B. N, N, Rao, who were excellent field botanists. They used to take us on long bicycle trips for botanizing, Their knowledge of plant form and taxonomy was enormous, The most valuable lesson I received from them was to understand the difference between seeing and observing. I learnt the common and Latin names, classification, and uses of a large number of plants.

After graduation from Mysore I joined the M.Sc, Course at B, R. College, Agra (1951) which was not well endowed. But the teachers were excellent, kind and devoted. The change from a life in a green city to a semi-arid, dry

city with dust storms, heat and brackish water was rather drastic. I often wondered why Taj Mahal was not built in Mysore, I saw for the first time at Agra plants such as *Salvadora*, *Tamarix*, *Suaeda*, *Salsola* and *Capparis* which have become adapted to drought, heat and high salinity. I received introduction to research from Professor Bahadur Singh, who taught me the value of academic rigour.

At Agra I was told that all the *Cycas revoluta* plants (belonging to a group of gymnosperms which formed the dominant vegetation 200 million years ago!) in the garden of Taj Mahal were female and had not set seed due to absence of males. Asked to bring a male cone from Mysore, I managed to steal one from the Mysore Palace Garden and covered it with several layers of sack cloth. When I boarded the train to Agra with the parcel, the passengers who could not stand its offensive stench hurled it out of the window when I was fast asleep at night. The Taj cycads are quite old now but are still virgins! While botanizing along the banks of river Yamuna, I was sucked into quicksand. If my professor who has wearing a dhoti had not taken it off swiftly, put it around my waist and pulled me out, I would not have been alive to write this article!

It was a windfall for me to be selected as a Lecturer in Botany at the University of Delhi, soon after receiving the M.Sc. degree. I came under the influence of Professor P. Maheshwari, the internationally recognized plant embryologist. His book was read by students all over the world. Maheshwari was a complete botanist, with interests in all branches of the subject. A highly disciplined, extremely hardworking and organized scientist, he had built a flourishing school at Delhi. Maheshwari stressed the importance of application, methodology, punctuality, neatness and accuracy in scientific investigation. My commitment to pursue botany as a career was inspired by his example. I did my doctoral degree work under his supervision. More importantly, the three things I imbibed from him were: to learn to learn, learn to work and learn to live.

The Department was elevated as a Centre of Advanced Study by the University Grants Commission in 1963 and Professor Maheshwari was elected to the Fellowship of the Royal Society, London. We were proud and privileged to be inspired by a botanist who never went out of India to study and who made us feel confident that world class work can be done by utter dedication and perseverance.

An exhilarating experience I thoroughly enjoyed as a botany teacher was to take students on field trips, which involved long journeys, playing games, singing, eating together and total abandonment. Artificial barriers were broken and students became friends. Even now, when I meet my old students (many are occupying chairs in leading universities in India and abroad), they love to reminisce about the times when botany meant wandering in the forests, looking at big trees, locating new plants, observing curious natural phenomena, and having great fun. The emphasis in botanical studies has now shifted to sophisticated laboratories where nucleic acids are extracted and the sequence of base pairs are traced to note molecular similarities and differences.

Countless incidents have taken place during field visits. On one trip, the tiny train between Mettupalyam and Ooty went off the rails near a bridge causing panic. Once I slipped fifteen metres on a slope in Mussoorie and somehow landed in the fork of a tree. Being fond of wearing a navy blue jacket, I have been often mistaken during train journeys at night for a ticket collector and approached with bribes for accommodation.

An extraordinarily gifted scientist who profoundly influenced me was Professor F. C. Steward, with whom my wife and I worked as Fulbright Fellows at Cornell University, U.S.A. (1958-60). He broadened my mental horizon and instilled in me a deep appreciation of the challenges in understanding organization and integration in plants. In my botanical career spanning over 50 years, I have interacted with several eminent scientists and individuals who have richly contributed to biology and conservation. In sheer versatility, utter dedication to research, energy, wide interests and productivity, one name stands out--the late Professor B. G. L. Swamy (1916-81). He was recognized throughout the world for his contributions to plant structure and embryology. Swamy was an inspiring teacher, thinker, art historian, epigraphist, musician, painter, and, above all, an unusually gifted writer in Kannada.

In my judgement no scientist has written on the biodiversity, morphology, taxonomy, domestication and introduction of plants in any Indian language as Swamy has done in Kannada in an inimitable and delightful style.

His book Hasuru Honnu (Green Gold) is based on visits to Western Ghats with students. He introduces you to some of the most fascinating plants,

their form and features, uses, myths, conservation status and references in Kannada and Tamil literature.

In using a story-telling style with wit and humour, Swamy has set a trend in popularization of science in Kannada. He received the Sahitya Academy Award (1978) for this book, a record for any Indian scientist. 2Who is my hero? The botanist I admire most is the renowned Russian plant explorer, geneticist and biogeographer Nikolai Ivanovich Vavilov. He conducted plant collection trips (1920-1930) in the former USSR and in 50 other countries. He gathered over 50,000 seed samples of cereals, pulses and tubers of potato. He was the originator of the concept of centres of origin (centres of primary diversity) of cultivated plants. The present-day gene banks are an outcome of his vision.

It is tragic that owing to the enormous political influences that Lysenko enjoyed at the time and his intolerance of scientific dissent, Vavilov was arrested, accused of espionage and of harming the growth of agriculture. He died in Saratov prison, utterly disgraced. During the 900-day long historical siege of Leningrad during World War II, the scientist who was guarding Vavilov's wheat collection is believed to have died of starvation rather than consume the valuable samples.

I owe a perennial debt to my late botanist wife Manasi, whose unquenchable curiosity about plants, sharp probing mind and deep love, enabled me to keep learning. She raised rare plants at home and distributed them generously. She showered great affection on my students as a gurupatni. We have botanized in several parts in India and outside. She is always in my thoughts, although I miss sharing my awe and joy about new plants, new places and new friends.

For most people wildlife connotes large cats, elephants, rhinoceros, hippopotamuses, gaurs or apes. Biologically, any organism that is not domesticated, be it a plant, animal or microbe, constitutes wildlife. In drawing public attention to practise conservation, the poster of a tiger or a lion, a colourful bird or a butterfly would make a deeper impact than a weedy-looking plant. For botanists the megastars are the saguaro cactus, a lady slipper orchid, a pitcher plant, a bizarre looking Welwitschia (of the Namib desert that can absorb dew as the principal source of water), or the double coconut. Learning about them whets your interest but actually beholding them in their natural habitat is an experience of a lifetime ! You

may have seen the illustration of the giant waterlily (*Victoria amazonica*) plant being grown in a tropical garden in a picture book. It is a rooted water plant (the largest aquatic) with large floating leaves (often 2 m in diameter) with upturned margins. The underside of the leaf has sharp spines and prominent veins starting from the middle and forking several times before reaching periphery. A mature leaf can support the weight of a 1Ei-year old person!

Even at 68, I felt greatly excited to see the giant waterlily growing naturally in the Amazon river near Manaus in Brazil in 1998. I asked the boatman to take me close to the plant so that I could touch it. The flowers are white and 20 cm wide when they open in the evening. At this time the flower temperature rises 100°C above the ambient air and the flower emits a fruity odour. A large number of dynastid beetles are attracted into the flower. The beetles feed on the abundant starch in the floral tissues.

After sunset the petals close down, entrapping the greedy insects until the following day. The petals turn pink and open in the evening to let the beetles crawl out, carrying pollen on their body. Beetles invariably enter the white flowers and cross-pollinate them. Ironically, I saw *Wolffia brasiliensis*, the smallest aquatic flowering plant, growing side by side with the giant.

Another astonishing sight along the Amazon was submergence of trees (Kapok, *Chorisia*, etc.) up to 8-10 m. I was told that these trees are able to tolerate annual flooding for 5-6 months.

Non-wild preservation mostly occurs in zoos and botanical gardens. Some species have survived only in captivity, having disappeared from their habitat. I wish to share with you the thrill of my visit to the Peradeniya Botanical Garden near Kandy in Sri Lanka.

The garden has unusually attractive plants but the most precious are the two rows of double coconut palms. Double coconut (coco-de-mer or sea coconut, *Lodoicea maldivica* or *L. seychellarum*) is a fascinating palm, 30 m high, bearing massive fan-shaped leaves and living up to 300 years. The tree grows naturally only in the Seychelles (a group of granitic islands in the Indian Ocean). Highly endangered, it is protected by law. Male and female palms are separate. The fruits borne on female palms appear like large green hearts, weighing 15- 20 kg and taking 5-8 years to mature. Below the skin is a mat of fibres enclosing a brown bony shell, which resembles a pair of

buttocks. Inside the shell is a bilobed seed--the heaviest and the largest (50 cm) in the entire plant kingdom. The dead fruits used to be washed up along the coast of the Indian ocean. They were greatly prized and became collector's items. In India sadhus use the shells for kamandals.

It was Lazare Picault, a French naval captain who was the first white man to discover the living double coconut palms on Praslin Island in 1744.

I have taught general botany, taxonomy, embryology, physiology, morphogenesis, plant tissue culture and economic botany (dealing with plant resources and utilization). In research, I have not pursued any single course. I have done what interests me, and not what is in style. Over two hundred and fifty research papers have come out of our laboratory. They are the efforts made by thirty-five research scholars working with me.

My mother founded a club for children in the early 1940's in Mysore, called Makkala Koota. Her main concern was to sensitize children to the freedom movement, poverty, illiteracy, inequality of sexes, and also encourage them to develop skills of mobilizing public opinion, writing, enacting plays, speaking and singing. She felt that schools ignored these basic aspects of personality building. These activities have had a profound influence on my working life and I have never declined any request to interact with children. I have some satisfaction in working for the cause of children as a trustee of the Children's Book Trust and as Chairman of the Governing Body of the National Science Centre, New Delhi ( for 6 years) and as a member of the Governing Body of the Centre for Environment Education (GEE) Ahmedabad.

A demanding but satisfying assignment taken up by me was as Chairman of the Committee for the preparation of biology textbooks for classes XI and XII, sponsored by the NCERT. The goals of the writing team were to inculcate in the student a spirit of enquiry, creativity, objectivity, the courage to question, aesthetic sensibility and environmental awareness .

Looking back, I realize that this has been one of the most difficult endeavours I have taken up at the behest of Professor C. N. R. Rao, the most distinguished chemist of India. It was rewarding to work with school teachers, pedagogues and university professors who were sincere, talented, critical and cooperative. A series of four books with colour pictures and

box items were prepared. These are being used fairly widely today. They need revision as a decade has passed.

I have deep interest in Indian classical music and photography. Forests, wetlands, cultivated lands, waste lands, rare and economic plants, vegetable and fruit markets are my favourite subjects in photography. The most enchanting markets photographed by me are in Bangkok, Belem (called Mercado ver-o-Peso in Brazil, where the produce of the Amazon is sold), Leiden (Holland ), Paris, Imphal (Manipur), Shillong (Meghalaya), Gangtok (Sikkim), and, of course, Mysore. I use my vast collection of slides for lectures, articles, books and educational films.

Do subjects like botany and zoology have a place today? It is paradoxical that at a time when there is global concern for the conservation for biodiversity, India should face an acute shortage of experts who can study, evaluate and explain the role of the wide variety of organisms.

The teaching of taxonomy (the science of the classification of organisms) is being neglected, in spite of India having signed the Rio de Janeiro declaration. A large number of bacteria, fungi, nematodes, insects and plants are waiting to be identified and studied. We need trained persons who can quantify biodiversity and determine the conservation status of species. More importantly, we need to equip them with modern methods of studying, analyzing, storing and retrieving information. Environment impact assessment requires reliable /quantitative data on flora and fauna.

Our planet earth is small and its resources limited. Over millions of years organic evolution has brought forth an enormous diversity of organisms that interact with one another in various ways to sustain life on earth. Human ingenuity has led to the selection, domestication and production of microbes, plants and animals to satisfy various needs.

However, the greed to produce, consume and collect materials for richer life-styles through technology has irreversibly destroyed forests and other wild habitats, at the cost of different groups including forest dwellers and tribals. The onslaught on forests has resulted in severe loss of top soil, silting of rivers, and escalation of species extinction. We therefore need to ensure ecological and economic security.

We must learn to understand how earth and its basic elements work. We need a thorough awareness of the ways to protect environmental values and enhance economic values. This requires the use of our culture and the very best knowledge available from natural and social sciences. Understanding biology is necessary for informed citizens to take up specific tasks in conservation. Decision-making requires wisdom to determine priorities based on equity, and broad-based participation of all the interested groups working in harmony and not in conflict. The Gandhian philosophy of reducing our wants to the minimum is more relevant today than ever before. Practising it calls for a drastic change in our behaviour.

What enlightenment have I received as a student of plant biology? I wish I could be like a tree: deep-rooted and firmly fixed, bearing a lofty role and a broad canopy, continuously absorbing, synthesizing and renewing, unmindful of stresses and insults, resilient to changes and perpetually giving.

**Romulus Whitaker** Romulus Whitaker was born in New York city. Already passionate about reptiles, he first came to India when he was eight years old, and went to school here. He returned to the US for a few years in the early 1960s but came back in 1967, to make India his home and herpetology his career. Since then he has been deeply involved in the conservation movement in South India and the Andaman Islands and works closely with the Irula Tribe of Tamil Nadu. In 1970 he set up India's first Snake Park and, in 1975 the Madras Crocodile Bank near Mahaballpuram for the conservation of crocodiles. He has published several books on reptiles and now spends much of his time making wildlife films. His children's feature film *The Boy and the Crocodile* won several awards and his recent Film for National Geographic Television *King Cobra* won the prestigious Emmy Award in 1998 in the United States.

### **Snake Crazy**

When I was five years old I was lucky enough to roam the fields and (fairly tame) forests of northern New York State, my birth place. My mother was a single parent and we lived in a huge house built 300 years ago. That old house must have needed a lot of looking after, so I guess my mother was happy to have her young son and daughter enjoying the great outdoors. There were long cold snowy months up there in hilly Hoosick, New York, but when spring arrived there was no end of creatures to be seen, and caught!

Once while out on a pretend expedition with a couple of older local lads, we turned over a rock and found a little snake. I was fascinated but my friends very quickly pounded the harmless garter snake to earth with stones. I took the battered snake home in a jar and my most vivid memory is that my sister Gall was horrified and said something like, "How could you kill that poor thing?" Soon I was catching snakes and bringing them home alive. With a strong hunting instinct, I'd been catching bugs and spiders since I could walk (my mother tells me), so this graduation to snakes made life exciting. If my mother had friends over for tea, they would either be very interested in my hobby or stay well away from my room with its terrarium full of snakes.

At that stage in life I had no idea that this reptile obsession would become my profession. I was passionately interested in dinosaurs and already knew that a palaeontologist is "a bone digger-upper". That's what I thought I would be when I grew up.

But when I was seven, a whole new world of snakes, lizards, turtles and finally, crocodiles, opened up to me when we moved to India with my new stepfather, Rama. The snake charmers at Juhu Beach in Bombay were my first tutors, but it wasn't long before I outgrew their mixture of magic and nonsense.

Hanging around Crawford Market where the pet market often had a star tortoise, baby python or even a little croc, and later the Bombay Natural History Society, I was well on my way to becoming a naturalist. My school days were spent in Kodaikanal, 7000 feet up in the Palni Hills, Tamil Nadu. My pet python lived under my bed in boarding school but the chameleon and an occasional pit viper had to stay in the Biology Lab. My luck persisted. Though I had stints of living in the city, most of the time I was right near the forest and I used every excuse to get away from the school campus and go roaming in the wilds.

I guess it's lucky I never ran into a venomous snake till I was thirteen. Scooping a Russell's Viper out of a lake with a butterfly net was dumb enough. But keeping this deadly serpent in my lunch box was really stupid. However, I survived these early years of snake hunting and was getting plenty of good experience.

The next big phase was going to the United States for college. I didn't do too well at an academic career but did manage to land a job at the Miami Serpentarium, then the biggest snake venom production lab in the world. Bill Haast, the owner of the "Serp" as we called it, was a tough boss but a cool character who handled 15-foot king cobras with practiced ease. It would be ten years before I caught my own king cobras in the wilds of South India and the Andaman Islands. Meanwhile I got drafted into the U.S. Army during the Vietnam War. I spent most of my war years catching rattlesnakes in Texas and Arizona, so it wasn't too bad! It was here that I got my most serious snakebite. One night on the Texas/ Arizona border I got careless and a prairie rattler nailed me on the right forefinger. The pain was indescribable, like a hot nail being driven into the bone. I was hospitalized for two weeks. My finger was saved but it's kind of crippled; a funny looking reminder to be real careful next time!

Returning to India I was determined to set up a serpentarium in the 'land of snakes' and start a long-term study of the creatures that fascinated me most: reptiles. Beautifully coloured, graceful in movement, always fascinating and sometimes deadly, I just couldn't get as excited over birds and mammals as I did over these scaly wonders. In fact, back in Arizona and Florida with my snake hunting buddies we'd make snide remarks about birds and mammals: 'Smelly and noisy" we'd say \*Good snake food!" and 'Anything with legs I don't trust". But this was half jest, a reaction to all the negative stuff we hear about reptiles. In fact, of course, we all had a bit of the general naturalist in us, curious about all the creatures and plants we encountered.

But I still had to make a living! First I started writing articles for newspapers and then magazines, often using a photo taken with my old Pentax K1000. I also started writing my first scientific notes on interesting things I'd observed about reptiles for the Journal of the Bombay Natural History Society. But in the meantime I was scouting around for a place to start a Snake Park and soon it was apparent that Madras was the place. To make a long story very short, I badgered and bothered people in the Forest Department and the Secretariat in Madras (now Chennai) and finally got permission to set up India's first Snake Park within beautiful Guindy National Park, the green heart of the city.

The Madras Snake Park was an instant success and a lot of good friends, my brother and sister, helped make it happen. The Irula snake catchers who live around Madras became my friends and mentors. The generations of

Irula experience in finding and catching cobras, kraits, Russell's vipers, and saw-scaled vipers taught me more than I could have learned in college.

I was constantly going off on snake hunts, sometimes as far away as Rajasthan and West Bengal, to bring new snakes back for the million yearly visitors to see. But my most exciting trip was one week in May when I visited Agumbe in Karnataka. The forest was hot and humid, the monsoon was due any day. As I walked along, I suddenly saw the long, jet-black tail of a big snake disappearing into the undergrowth. My reaction was instinctive--I did a sort of rugby tackle and grabbed the tail just as it was disappearing. The next thing I knew, a huge hooded snake was looking down at my prone form and my heart leapt into my throat: a king cobra! I quickly let go of the tail, jumped to my feet and rummaged around for a stick. I managed to catch that first king cobra, and somehow got all twelve feet of it into my sleeping bag--the only bag big enough!

But just catching, studying and teaching about snakes was somehow not enough. The ever-growing human population was exerting too much pressure on reptiles, and crocodiles in particular seemed to be in big trouble in India. There were two main things to do to help--first, carry out surveys all over India to see just how endangered crocs are, and second, develop a gene bank for crocs--a farm for conserving these giant survivors of the dinosaurs age.

Well, the Madras Crocodile Bank got started in 1975, again with the help of many friends. Starting with just a dozen adult crocodiles, the Croc Bank grew and grew till now there are ten species and almost 5000 reptiles here!

But the Croc Bank isn't just a farm of crocs, it is the base for many a conservation project in different parts of the country including the Andaman Islands. Over the years, a lot of good students got their start working on projects initiated by the Croc Bank and it soon combined popular science with a more serious effort--the publication of an annual journal called Hamadryad (another name for the King cobra).

My never-ending impulse to show and tell people about reptiles encouraged me to start making documentary films, first on a shoe-string budget like the film Snakebite which tells how to avoid and treat snakebite. In recent years my films have been supported by National Geographic Television enabling my colleagues and me to make really detailed films such

as revealing the natural history of the world's largest venomous snake in King Cobra.

So you see that a child's single-minded interest in creatures most people think are slimy and scary can develop into a profession that is totally fulfilling. My own, very self-centered fascination with reptiles has grown by leaps and bounds and resulted in the Snake Park, Croc Bank and exciting educative films. These are ways of sharing a love and passion for the creatures that have given me such an enjoyable life.

### R. Sukumar

Raman Sukumar has been studying the life and behaviour of wild elephants in South India since 1980. He got his doctorate for his studies on Asian Elephant in 1985. He has been specially interested in studying the relationships and interactions of elephants and people, looking at how elephants have played an important part in our culture and society, and why, today, there seems to be a conflict between people and elephants. Sukumar is on the faculty of the Centre for Ecological Studies, Indian Institute of Science, Bangalore. He is also Chairman of IUCN's Asian Elephant Specialist Group and is Honorary Director of the Asian Elephant Research and Conservation Centre. He is the author of several books, including *Elephant Days and Nights*, and *Asian Elephant: Ecology and Management*, in addition to over 50 technical papers and chapters in books.

### Jumbo Love

There was no hint during my younger days of what I was eventually going to do. I was the usual city-bred child interested in games and various hobbies. I was very fond of books, an interest I attribute to my maternal grandfather who was a bookseller. One of my chief boyhood delights was to regularly raid his shelves. My paternal grandmother seems to have recognized a streak of the naturalist in me quite early on. I recall that for some reason she used to call me a *vanavasi* much before I ever went to a forest,

It was only when I reached high school that my eyes opened to the profound beauty of living creatures. Those were the heady days of space exploration and man's first landing on the moon. The mysteries of outer space beckoned more excitingly than the realities on Planet Earth. At that

time the world was also waking up to the crisis facing our environment -- caused by pollution and the reckless exploitation of nature. The modern conservation movement was gathering momentum. Even then I was convinced that humans were heading for trouble unless they changed course towards a more prudent, efficient and equitable consumption of the planet's resources.

I had a passion for science and wanted to work in conservation. Nothing would be more ideal, I felt, than becoming a biologist specializing in ecology. With this goal in mind I pursued botany at Loyola College and later at Vivekananda College in Madras, what is today called Chennai. I was fortunate to have teachers who encouraged creative pursuits outside the framework of the regular syllabus,

I was also fortunate to be in Madras, the largest city in southern India, which is almost unique in having a national park, the Guindy National Park with its semi-natural forest, large populations of spotted deer and blackbuck, and a rich fare of birds, all within the city. I spent most of my weekends at Guindy Park in the company of R. Selvakumar, who was pursuing his studies in zoology, and who was to accompany me on many future trips to the jungle. Selvam was the quintessential naturalist, lost in a world of feathered and furry friends. He had an amazing ability to identify and describe anything from an ant to a whale, and I must say that my work was made all the more easy and pleasant because of him.

I still did not have the faintest idea of getting involved with elephants, although a passion for these pachyderms may have been latent in me. Baby Elephant Walk, that delightful song from the movie Hatari, was, and still is, one of my favourite tunes. I remember this was the first item I played when I compered for the local radio station.

My first sighting of a wild elephant was not spectacular. In fact, I doubt whether I saw an elephant at all! Our class was on a botanical tour during September 1976. We were in Mudumalai, a sanctuary in Tamil Nadu state in southern India which is well-known for its large elephant population. I was talking to P. Padmanaban, the Warden of Mudumalai, who was later to become the State's Chief Wildlife Warden and who was to give a boost to wildlife research.

A rickety car rolled in and a familiar figure leaned out and boomed, 'Hey, boy. What are you doing here?' It was the flamboyant Siddharth Buch, a naturalist-photographer and one of my early gurus in wildlife pursuits, who was visiting Mudumalai along with his brother-in-law. They had driven the 600 kilometres from Madras in the latter's old car, which would have boasted a top speed of 40 kilometres per hour on the highway. There was probably no other vehicle less suitable for going about in elephant country -- at a mere swish of a jumbo's trunk its flimsy body would have fallen apart, and there were plenty of jumbos in Mudumalai. Yet here were these two~brave gentlemen all the same. Siddharth was delighted to see me. He enquired whether I had seen any elephants. I explained to him that we had only just then arrived. He immediately asked me to hop into their old jalopy as they were going for a drive along the Moyar river. Whatever my apprehensions about the car, my eagerness to see some wildlife made me obey instantly.

We had hardly gone a kilometre when Siddharth stopped the car, leaned out, pointed towards a hillock and said "There is an elephant moving up the slope. He must have just come up from the river and crossed the road". I strained my eyes in that direction but could not see any elephant. "Can't you see that black shape moving through the bushes? That's the back of an elephant", he continued. It was mid-day and the jungle was a patchwork of light and shadow. I guess I did see something darker than a shadow a hundred meters away but I could not see it moving. It may have been just a rock, but I nodded dutifully, meaning that I could indeed see a dark shape. "There, my boy! I have shown you your first wild elephant!", announced Siddharth triumphantly. Whatever the true identity of that object, with the benefit of hindsight I must caution readers unaccustomed the capricious ways of wild elephants that it is always better to mistake a rock for an elephant than an elephant for a rock.

In August 1979 I joined the doctoral programme in ecology at the Indian Institute of Science in Bangalore. Madhav Gadgil had established the country's first academic programme in modern ecology.

When the time came to select a research topic for my thesis, Madhav suggested some problems, among them, a study of elephant-human conflict. My ears pricked up when he mentioned elephants. I had wanted to work on large mammals and what was better than studying elephants, although I must confess that such a thought had never occurred to me earlier.

Madhav explained that in many areas wild elephants entered cultivated fields to feed on crops and sometimes killed people. At the same time, people made their own impact on the elephant's habitat and killed them in defence of their crops or in order to steal their tusks. This two-way interaction of elephant and man had never been studied in detail before in either the Asian or the African elephant. In that respect it would be a novel study. It would also be important from a conservation angle because the satisfactory resolution of this conflict was crucial to the long-term survival of elephants.

Thus my study of elephants in southern India began in 1980 and continues to the present. I have been studying them, photographing them, chasing them and being chased by them. I have seen my share of elephants courting, mating, giving birth, parenting, playing, figuring, rolling in slush, enjoying life, and dying. Elephants can be funny. Elephants can be frightening. They can be heart-warming and their study can be addictive. Even today, after almost two decades of study and observing thousands of elephants, I cannot help but just stop and look whenever I see one. If the tiger is the spirit of the jungle, secretive and elusive, the elephant is its body, large, majestic, making its presence felt with authority. Yet, an elephant's life seems so unhurried, it is almost like watching a movie in slow motion.

To even begin to understand this fascinating animal one has to spend several years in the field. Every day, every month, every year, one learns some new facet of its character. Even several years may not be sufficient to understand details of its population dynamics; this may require several decades of data gathering. An elephant, after all, lives out the proverbial life span of three-score-and-ten years.

Excerpts from *Elephant Days and Nights* by R. Sukumar, Oxford University Press, 1994. Reprinted by permission of Oxford University Press, New Delhi.

**Insects are Wildlife Too!**

**Isaac Kehimkar**

Isaac Kehimkar has been involved in conservation work for over twenty years, through his association with the Bombay Natural History Society

(BNHS). He began his career in 1979 as an assistant librarian with BNHS where he is today the Public Relations Officer and Joint Editor of the popular publication, Hornbill. Isaac's work has involved the conducting of workshops, lectures, slide shows and outings for teachers and students, general public and special groups such as army officers. He has also been the naturalist consultant for films and TV serials. Over the years, Isaac's varied interests have led him to acquire skills in cinematography, horticulture, designing gardens for butterflies and birds, and breeding of butterflies and moths. Isaac has to his credit a number of popular articles on different aspects of nature, as well as several publications on butterflies, moths and insects. Isaac enjoys photography and travel. He has travelled widely in national parks and wild places across the length and breadth of the country, I was fortunate to have spent my childhood up in natural surroundings. I grew up in Govandi, a suburb in Mumbai in Maharashtra, in a big house with large orchards to play around in, and nearby ponds where I used to catch fishes and crabs. There were no social clubs or playgrounds. Nature was my playground,

My parents encouraged me to do what I enjoyed doing. My love for animals and the natural world was also strongly influenced by my grandmother. She liked animals and we had several animals including chickens and dogs in and around our house.

Unlike other parents, mine always welcomed pets in the house. My father believed that having pets at home teaches us a lot, He used to say that pets build a sense of responsibility in you, You can't have pets just because you love them, you have to take care of them, and they eventually become a part of the family, Having pets also teaches you to take losses in life. It makes you learn how to face difficult situations.

I had no ambitions as such when I was a student. I was always interested in science. But as I failed in mathematics, I could not take science as my subject in college. So I had to opt for political science. I took things as they came. 2A snake show at Thane was the turning point of my life. The organizers needed volunteers. I volunteered because I had some experience in handling snakes. The show ended, but not before it created a new-found relationship between the volunteer and the organizers of the event. This was the Bombay Natural History Society or BNHS as it is popularly known.

After the show, in 1979, I was offered the job of assistant librarian in BNHS. I accepted. Later, I did my Bachelor's continues ns Officer areer but >iness will :h provide y to do a a chance ltists and ~groups. Man of i is one was like on your you met :cially his I, insisted rv best of lything

It is perhaps this tip that has influenced the kind of writing I have been doing.

My involvement with insects started with my observations of the life cycle of a butterfly. The magic of emergence of a butterfly from a cocoon fascinated me, and I started to pursue the study of butterflies and moths after that. Till today, each time I see a butterfly emerging from a cocoon, the moment gives me absolute happiness.

What attracts me about insects is that theirs is a fascinating world-so close, so near, and yet so unknown. Observing or studying insects teaches you how to be patient, both as an observer, and imagining what it must be like for an insect. For instance, the Atlas Moth can take as much as eight months to come out from the cocoon!

I began writing for Sanctuary magazine in the early 1980s. I wrote about frogs, and moths, butterflies and reptiles, and many- other small but fascinating creatures. It was in 1992 that my first book Common Butterflies of India, which I co-authored with Thomas Gay, was released. My interests have been changing with time. I started with reptiles, then to insects and now wild flowers. Photography is an additional qualification for any person interested in Natural History. My passion for photography started in 1986 as a hobby. I bought a camera by saving money from my salary. When you love someone or something, you want to keep it with you. When you love nature, you cannot rob things from it. Photography helps me to keep what I love with me! Photography gives me a chance to express myself. For me, photography is a way of appreciating nature. A moment of nature comes back alive again as a film whenever you see a photograph. For a naturalist, photography is just not a matter of clicking pictures. One has to work systematically on the theme, read up and try to find out more about the subject. There are frustrations sometimes. Nature does not 'model' for you. One has to wait for that particular moment. I waited for 6-7 years to photograph a lily which flowers only after the rains and the flowers wither after just a day or two. But nature also offers a lot of choices. Once I photographed a Garden Lizard laying eggs. I won a prize for this.

I have had the opportunity of working with BBC, while David Attenborough was making his film Trials of Life and with some other film makers. These have been wonderful learning experiences in filming and photographing wildlife. I look forward to many more years of photography and writing on natural history.

I have two sons--Amit and Samir. Samir seems to have inherited our common love for nature--my wife Nandini too started her career in BNHS, under Dr. Salim All. When the children are home from boarding school, our house turns into quite a menagerie, as well as a nursing home for sick and injured animals.

I regret that living in cities, young people today have little opportunity to interact with and enjoy nature. What an experience to miss! As a family, we do try to get out and travel whenever we can. I feel like a child again when I breathe fresh air, and enjoy the waterfalls and woodlands. Its only when you see the good and the beautiful that you understand what is wrong and unnatural.

I accompany my two sons on treks to show them clean, clear waterfalls and take them on walks so that they can feel the fresh air. I don't believe in creating awareness by drawing attention to the grim side of things, or talking about the disaster stories. I would rather sensitize people to observe and appreciate what is around them, even in their own immediate surroundings. Once you really "see" and understand the intricacies of nature, you will instinctively and consciously want to protect and preserve all this.

Based on a conversation with Ambika Alyadumi and Kalyani Kandula of Centre for Environment Education.

**Ravi Chellam** Ravi Chellam's early aspirations ranged from wanting to become a doctor to joining the Indian Forest Service. After completing his Bachelor's degree in Botany, he took an unexpected turn onto the path of Wildlife Biology. He joined the Wildlife Institute of India (WII), Dehradun in October 1985 for a doctoral programme, and that is when he started his continuing involvement with the Asiatic Lions. After several adventure-filled years of field research in the Gir forest, Ravi is still with the WII, but now as a faculty member. He distributes his time between research, teaching and organizational duties. His current projects include a study on the effects

of rainforest fragmentation in the Western Ghats on the herpetofauna and small mammals. He is planning to begin studies on the social behaviour of lions in Gir, ecology of leopards in Madhya Pradesh and effects of forest fragmentation on hoolock gibbons in Assam. His other interests include sports [he leads the WII cricket team), music, books, gardening and pets. His publications include contributions to numerous scientific journals, as well as many popular articles in conservation magazines and contributions to books.

### A Roaring Career

It was a little past 3 o'clock on a cold winter morning in late 1988, or would it be more appropriate to describe it as night, as it was pitch dark in the Gir forest. I was busy ensuring that all the lot of equipment and people -- including my project supervisor Dr. A. J. T. Johnsingh, my colleague Jamal Khan, our veterinarian from the Wildlife Institute of India, Dr. P. K. Malik, my crew of field assistants, and live buffalo and goat baits, were loaded in the two jeeps. We were preparing for the chemical immobilisation and radio-collaring of wild Asiatic lions in the eastern parts of the Gir Wildlife Sanctuary.

A radio-collar is a piece of wildlife research equipment, which consists of a radio transmitter that is mounted on a collar made of some tough material. The transmitter constantly emits signals, which enables the researcher to track and locate the animal that is carrying it. The collar is for fixing the transmitter on the animal. A very wide variety of organisms have been studied by this method of radio-telemetry, ranging from whales, elephants, lions, tigers, snakes, to even very small birds like the hummingbird.

Locating and capturing lions in the east was not an easy task as these animals were shy of human presence and hence skittish and, at times, even aggressive. The plan was to drive out really early into the jungle and to listen for the roars. Our target was an adult male lion, and male lions do roar regularly from dusk to dawn. The roars would give us a reasonably good idea of the location of the lion. There was also the possibility of sighting the lions on the road. After a couple of hours of driving and waiting to listen for roars, I got the feeling that it was not going to be our day. No lions were located nor had we heard any roars. We decided to shift our area of search. It was close to 7 a.m. and the first rays of the sun were lighting up the sky, as we parked the vehicles on the dirt road and climbed a hillock to listen for roars. We didn't have to wait very long before we heard two male lions roar.

The lions were not very far from us, and, hopefully, they would come towards us. Less than ten minutes after the first roar, we heard the next roars. This time they sounded closer to us.

Immediately we decided to prepare for the capture. The buffalo was unloaded and tied to a tree by the roadside. The gun with the dart loaded with the drug was checked and then Dr. Johnsingh took position behind the cover of some trees on the hillock overlooking the buffalo bait. The vehicles were driven away after the other essential equipment had been unloaded. All of us took our positions. From the roars it was clear that two male lions were approaching us. The excitement soon gave way to concern, as the roars seemed to indicate that the lions had abandoned the road and taken to some trail heading away from us. We had a quick discussion when my assistant Murad came up with the idea of making the goat bleat to attract the lions back to the road. Murad lifted the goat and took his position behind Dr. Johnsingh. He twisted the ears of the goat to make it bleat. The goat bleated loudly --it sounded even louder than it was, in the silence of the forests.

Shortly, we heard the regular rustling of the leaf litter, a clear indication that a large animal was approaching us. A large male lion emerged out of the shadows of the forest and it immediately saw the tethered buffalo. It looked around, as if to check that there were no human beings around and then rushed to kill the buffalo bait. As the lion locked its jaws around the neck of the buffalo, it presented a clear and close enough target for Dr. Johnsingh. The dart went into the rump of the lion. Startled by the loud report of the rifle, the lion left the bait and walked away into the forest.

We waited for about ten minutes, to allow time for the drug to take effect. Then I cautiously led the search team to locate the darted lion. It had not gone very far. It was lying on the ground, barely one hundred metres from the bait. I threw a couple of pieces of dead wood towards the lion to check its level of immobilisation. The lion responded by slowly lifting its head, and it was evident that the drug had taken its effect; but to safely work with the animal, we needed to give it an additional top-up dose. I crept up to the lion with two of my assistants and we soon physically restrained the drugged animal by sitting on its head and rump. This enabled the delivery of the additional dose of drug by means of an injection.

Once the lion was completely immobilised, we fixed the radio-collar around its neck, took the required measurements of the lion's body, treated the minor external injuries, weighed it and then left it in a cool place to recover. I sat at a safe distance to monitor its recovery. <sup>2</sup>This was just one of my experiences in 1988 when I was a researcher of the Wildlife Institute of India at Dehradun, conducting field studies on the ecology of the Asiatic lions for my doctoral degree, and also providing data which would aid in the better management of the lions in Gir and ensure their long-term conservation.

I made my career choice of working in the jungles and conducting field research for the conservation of wildlife rather late in life. In fact, I had grown up in a city, playing cricket and aspiring to be a medical doctor. The first real trip I made to a wildlife sanctuary was as a volunteer helping to conduct a nature education camp. It was as late as January 1983, and I was in the Point Calimere Wildlife Sanctuary assisting Preston Ahimaz conduct a Nature Education camp for the members of Tamil Nadu State WWF.

My romance with biology and wildlife had begun much earlier in my childhood. This interest was reflected in many of my activities: gardening, keeping pets and reading widely about nature and wildlife. A succession of pets including dogs, cats, fish and birds have enriched my life and given me a very good understanding of animal behaviour.

Many factors made me consider a career in wildlife conservation. These were a natural affinity for biology and animals in particular, the increasing exposure I got to the wonderful Indian wildlife, my love for the outdoors and the realisation that much of India's wildlife and its habitat were facing grave threats.

The decision was not easy to make. In fact, I first considered joining the Indian Forest Service. Then I decided to take the academic route, which meant obtaining a Masters and a Doctoral degree--both of which required plenty of research. The reasons for this choice were the greater freedom in functioning and of actively involving myself in conservation debates and action while being an academic. Moreover, the responsibilities of a forest officer are of a wide variety and there is every possibility of one not getting wildlife-related responsibilities .

In the early 1980s, wildlife research was not a very popular subject among students. I was fortunate not only to find out about a college which offered a Master's degree in wildlife biology, but also because of the encouragement and support that I received from my parents.

My parents were keen that I pursue my academic career and not stop with just a basic Bachelor's degree. They also allowed me complete freedom in choosing my career. Their support was very crucial. In 1981 I had completed my B.Sc. in Botany but I was not at all keen in pursuing further studies in that subject.

On completing my degree, I got a marketing job which was well paid. Life seemed to be a bed of roses for me then. I was staying with my parents, earning handsomely, enjoying my job and also playing a lot of cricket. However, in a short span of less than two-year I had gained sufficient exposure to wildlife to make a decision which would change my life completely. Many of my friends reacted with surprise and curiosity. Even today, very few of them have a good understanding of what I do. This is understandable as most of them live in big cities and have no exposure to wildlife.

Over the years I have enjoyed relating many of my jungle experiences to my family and my friends, and strangely I seem to gain a certain sense of appreciation and respect from these interactions. Most of them find it incredibly interesting and some are even jealous of the healthy outdoor life that I enjoy, and the wonderful experiences that I accumulate.

As a follow-up to my doctoral research with lions, I am now working with various governmental departments and other organisations to translocate lions and hopefully set up a second free-ranging population of wild lions in Asia. Historically, lions have existed in most of northern and central India, but due to destructive actions by humans they are now restricted only to the Gir forest in Gujarat. This is potentially a very dangerous situation as all the individuals of an endangered species are restricted to one small patch of forest. An outbreak of disease or any such similar threat can very easily wipe out the population and lead to its extinction.

Based on the results of my doctoral research I surveyed potential lion habitats to locate a suitable site for the translocation. In January 1995, I submitted my report to the Government of India and since then efforts are

underway to manage the forests of Kuno-Palpur in Madhya Pradesh for making them suitable for lions. 2If this translocation effort is undertaken and succeeds, it will be a major step in ensuring the long-term conservation of the lions and a major personal achievement for me. Translocating large carnivores and ensuring their successful establishment in a new habitat is not an easy task. People resident in the forest and the adjoining areas will always be worried about their personal safety and that of their livestock when a population of large carnivores is established.

Additionally, great care needs to be taken to ensure that the animals are captured and transported without causing any physical injury to them. There are also many political angles to be considered. This is in a way part of the challenge of doing wildlife conservation.

Apart from my enduring interest in the conservation of the lions, I have expanded my research interests to include the conservation of amphibians, reptiles and small mammals in the rain forests of the Western Ghat mountains, ecology of leopards in the forests of central India, and a few other such interesting species and their habitats.

To succeed in wildlife research and conservation it is very important to maintain high levels of motivation and commitment for the field work, an active and inquisitive mind, high standards of integrity and also be able to articulate effectively the research results to support the conservation of the species and habitats of interest. Wildlife research, conservation and management are fields that require more and more trained and committed people. 2Since my time as a student in the 1980s, I find an increasing number of people showing interest in taking up wildlife- related careers. India needs many more young people to take up active field research for conservation of wildlife to be effective. This is one of the few fields in which we can make contributions which can well change the course of events even within our own lifetimes. Working with endangered species and their habitats gives immense satisfaction as it gives me the opportunity to make the difference. Apart from the obvious satisfaction of working for the conservation of wildlife, my job also offers a wonderful opportunity to work with very highly motivated and talented youngsters.

In short, field research and wildlife conservation are a very challenging and a fulfilling career that also offer a great opportunity for an active outdoor life in some of the most scenic landscapes of our country.

I consider myself incredibly lucky to be working with wild animals. I am sure that in the not too distant future many more of our youngsters will be taking up this very interesting profession and making valuable contributions that will ensure that our invaluable natural heritage is conserved.

### Shekar Dattatri

Shekar Dattatri has been an ardent wildlifer since the age of thirteen. In 1984, just out of college, he had the opportunity of working with a film-making couple from the USA on the film Snakebite. This was his first introduction to film making. Already a keen wildlife photographer, the jump to camerawork was not difficult. After several small projects, Shekar directed and shot Silent Valley--An Indian Rainforest, a one-hour film on the natural history of a south Indian rainforest. After completing that film, he won an Inlaks scholarship which enabled him to spend eight months working with Oxford Scientific Films in the U.K., where he sharpened his skills in macro-cinematography and set-building. He returned to India after this stint in December, 1992, and has been busy shooting and producing wildlife documentaries ever since. He has been the wildlife cameraman for several films including Rat Wars and Seasons of the Cobra for National Geographic Explorer, and Land of the Tiger, the BBC series. Shekar is the producer, cameraman and writer of Nagarahole-Tales from an Indian Jungle, a 52-minute natural history film which has won several international awards.

### Shooting Wildlife

How did I end up being a wildlife film maker? Well, it's a long story, and to tell you the truth, I didn't just wake up one day and decide to become a wildlife film maker, I evolved into one.

Let me explain. I have been interested in nature since I was very young. No, my father was not a Forest Officer, nor were any members of my family big game hunters or naturalists. So when someone asks me where my interest in nature sprang from, I always answer, half jokingly, that it was perhaps due to a chemical imbalance in my brain!

I grew up in a very urban locality of Chennai, And even though we were in the heart of the city, there was quite a lot of nature around us. Our tiny garden was home to palm squirrels, several species of insects, and birds. I

still vividly remember the ant fights that my brother and I used to watch at the base of a Tecoma stans tree in the garden. There was a colony of big black ants living there. Once in a while the black ants from a nest at the opposite end of the garden would come to raid this nest, and a tremendously bloody battle would result, leaving many ants dead and many more with mortal wounds, Sometimes two massive ants would stand on their hind legs and grapple with one another like human gladiators, until one of them was vanquished with a vicious bite. Through reading, I later learnt that many species of ants occasionally raid other ant nests to capture 'slaves'.

The Tecoma tree itself was a hive of activity every morning. Its bunches of bright yellow, bell-shaped flowers would attract purple and purple-rumped sunbirds, The birds were so tiny that in their search for nectar they would disappear almost completely into the flower. Large black carpenter bees would also buzz around the flowers for food. At the other end of the garden was a large neem tree that was always full of rose- ringed parakeets. The unripe neem fruits were the attraction for them. They did not actually eat the fruits, but would slice into them with exquisite precision and extract the kernel from within the seed. The ground beneath the tree was always strewn with the seedless, discarded fruits.

The tree was also home to a population of palm squirrels. Now, I was always imbued with a hunter's instinct, and one of my favourite childhood pastimes was to catch squirrels. Many evenings, after returning from school, I would set up my simple trap. It consisted of a two-foot square box made out of wood and mesh. I would prop the box up at an angle using a stick about eight inches long and run a fishing line from the stick to my hiding place about 20 feet away. I would then create a trail of food, leading from the base of the neem tree to the trap, placing the choicest morsels in the centre of the area under the box. 2Then, it was a question of waiting patiently and with bated breath for the squirrel to enter the game. To cut a long story short, when a squirrel finally came into the area under the box to feed, I would yank the fishing line and the box would come down, trapping the squirrel inside. Of course, I always let the squirrels go unharmed. Although shaken by the experience, the dumb beasts continued to fall into my trap with fair regularity, giving me hours of 'hunting' pleasure which was as thrilling for a young boy as big game hunting must have been for the shikaris.

I was an avid reader and read anything and everything that came my way. One day my sister gave me a book by Gerald Durrell, the man who started the Jersey Wildlife Preservation Trust. I was so captivated by that book that I became totally addicted to reading anything on wildlife. I read scholarly books on animal behaviour as well as tales of adventure in the jungle by Jim Corbett and Kenneth Anderson. These two authors in particular, along with my favourite, Gerald Durrell, really instilled in me a deep longing for adventure beyond the confines of my city life. I lived their adventures in my mind. Wildlife became an obsession!

In 1976, at the age of 13, I re-visited the Snake Park in Chennai with my new-found intense interest in all living things and was immediately fascinated by the snakes there. I couldn't take my eyes off them and wanted to spend the whole day there. While I was leaning over one of the snake pits, a girl in a blue lab jacket who had been watching me for sometime came over to talk to me. Her name was Viji. She was a college student and a volunteer at the Snake Park. After talking to me for sometime, she said "Why don't you join here as a volunteer also? There is a lot of work to be done here and you can spend your spare time learning more about snakes".

I was electrified with the idea. So I brashly went up to Rom Whitaker, the Founder- Director of the Snake Park and said boldly "Mr. Whitaker, I am very interested in snakes and know how to handle them. I want to be a volunteer like Viji. Can I please be one?" Rom Whitaker looked down at me and said something that changed my life forever. He said "Sure, you can be a volunteer here, just stay away from the dangerous snakes"

It was that simple! Rom Whitaker always encouraged young people. It was one of his great traits. From that day, the Snake Park became my second home. I helped to care for the snakes, cleaned snake pits, made observations, helped educate people about snakes and prevented people from throwing stones at the reptiles. I consumed the contents of every book in the Snake Park library, and, as the days turned into weeks, months and years, became more and more useful to Rom and the Snake Park. In those days the Snake Park was a hub of wildlife research and many researchers from various disciplines from all over the world passed through it. These interactions greatly broadened my knowledge of wildlife.

In the meantime, I was spending a lot of time in the field with the Irula snake catchers and imbibing some of their tremendous practical knowledge

of natural history. I was also getting more adept at handling snakes, even the venomous ones. My small field trips with the Irulas around the outskirts of Chennai gradually turned into longer trips that I made by myself to some real jungles in south India, to collect reptile and amphibian specimens for the Snake Park museum and make checklists of the herpetofauna of these areas.

With a couple of hundred rupees in my pocket and my trusty back-pack I would go away for about 10 days to 2 weeks at a time during school holidays, travelling by train and bus to some distant forest. There I would engage the services of a local tracker or guide and roam the forests to my heart's content. The reptile surveys were a good ploy to experience the real jungle and catch glimpses of wild elephants, gaur, wild dogs, great pied hornbills and lion-tailed macaques. Snake Park make -"

At night, my guide and I would put on the head lamps I carried with me and roam around looking for the creatures of the night. There were always mysterious crashings in the bush, as large animals got flushed by our presence and took flight. Most remained unseen in the dark of the night, but that only heightened our imagination and made our hearts pound in excitement. Was that a gaur or a sloth bear that was running away? Were those red eyes reflected from our torches those of a tiger? Was that growling noise in the dark a wild boar or a leopard? I became addicted to these trips to the jungle.

About this time, an elderly friend of mine, Mr. R. A. Krishnaswamy, a keen naturalist and photographer, magnanimously lent me his camera and telephoto lens whenever I needed it, and I began experimenting with photography. Since the Snake Park had a modestly equipped darkroom, and I had already learnt how to develop and print black and white pictures, this soon became an obsessive hobby. In 1984 I completed my Bachelor's Degree in Zoology. Thanks to my years at the Snake Park, I was already a well versed herpetological researcher and had several scientific papers, to my credit. I looked forward to a career as a field biologist specialising in reptiles and amphibians. I was contemplating doing a Masters Degree, and then a Ph.D.

At this critical juncture in my life John and Louise Riber, a husband-and-wife team of documentary film makers arrived in Chennai. They had mooted the idea of doing a film on snakebites in India with Rom, and having collected some funds, had now arrived to start work. At that time Rom was

away on a long-term FAO-UNDP assignment in Papua New Guinea, so the job of guiding the Ribers fell upon me. They knew little or nothing about snakes and I knew nothing about film making, so we learnt from one another. Since I was already a competent still photographer, the movie camera was not a complete enigma to me.

I was more curious about how John, who was the Director and Cameraman, framed his shots and assembled his sequences. Every now and then, I would ask him to let me peek through his camera. Later, while viewing the rushes, the logic of the shot would become evident. Thus, gradually, I started understanding the rudiments of film making. John and Louise were self-reliant independent film makers who were well versed in all aspects of film making--from script writing to camera work to editing, and almost without realising it, I imbibed their style of functioning. By the time they left India to go and make films in Africa, I had acquired a working knowledge of film making. All I needed now was work. By this time we had a small film company going in Chennai. We called it Eco Media. There were four of us in it, Rom, his wife Zai, a friend of ours, Revati Mukerjee, and myself. We acquired a post office box number and printed some letterheads. My parents' house, where I lived, became the "Office", and we decided to each draw the princely sum of Rs.750- a month as salary. The film that we had made with the Ribers, Snakebite, turned out very well, and based on this first film we managed to get contracts to make more small documentaries. One was on the Irula snake catchers' cooperative in Chennai, another was an instructional film on how to create tree nurseries, a third was a short film on the Crocodile Bank in Chennai. I bought ourselves an old second hand spring wound 16 mm movie camera and I became the designated cameraman. It came naturally to me. Since I had spent the most amount of time with the Ribers and had learnt the most about making films, I also coordinated the entire process and took charge of the editing. All the others had valuable contributions to make, so we were a good team.

Rom and I also got an assignment to shoot a couple of films for a Project Tiger series that Bittu Sahgal of Sanctuary Magazine was making for Doordarshan. This gave us hands-on experience in filming wildlife and gave us the confidence to dream of bigger things.

In 1989, with financial assistance from Norad and Miseneor we began an ambitious film project on the south Indian rainforest ecosystem, focussing on Silent Valley in Kerala. The film took 18 months to shoot and they were

18 months of challenging hard work, full of adventure and discovery. It would take a whole book to describe all the trips we made and all the things we saw!

However, if I were to pick out my favourite trip and shoot, it would be the filming of a great pied hornbill nest deep in a forest in Kerala. It was late March and extremely hot. I was camped in a clearing in the forest next to a small stream. With me was an associate from Chennai and a couple of Kadar tribals who had discovered the nest and were helping me with the shoot. It was so hot that the stream had all but dried up. To get clean fresh water, we had dug a pit in the sandy bed and were carefully rationing the water that would seep up into it from the ground.

The tree which had the nest was a 45-minute tough hike from our camp, on a steep slope. The nest hole was 80 feet up the smooth trunk of a huge rainforest tree. The female hornbill had sealed herself into the hole, leaving just a slit through which her beak could poke out. Her chick had hatched and if you listened carefully, you could hear its begging cries at feeding time.

Every hour or so the male bird would arrive with food, mostly figs, for his mate and chick. His wings made a great whooshing sound that could be heard when he was still quite a distance away: He was a huge and spectacular bird, with a black and white body, a yellow neck and a massive golden yellow curved beak. His eyes were blood red.

With the help of the Kadars I had put up a hide eighty feet up in a tree opposite the nest hole so that I could be on the same level as the hornbills. I had also made a rope ladder to climb up and down to my platform. So as to not disturb the birds, I would climb up the ladder in the dark before dawn, and only come down again after dusk, spending the whole day sitting cross-legged in my little hide, with the lens focussed on the nest hole. My heart would pound with excitement every time the male flew in with food. He would never come straight to the nest, but first perch on a nearby tree and survey the area for danger. Only when he was satisfied that all was fine would he come to the nest. He would cling precariously to the bark next to the nest hole and regurgitate 40 to 50 whole figs from his crop and pass them in to his mate one at a time.

When his supply was exhausted he would take off from the nest and land heavily on my platform, shaking the whole structure. He would rest there for

a couple of minutes, cleaning his massive beak and rearranging his feathers. Through the camouflaged netting of my hide I could see him perched less than a foot away from me, and I dared not even breathe while he was there! I would just hope that I wouldn't suddenly have to sneeze! And all the time he never even suspected my presence so close to him up in the tree tops!

After we had finished the Silent Valley film, I really felt that I had learnt all that I could on my own. I was beginning to feel like a frog in a well, and desperately craved for wider exposure to the work that was being done abroad in natural history film making.

Towards this end I applied for, and was awarded, an Inlaks Scholarship. This wonderful scholarship enabled me to spend eight months working with a company in the U.K. called Oxford Scientific Films.

While there I learnt a great deal about specialised techniques in wildlife film making. And by travelling around Britain, I met a great many people in the natural history film field. It was all most enlightening and revealing and helped me make a quantum leap in my career.

During this period I entered the Silent Valley film in some international wildlife film festivals, and to my great surprise it won handsomely in several of them. This marked me as someone with talent among the international wildlife film making community that attended the festivals.

Soon offers of work came my way. I returned to India with a freelance camerawork assignment in hand for a series called Wild India which was being made for Channel 4 in Britain. By the time that was finished some months later, a proposal I had given to National Geographic Television for a half hour film on the Indian cobra was approved. I also got a freelance assignment from them to shoot footage for a film they were making on rats in India.

By the time these films were over, I had already raised money to shoot a film in the forests of Nagarahole in Karnataka. This film also took 18 months to shoot and was full of excitement and adventure.

The film, titled "Nagarahole --Tales from an Indian Jungle" has been shown the world over, and has been screened several times on the Discovery Channel in India. We have made a Tamil version of the film, and are

currently working on a Kannada version as well, for the benefit of non-English speaking audiences in India.

We have an amazing wealth of wildlife in this country, but overall awareness of wildlife and conservation is still very low. Through my films I hope to help sensitise people to the wonderful heritage that we have inherited, and must preserve at all costs.

I feel extraordinarily fortunate to be able to have a career that I enjoy so much. But it has not been all gain and no pain. While I have recounted many exciting moments in my career as a wildlife film maker, I have had equally frustrating times too. It is extremely hard and challenging work and you have to be constantly on your toes.

Filming wildlife is the fun part, but to get there you must cross a huge obstacle course. Funding is not easy to come by, and the bureaucratic procedures that have to be surmounted before you even enter the forest need far more patience and equanimity than required for filming elusive wild animals!

Once in the field, you have to be out there from dawn to dusk, rain or shine, sitting in cramped hides or in the back of a bouncing jeep, or even, occasionally risking your life on foot. Sometimes, despite all the hard work, you could go for 10 days without shooting anything worthwhile. To succeed you just have to persevere.

So what's the secret of my success? The key ingredient is probably the passionate, single-minded enthusiasm I've had for the observation and study of wildlife since childhood, and my thirst for adventure. I wouldn't have come this far, however, without the encouragement and support of my parents and several other people. They, in turn, would not have helped me if they had not seen this fire burning inside me. To succeed at anything in life, I believe the key ingredient is always the fire in the belly!

**Seema Bhatt**

Seema Bhatt was taken up with the idea of "ecology" and "biodiversity" when the words and subjects were not so well known. Hence she had to enter into the area via the traditional routes of zoology and entomology. Her love for the outdoors and travel nudged her to link academics with other

activities such as volunteering for WWF camps, etc. This combination has been leading her, through a variety of diverse work experiences, towards what she feels may become her "professional niche" --that is, people's involvement in conservation efforts. Always ready to "try something new", Seema looks forward to exploring new territories and new discoveries - geographically and professionally. Name, Place, Animal, Thing... People ask me what I do for a living. A tough question. I am an environmentalist/conservationist/biodiversity specialist. Whichever way one puts it--it may be enough to say that I have made biodiversity conservation my profession. What made me choose this rather unusual profession? It's hard to say where it all began. My family comprises of my parents and two older sisters. Being the youngest certainly had its advantages when it came to opting for an unusual career. Our love for nature was something our parents inculcated in all of us since our childhood. I remember driving with my parents during family trips, when they always pointed out the common birds on the way. They introduced me to my first kingfisher and Indian Roller. My parents encouraged us to 'see' what was around us.

As we grew up, one of our favourite games was something called, 'Name, Place, Animal, Thing...' in which each person had to write down the aforementioned, starting with a particular letter of the alphabet. The big challenge was to find names of rare and unusual birds and animals. This encouraged me to read more books on natural history and encouraged me to 'know' more about the subject. I also read authors like Gerald Durrell and Jim Corbett, and I longed to travel to exotic places to see unusual birds and animals. The choice of biology in school was thus inevitable. In college too, I majored in zoology. Although at that point of time I really didn't know what I would do with this subject, except that I enjoyed it. My elder sister did Botany Honours and went on to do medicine--something I could not see myself doing. Being the youngest had its advantages and my family did not pressurise me in any way. In the final year of my Bachelor's degree I happened to attend a wildlife camp in a National Park, organized by the World Wide Fund for India (WWF-India). And I was hooked! I realised then what I wanted to do. I wanted to make conservation my hobby as well as my profession. I would have loved to join a professional course specializing in Ecology or Wildlife Biology. Unfortunately there were no such courses being offered in India at that time. But I was aware of the fact that I had to have the appropriate academic qualifications to pursue conservation as a career. I chose the next best option and did my Master's in Entomology (the study of insects). This subject at least took me outdoors. I also started

volunteering some of my time to WWF-India, while I was completing my master's degree. This was perhaps that's only time that my mother objected. It was rare, then, for students to work while studying and she was sure this would affect my grades, This was all I needed to take up the challenge! I travelled 25 km every day, changing two buses enroute, only to spend a few hours in the WWF-India Office, I also tried very hard to maintain my grades. Some of my professors noticed and encouraged my keen interest in wildlife. I remember one particular professor who regularly took us out on bird watching trips.

Quite predictably, after my post-graduation I joined WWF-India as a full-time employee. Thus started my career in rather romantic notion of tramping conservation. However, my across the wilds of India was somewhat dampened as I spent the next five years at my desk, working mainly on documentation of environment-related information. Even though I spent a lot of my free time outdoors, I found the job frustrating. However, in retrospect, I realize that this was perhaps my most important orientation in the field of environment, and it also led me to get another Master's degree in Environmental Studies from the USA. I worked extremely hard, but enjoyed myself immensely. At last I could relate to what I was studying because I was in the real world of conservation. I wanted to learn as much as I could so I could use this knowledge when I returned to India.

I have since then been coordinating various biodiversity-related projects, mainly in India and Nepal. The focus has been on looking at ways to conserve biodiversity of these countries, with local partners and communities. These unique projects attempted to do this by setting up small businesses based on natural products, thus giving local communities an economic incentive to conserve. In the Biligirirangan forests of Karnataka I have worked with our partners to help the Soligas (local tribals) to improve their honey-hunting skills and also encourage them to process and market the same. In the mountains of Garhwai our team assisted the local partners to manufacture oak tassar silk in a sustainable way. In the Sikkim Himalayas we looked at how ecotourism could be made a successful venture. In Nepal we worked in one of the remotest districts to assist the community extract an aromatic oil from the root of a local plant. In another Nepal-based project we assisted in a community based ecotourism venture in the land of rhinos and tigers

When I experience the thrill of watching a rhino from elephant back; or the joy of seeing the sun rise over snow capped mountains; I am amazed that I am actually being paid to experience the wonders of nature! But let's not forget that these wonderful experiences come with long, dusty, hot car rides, blisters, tick and leech bites, and less exciting (but essential) tasks like writing detailed reports, doing accounts etc. My biggest satisfaction comes from the fact that sometimes I can see tangible results from my efforts.

A profession like this requires one to be physically fit as also have a mindset which prepares you for anything ranging from landslides, man-eater tigers to rogue elephants and even bandits. One must also have the ability to work with different kinds of people.

Let me share some unforgettable experiences to give you a taste of "life in the field". We were visiting the Royal Chitwan National Park in Nepal to monitor one of our projects. We were to stay at the research station of our local partner NGO. The field station was adjoining the National Park. The station had rooms with no electricity and, of course, no attached bathrooms. We were also warned that we must carry a flashlight when going to the outdoor bathroom lest we encounter a rhino. None of us actually believed this. A few nights later: I wake up to a strange munching sound. I cautiously looked out of the window and came face to face with a rhino which was enjoying a midnight snack. After that, I for one, never did have the urge to use the bathroom at night!

In my first trip to Sikkim we were on our way to the site from where we were to begin our trek to the first ecotourism site. After a seven-hour drive we encountered a landslide which meant that we could not go any further. We decided to try another route--only to find after another 4 hours that the other road was also blocked by a landslide. It was dark by then and also pouring. We decided to spend the night in the nearest town, which, of course only offered a bed each, and a common bathroom. The next morning we actually walked over the landslide to the other side and having reached our destination began an eight hour trek. The trek route was incredibly beautiful, and it was also infested with leeches which kept us all alert. Our welcome to Sikkim was indeed quite eventful. We were repeatedly told how remote the Humla district in Nepal was. We did not realize how remote "remote" was until we got there. An eight-seater plane transported us to the district headquarters of Simikot located at 12,000 ft (4000 mi. Getting to Simikot is dependent entirely on the weather. Once you arrive in Simikot, there are no

motorable roads and, of course, no transportation. If you have to get anywhere you have to walk. And this is not a cake walk --a fact I realized at the cost of my toe-nails! We did a steep three-hour descent to get to one of our project sites. Having spent one night in our tents (amidst a variety of ticks and mites) we planned to visit the nearest village. This was a five-hour walk through some of the most rugged and steep terrain I have been on. But it also brought to us some unsurpassed natural beauty! At the end of this trip I had lost both my toe-nails as a result of hiking through the steep terrain!

I have often worked in situations where I have been the only woman--a fact that has never bothered me. I have never been made to feel any different. I mention this to emphasize the fact that being a woman should not deter anyone from choosing a career like this. My biggest realization after fifteen years in this field has been that one never stops learning. Every site, every trip and every community has taught me something which I have used subsequently. An open mind is an important asset in a profession like this.

### Deepak Dalal

Deepak Dalal did his schooling at Lovedale, Ooty, and went on to do a degree in Chemical Engineering. This seemed to be the logical choice for a young boy who would soon be joining the family engineering business. And join he did. But once he started, Deepak realized that the work did not inspire or motivate him. Having gone through several years of feeling a misfit in the field, Deepak decided to take the plunge, and choose a totally different path--writing for children. Despite having no formal education either in literature or natural sciences, Deepak has taken up the challenge of learning about, and sharing his excitement of discovering Nature, through his books. This bird and wildlife enthusiast enjoys photography, trekking, windsurfing and sailing--all hobbies that help to enrich his writing. Deepak has published two books--Lakshadweep, Adventures and Ranthambore Adventures.

### Write Moves for Wildlife Conservation

What inspired me to be a writer? An author of children's books is an unusual career choice, quite different from options like computers, engineering, medicine, accounting etc. which are the standard career opportunities available to us.

Well, I started life as a chemical engineer, Since engineering is my family business, I drifted into this profession without sparing much thought. While I was studying chemical engineering I found myself poring over nature-oriented magazines like National Geographic, Sanctuary and BNHS journals, instead of engineering-based material. When I finally became an engineer and moved out from academia into the real world of business and manufacturing, I realised that I had no motivation for that kind of work. Designing and selling industrial equipment did not inspire me at all.

For the first time I began to question myself about what I really enjoyed doing. What did I consider motivating? Was there something which could drive me; compel me to work night and day; something that, despite the long hours it required, I would consider to be fun and be ready to tackle day after day, with vigour and enjoyment?

After some deep soul searching, I concluded that I enjoyed teaching. I delighted in sharing my love for nature with others, especially children. Though I had never given it any thought before, I was reasonably confident that I could write stories that would capture the imagination of a child.

After many years of working unhappily as an engineer, I finally made a decision. If writing for children was what I wanted to do, I was going to do it. I decided I was going to pursue a career which would bring me joy and fulfilment. This, of course, was easier said than done. It was difficult to brush aside years of work as an engineer and start a new career from scratch- -but I did it. Writing is not easy, but it is something anybody can learn. It is like any task in life: the more you practice or pursue it, the better you get at it. But it did strike me that if I had studied English literature at college, instead of engineering, I would have gained a tremendous head start. Knowledge of different styles of writing and the study of literary works could have helped me enormously. Maybe not literature, suppose I had studied wildlife in college. It would have supplied me a solid grounding on the animal and plant kingdom. I often miss this firm foundation, especially when I am researching for my books.

This brings me to the all-important decision of choosing a career. CAREER CHOICE! I cannot emphasize how vitally crucial it is. If only I had given thought to this question during my school days! My drifting into engineering without ever questioning myself lost me many valuable years. I

would have had a head start in my literary career and would possibly have turned out better books.

School-going children still have this option. I urge you to apply your minds before making a choice. Ask yourselves the question: 'Will I be happy pursuing my chosen profession all my life? Will it motivate me? Will it bring me satisfaction, joy and fulfilment?' I know that as a school child it is difficult to answer most of these questions, but by opening your minds to the possibilities and simply questioning yourselves, half the battle is won.

So much for career choices. Let me dwell for a while on what inspires me about nature and all things wild. I was always attracted by the outdoors. For me, falling in love with nature was a gradual thing. I think it came about as a consequence of my love for the outdoors. When you trek, when you climb mountains, or indulge in windsurfing or sea voyages, you come into close contact with nature. Mother Nature can be astonishingly beautiful and it is when you learn to appreciate her beauty that you get hooked.

It was simple things that enchanted me. Small things like the collection of dew drops on a spider's web. When the sun shines through the tiny drops, hundreds of tiny rainbows are produced. The wondrous glories of sunsets never cease to fascinate me. Then there is the marvel of changing seasons. It is not just the transformation of the landscape from brown to green which captivates me, but also the different ways in which animals and plants adapt to the natural rhythms of life. Watching animals has always fascinated me, but for a long time birds were just noisy creatures which lived in the trees. I remember that the Redvented Bulbul was the first bird I observed closely and also identified through *The Book of Indian Birds* by Dr. Salim Ali. Binoculars added a fresh dimension to the observation of birds. Suddenly the same noisy creatures became objects of extreme beauty. Lenses enabled me to see the iridescent splendour of the purple sunbird, the moonlike eye of the white eye, and the riot of colours on the golden-backed woodpecker. I began to distinguish one bird from another. I listened carefully to their birdsongs and learnt to follow bird migration.

Bird watching has added an intangible something to my life and it is a hobby which will bring intense satisfaction and mental rewards.

Why did I start writing for children? There are a number of reasons for this, actually. It is sad but true that there are very few authors in India who

write for children. There are no nature-oriented stories specifically directed at the younger generation. The only references that you come across to nature and wild creatures are in textbooks, or the matter is presented to you in the form of boring lectures. Since most of you live in huge, crowded cities, there is very little scope for your being exposed to the outdoors or learning about nature.

Unfortunately schools compound the problem by pursuing what they call academic excellence at the expense of all else. Nature and the knowledge of natural rhythms take a back seat. My stories try and fill this gap. I try to build a very strong natural history foundation in my stories. Another aspect I try to bring forth in my stories is the diversity of our country. India possesses so many wonderful destinations. We have coral islands in Lakshadweep, rain forests in Arunachal and Bengal; we have Himalayan states like Sikkim, Himachal and Kashmir. The list is endless: places like Ladakh, the Andaman islands, the Thar desert, game sanctuaries, our vast coastline etc. We are blessed with an incredible diversity of people, landscapes, birds and animals. I have made it a point not to set my stories in cities; rather they will be set in some of these wonderful destinations. Hopefully, by reading these stories you will learn something about them.

Today wild India is under threat. Our national animal, the tiger, is in danger. Many other species are on the brink of extinction. Forests are being gobbled up by greedy businessmen and corrupt politicians. The list of woes is endless.

The purpose of my stories is to kindle a love for nature in you and open your minds to the senseless destruction of our wild places. It won't be long before your generation inherits the mess left behind by mine. Soon the management of our wildlife parks and forests will be in your hands. If my stories gently nudge your hearts and help mould you towards being responsible future leaders, I shall feel fulfilled.

### **A Day With a Forest Officer**

**Sunita Singh**

Sunita started her school life by refusing to go to school! She thus started nursery school later than most children do. She completed school and college studies in Delhi, and her post graduation in Environmental Science

from G. B. Pant University. She qualified for the IFS while she was about to complete her Master's Degree. Since joining the forest service, Sunita has worked in several areas. Her desire is to contribute substantially to the area of women's role in forest conservation, and active involvement of rural women in forestry activities. Sunita is currently posted as Deputy Conservator of Forest, West Nasik, in Maharashtra - an assignment that keeps her on her toes--round the clock.

*Tell us about your childhood?*

We are basically from Chhapra district in Bihar. My father was working in Delhi, so that's where I was educated till my graduation, I then went on to do my M,Sc. in Environmental Sciences from Pantnagar University in U.P,

Was the ambition right from then to be a forest officer? No, not initially. In fact, my parents wanted me to be a doctor (laughs) and till my XII std., that's what I thought I would become. It was in my first year of B.Sc. that I first learnt about the Forest Service. And I felt, "now this is something I would really like being part off."

*Was there any person, any institution that inspired you and drew you towards this field?*

No, not in my case. I was attracted very much by the glamour of the IFS. It was really something different. It would allow me to move a lot outdoors. I was fond of trekking, hiking; I was something of a tomboy. So, naturally, such a job seemed very exciting. The other comparable services, the IAS and the IFS, didn't have this combination of technical knowledge and glamour.

*This must have been sometime in the '80s,....*

Yes. Environmental issues were just coming to the fore and we would be reading about it in the newspapers all the time. I strongly believed -- even now believe -- that if we could achieve at least the target of getting one-third of our land area under forest cover, up to 80 percent of our environmental problems would be solved. I felt that by joining the IFS, I would be serving the country best.

*Once the decision was taken, did family and friends encourage you?*

Initially, both Mom and Dad encouraged me very much. But when I got through the exams, Mom was upset. She suddenly became worried about me. Dad told her I could always look for another job if I found I couldn't cope with this one. My parents have always been very encouraging. We are three sisters, and all three of us are working. They've never insisted that we should get married and settle down. Dad always said that we should become something, individually. His encouragement has really meant a lot.

*Were you scared at any point of time?*

Yes, on many occasions. I often felt lost. There was no denying that I had come into a man's domain. Such a lot depends on your personality. One initial impression is usually, "Oh, I'm going to be a forest officer. That means I'll be going out and protecting the forest." But then one realizes that it is so much of an administrative job--a question of getting things done from people under you, managing your staff, maintaining good inter-personal relations. It's largely "human- management". I'd worry about whether I'd be accepted professionally. *Have you been accepted?* Yes, I feel I have.

*How does one go about becoming an IFS officer?*

The IFS exam is conducted separately from the joint services (UPSC) exam and there is no preliminary exam here. Only science graduates are eligible to appear. The pattern is similar to that of the UPSC exam. There an English paper and one on General Knowledge. There is comparatively more focus on geography, geology, ecology and the like, but there is no hard and fast rule about that. Then you've two special papers which you can choose from a wide range of subjects that includes botany, zoology, agriculture, geology, statistics and even engineering. If you get through, you face an interview by experts. The questions -- here depend a lot on your bio-data. That is followed by a medical test and, finally, a physical test which is specific for the IFS. You have to have a certain height, weight, chest expansion measurements, and, also a test of stamina. Women have to walk 16 km and men 25 km. minimum weight,

*These tests are conducted in Delhi, aren't they?*

Yes. We heard that one batch had this test in May and candidates fainted from the heat. Yeah, 2-3 batches faced this problem. Normally, the exams are conducted around July or so, and it is December by the time they get

around to the physical. But for these batches, the exams got taken only in January and they had to appear for the stamina test in mid-May Delhi heat!

*If you pass the physical also, are you selected?*

Yes. You are then first sent for training in administrative skills at the Lal Bahadur Shastri School in Delhi. Then there is a 2-year training period at Dehradun which is now divided into Phase I and Phase II, just like it is for the IAS. During the 1 1/2 year Phase I, you are literally made a Jack-of-all-trades, with up to 30 subjects being covered, including some construction engineering, road alignment, geology, ecology, taxonomy, statistics, and, so on. The Phase II is more fieldwork-oriented. You have to do projects, formulate solutions relating to the State for which you have been selected. You are given basic training in skills like horse-riding, weapon-use and motor mechanics. For these things, they take the help of the Indian Military Academy (IMA) at Dehradun. Your training is followed by a 1-year probation period during which you are assigned all kinds of jobs in the various departments of the Forest Service. So for a time you may have to do the job of a range forest officer-go to the bank, draw cash, disburse it yourself to labourers and maintain an account of it. The idea is that you must know all the kinds of work involved at the various levels.

*Your first major posting is directly as a Deputy Conservator of Forests?*

You are on a junior scale for a short time. Then you are posted as a DCF. That is the same as DFO (Deputy Forest Officer) basically, only the latter term is applied to officers promoted to the post and not appointed directly through the IFS. *Did you face any specific problems or situations because of being a woman?* It's only since 1980 that women are being allowed to try for the IFS. I am from the 1987 batch. Even now, there are only 3 lady DCFs, including me, in the entire Maharashtra cadre to which I belong. Generally speaking, we have been accepted, but people's attitudes to us differ. There was one officer who was always over-protecting me. And there was another who made me slog like anything. He wasn't prepared to give me any concession, even when I was pregnant!

*Can you choose to be posted in your own State?*

No, not everyone. Only the few merit-ranked candidates get a State-cadre choice. In every cadre, one-third of the posts are occupied by insiders and

two-third by outsiders. And the ratio is pretty strictly maintained. After being allocated your State-cadre, you have to pass an exam in the State-language.

*Once you've been appointed to a State-cadre, is that where you make your entire career?*

Well, you can move out of your cadre on deputation to some other state or department, for a standard deputation-period of four years plus one more year, if you get an extension. Then you have to return to your own cadre.

*Tell us about some of the projects you've worked on in your 9 years of forest service.*

My first posting was in Pune in 1989. After getting promoted, I was again given a Pune posting. Both these postings were essentially city-jobs and involved mainly administrative work. This, my third posting, has been as the DCF in charge of Social Forestry of Raigad district. The first thing I had to do was to set about publicising existing schemes about which there was not enough awareness among the people. We found quite a few takers. As for new projects, I have submitted some for wasteland development, but they've not been cleared yet. One project that has been really close to my heart is the development of a *Smriti-Van* on the outskirts of Alibag. The idea is that people can plant a tree of their choice on this land in the memory of some one dear to them. They need to pay a very nominal amount of Rs.500/- for its upkeep. We ourselves have planted hundreds of saplings suited to the soil conditions here. These have helped in trapping last monsoon rain-water and with two wells sunk, the land is already providing the water needed for its greening. Though the whole thing is still in its initial stages, we hope it will grow into the green belt this area needs. And because of the trees the townspeople have planted, they will have that emotional bond with this plantation.

*Now that you have been transferred to Nasik, a new person will take over here. Will the work you have started be necessarily continued by your successor?*

(Laughs). If you start thinking about what's going to happen to your schemes, you won't put in the inputs required. You have to do your best and leave it at that.

*Is this as transferable a job as one in the other civil services?*

Yes. We are transferred every three years. It is practically obligatory.

*How does your husband react to your job?* (Smiles). He's been very, very helpful. We were married in 1993. I was already a forest officer then. He was fully aware of the nature of my job. He himself is an academician, by choice. At the time of our marriage, I was posted in Pune and he took up a job at Bharati Vidhyapeeth Engineering College at Pune. When I was transferred to Alibag, he shifted to the Pen Engineering College, the closest option available. Each time he starts afresh in a new college, he cannot avail of long leave or the standard vacation for a period of one year. So he forfeits that luxury every time he moves with me. We have been very lucky so far in that he has had a suitable job opening close to both the places that I have been posted at. But we are prepared for the fact that we may have to stay apart at times. He's been very understanding, very supportive.

*At times it must become difficult for your family if you have to cope with the demands of the job..*

Whatever time your job leaves you with; you have to give it completely to your family. I have a four-year old daughter. When she was younger, it used to become very difficult to give her enough time. While touring, I used to carry my child around unless, of course, a very senior officer was present! A couple of times, she was really ill when I had to work. At that time, my mother-in-law had brought her over to my office; if you had walked into my room, you would have seen my child sleeping on the table and me working next to her. Sometimes you have to make these allowances. In assignments like Social Forestry, once you leave your office, your job is over for the day. But in proper Forestry, it is a 24-hour job. You may get a phone call any time of day or night and have to go for a survey. You need to have a lot of support from your family, especially from your spouse, whether wife or husband.

*What are the essential qualities you would say a forest officer must possess?*

He/she should like moving around a lot, because touring is an inseparable part of this job. Administrative qualities are another must, to manage the

"human-management" part. Technical knowledge is desirable; one should be able to quickly grasp things about a project one has been assigned. This is necessary because often you are trained in one thing, and you get work of a totally different kind.

*Would you advise youngsters to join the IFS?*

Yes. Definitely. We need a lot of sincere people dedicated to the cause of environmental *conservation*. *Excerpts from an interview with Shri Parth Bapat at Alibag, just before Ms Singh was due to leave for her new posting at Deputy Conservation of Forests, Nasik. Shri Parth Bapat runs an environmental organization called The Reach.*

### **On the Run in the Rann**

#### **Nita Shah**

Nita Shah is an independent field biologist involved in extensive studies and research in hot and cold deserts of India. Armed with B.Sc. and M.Sc. degrees in zoology, Nita joined the Wildlife Institute of India, Dehradun to work for a Ph.D on the Ecology of Wild Ass in the Rann of Kutch. Her study included the first radio-telemetry study on the Asiatic Wild Ass. Her findings of her research have been crucial for the management of the habitat of the Wild Ass. Since 1994, Nita has shifted focus from the hot desert of Kutch to the cold trans-himalayan regions of Ladakh and Sikkim, but continues her study of the Wild Ass. She looks *forward* to visiting exciting places like Tibet and China, in her pursuit of the Wild Ass.

During my formative years as a school child in Bangalore I was always an energetic, strong sports girl. My parents exposed me to classical Bharatnatyam, and I spent nine years of my childhood in vigorous training and exercising my body postures, control over the emotions and facial expressions, which has helped me all along my life. I also had an opportunity to learn Carnatic vocal sangeet. Thanks are due to my dance teacher and my music teacher who spent hours patiently inculcating the classical Nritya into me. This has helped me, I feel, in appreciating Nature.

My family was always interested in activities that would take us close to Nature. Right from my childhood, my parents, brother and I planned our vacations in the wild and remote areas of Karnataka. My brother, an ardent

trekker, used to visit wilderness areas in the Himalayas and come back and tell me all about his experiences in the wild.

As a student at Sophia High School in Bangalore, I was taken to various parts of the country during vacations; whereby I learnt to deal with situations independently. My aim in life was always to be a doctor or a dentist--a dream of any average individual. But nature had something else in store for me. I got myself an admission into the Bachelors course in Zoology at the M.S. University of Vadodara.

During those years I was an active member of WWF-India, INSONA (then Indian Society for Naturalists) and Bombay Natural History Society (BNHS). I believed in naturopathy, attended all environmental activities, attended nature education camps; till I met my guru/teacher, Prof. G. M. Oza an eminent personality, at the Botany Department at the University . I talked to him of my interest in wildlife and nature conservation and of my main interest in pursuing field-based studies rather than doing any lab-related research. Eventually he guided me into the field of conservation which eventually was to become my profession.

All through my University days in the early 80s, I was involved in nature-related activities. During the week-ends we used to have field-trips for bird watching and counting which formed a part of my Ornithology course at the Masters level. With a couple of my university friends, we used to regularly leave before dawn to observe and do bird counts of various wetlands in and around Vadodara, including a large sewage farm that used to attract birds.

My greatest interest was in Ethology (the science of animal behaviour). I started looking for field-oriented studies in the wild. From 1983 onwards, I had started visiting wilderness areas, through camps and by myself. Here I was able to interact with the local people and learn a lot about the forest through them. I never missed an opportunity then to watch wildlife films and TV programmes, and read many books about Ethologists, Biologists and Conservationists. The kind of work done by wildlife biologists in Africa especially fascinated me.

On Sundays I would cycle down to the ravines of Mahi river near Vadodara to spend the day watching wild animals, and birds; now that area is the Sindhrod Nature Reserve. Near my house in Vadodara. were agricultural fields and guava orchards. Here I used to spend days watching

the birds, jackals, jungle cats, reptiles. Over the years, the area began to be developed, so that the open fields started shrinking. Today the same areas have residential complexes--no more do we hear the call of the peacocks and jackals.

I was determined to undertake field-based conservation studies. So I contacted BNHS and wrote to Wildlife Institute of India (WII) to find out about possible openings. It was luck that knocked on my door. I was called for a written test at WII in Dehradun. This was when I had just completed my Masters Course in Zoology. I proceeded to Dun, gave my exam, qualified and was interviewed. Eight of us were selected, and I was the only lady biologist selected. Thus began the pursuit of conservation. After the orientation period I was assigned to work in the desert. Initially, when there were plans of putting me into the extension part of *conservation*, I had immediately reacted, and requested the authorities that being a zoologist my aptitude was more for animal studies and not the two-legged ones.

My first visit to the Rann of Kachchh in 1988-89 for a reconnaissance was an experience on its own. It was the end of winter; summer was setting in. As the open barren parched land came into sight, and entered into nothingness, mystical feelings set in at the sight of the brown saline land merging with the horizon. I felt then that this would be the area where I would contribute my best. I had a feeling of belonging to this area from Day One. My driver, Yadgir: from Hyderabad, had never visited the desert before. He had a perplexed look on his face, because he felt there that water was all around the place. I asked him to drive to a spot where he thought he saw water, and then he realized it was not so, that he was "hallucinating"--the feeling one gets when one sees a mirage. He desperately wanted to leave. He was worried as to how I could work for the next three-and-a-half years in the Rann.

My field driver Dharamsingh used to remain with the vehicle till it was dusk, and it was time to pick me up from the herd that I was observing. Once, near Kopami Rann, Dharamsingh drove the Jeep straight into my herd of khurs, disturbing the normal activity pattern. I asked him what happened. He told me that when he was having his siesta in the early evening, there appeared seven women out of nowhere and asked him "What are you doing in the jeep, when your Madam (meaning me) is out in the Rann?" So, he said, he had started the jeep, and drove so as to reach me fast, and had ended

up banging into the herd under observation. That day I had to give up my entire day's observations-- from dawn to dusk.

I remember some days when I could not track my radio-collared wild ass. I would be disheartened and dejected. But then I would throw out all the negative feelings by driving into the Rann. I would spend a couple of hours in the Rann; what a sense of relief I used to feel after this! The Rann thus became a refuge for me in times of both joy and dejection.

One winter midnight while tracking my radio-collared mares, I saw a light where there was no habitation. On reaching there, I saw a *Waghri* family cooking, at that odd hour, On asking, I came to know that they were capturing spiny-tailed lizards. Winter is the best time for catching them as it is the hibernating period for them. The *Waghri* group already had twelve lizards whose backs had been broken in the bag. This infuriated me. I happened to see a half-dug burrow, and from it I rescued a lizard. I adopted her as my pet, and she lived with me for six years. She ~was the most well-travelled lizard, going right from Bangalore to Garhwal Himalayas.

My Mahindra jeep was named the "Prosopis Dancer". In it, I travelled over a lakh km, within the Rann. We seldom took the tar roads. This saved time, and the Rann was better to drive in than on bumpy roads. This sounds adventurous now, but I know how I had to manage my ways along with the team who, over time, had understood my ways of working; they too were cooperative.

In the Rann I had to be mobile in the monsoon too. In such weather my vehicle could not be used for the wild ass counts which I did every month. Then the "ship of the desert"-- camels, were my only means of commuting through the soggy landscape. 2Once, I travelled over night through the Rann with my caravan of four camels. That year the monsoon had failed, i. e. only few showers had arrived, and this made the Rann terrain even more difficult than usual. I had to count the wild ass population on one of the islands, but I had no plans of camping for the night as the rains were unpredictable. It was very humid and hot; and as I neared the island after a backbreaking camel ride, we stopped for a break.

Then I discovered that the people assisting me and my assistants had emptied my stock of water in the *jerrycan*, assuming that, I being a lady, would turn back! I took them to task and asked them to take one camel back

to fetch water. I was aware of a water source in the Island, but on checking found that this water was no longer potable. On the island I saw large herd of wild ass. The *talab* (water tank) had very little water left and the graziers had already been on the island, and their cattle had left the water stinking, very dirty, and full of dung. Eventually I heated the water (which turned green) and filled it into my hctnari (canvas bag used in deserts for cooling). We managed without food.

I did my counts by late evening, and left the Island. I was happy and felt it had been worth the trouble. I had already sent my two camels and assistants towards another island to wait for me. Suddenly I realized that we were into a more soggy patch which we had not come across in the morning. The *unteshwar* (camel man) told me that he had no clue where we were. I was taken aback. We had only one glass of water left. Nights are chill in the Rann, and praying that it would not rain, we were lucky to hit a bare patch. I disembarked from my camel and decided to call it a day.

In the meanwhile my assistants who had already left for the village were worried. The village elder, Khan Chacha, with whose family I had lived for the last three-and-a-half years, was panic stricken. The night went slowly. I had to keep awake all night, sitting next to the camel for fear of being crushed (the camel changes sides, and God knows when I could be trapped under it).

I was up before sunrise. I climbed on to my camel, and waited for the sun to rise so that I could head for my village. I started travelling in the direction the water was. On the horizon I saw 10-15 people walking towards the island. It was the villagers, coming in with *jerrycans* of water in hand, in search of us. They had left the village at 3.30 in the morning in search of me!!

In the Rann, a bath was a rare event; one was mostly bathed by the dust storms. We cooked our own food and quietly accepted the sand particles which often accompanied our diet.

Sleeping in the Rann under the starry sky was fantastic. Full moon nights are best in the region, when the sky is so lit up that there was no need to use our vehicle headlights. Despite all the trouble we had to live with, I enjoyed being in the Rann. I have always felt the Rann to be the safest place, where, once you are in, you are totally isolated from the world.

The people all over the Rann have invariably been very hospitable and caring towards me. I always feel indebted to the Rann and its inhabitants. But for the support of my husband and my parents and our families, I am sure it would never have been possible to continue scaling the barren, yet, so full of life, hot and cold arid zones of India.

In this field I have learnt to be a good administrator, listener, planner. Apart from being a good observer, one needs to be dedicated, devoted and have the stamina to carry on this profession which has returns in terms of satisfaction and the joy of conserving the land which we all love.

The "Land of storms and mirages" as I called the Rann then, continues to haunt me to this day. This land has given me unique experiences, and strength and confidence. I have battled loneliness, tiredness, barrenness, and have had to teach my team (comprised of local people) to understand the objectives of my study in the area. Today my name gets linked to the most hardy, strong magnificent trotter - the "Ghorkhar" wild ass.

My life has been adventurous and tough; at the end of the day I have no regrets whatsoever for having taken wildlife conservation as my profession. I am so addicted to this scenic land of mirages and barrenness that I visit it year after year to meet my trotters of the Rann.

### Birds are My Neighbours

### Qasim Moammad

Qasim Mohammad and his family have lived, for years, close to Nalsarovar, a large lake located about 60 km from Ahmedabad In Gujarat. This lake attracts large numbers of migratory birds, especially during the winter season. This is the main attraction for very many visitors and tourists, while others visit for a lakeside picnic. Qasim comes from a family of boatmen but he combines his traditional profession with a keen interest in learning more about the feathered visitors that come to Nalsarovar, and in sharing his observations with the two-legged visitors! A self-taught "birder" whose enthusiasm is infectious. My name is *Qasim* Mohammad. I am 34 years old. I work as a boatman with the Gujarat Forest Department at the Nalsarovar Bird Sanctuary, a large lake covering an area of about 120 sq km and situated 60 km from Ahmedabad. This lake is home to a variety of birds,

and during the winter season it attracts several migratory species, especially flamingoes, pelicans and several ducks. A lot of tourists visit Nalsarovar, sometimes to see the birds, and many more come as picnickers.

My work begins early in the morning. I wait for the visitors near the lake in my boat. I take them for boating around the lake and I also show them the birds on the lake. But many tourists do not necessarily come for bird watching. They enjoy the boat ride, as part of the picnic.

I used to accompany my father when he took our boat out in the lake. My father taught me how to row the boat. I was able to study till 5th standard. My parents married me off immediately after my studies. I have four sisters, and I had to take care of my family too. I knew that one day I too would become a boatman like my father. Anyway, I had no choice. He stopped rowing boats after he became weak and fell ill and I had to take over his work. Now, my father and one of my sisters run a tea shop near the gate. To be a boatman requires a lot of strength, stamina and energy,

I don't recollect how I learnt the names of the birds but I do remember how my interest in birds began. When I was seven *years* old, an old man visited Nalsarovar. Everyone around was talking about that person. He had a camera and I liked the sound that his camera made when he clicked it. When I learnt that he was a bird scientist, I wondered why people studied birds. Later I came to know that his name was Dr. Salim Ali and that he was an eminent person and had made great contributions to natural history. After that visit of his, I started paying attention to birds. I have grown up watching birds and thus, have been witnessing the reducing population of birds.

Villagers of the seven villages that surround the lake are basically fisher folk and some of them catch birds to get more money. They sell the birds and also eat them. The common way of putting a trap is vertically spreading the net on the surface of the water using two bamboo poles. Another incident that triggered my interest in birds is when a friend and I saw a bird caught in such a net. We thought the bird was dead but it managed to survive. We took the bird out and were astonished by the colour of its feathers and its beak. It was a Purple Moorhen. It was the first time that I had seen a bird from so close.

In one foolish incident, my friend and I decided to trap a bird. We had no idea of what made us do that. We carried two long bamboo sticks and a net

with which the local people usually trapped birds. It was not easy to plant both the poles together. We succeeded in spreading the net after two long hours of our struggle in the water. We came in the morning to check if any birds had got trapped. We were shocked to see both the poles and the net missing. At last, we found them floating near the bank. We realised this occupation was not our cup of tea!

Children near the lakes learn from what's happening around. Such trapping of birds happens even now. I am afraid if the children who live around the lake are not educated about the importance of the lake and the birds, they might end up hunting the birds. Some of the boatmen are assigned to patrol the lake during night hours. During patrolling, I have collected plenty of nets that were laid to capture birds and submitted them to the Forest Department office. The number of nets gets noted down in the files and I am given my quota of appreciation. I feel sad that these numbers are only seriously taken in the reports but concrete steps are hardly taken. Incidents like these make me frustrated. I worry that if these activities continue, all the birds could vanish. Once during the night patrol, I was chased by the hunters and a stone hit me on my head. My family members get disturbed and ask me to stop interfering in these matters.

It is during the months of December and January that Nalsarovar gets the maximum number of visitors. The lake appears like a *meio* with a variety of birds. Different tourists react differently when they see birds. Tourists with no interest in birds are not at all concerned. They find enjoyment in making noise and singing songs. For them it does not make much of a difference even if I ask them to be quiet. Some even say that Kankaria zoo in Ahmedabad is a better place to see birds clearly and from close by. But some people come only for bird watching and they ask for me at my father's tea shop. I enjoy talking to people about birds. People interested in birds listen to me carefully, and while going back give their visiting cards and addresses. They ask me to call when more birds arrive at Nal. I do not show birds to get extra money from the visitors, it gives me happiness. I hope the visitors go back and tell others about the richness of Nalsarovar. I have not visited any other bird sanctuary. Visitors often talk about Bharatpur Bird Sanctuary in Rajasthan. But this is my Bharatpur. Many tourists ask me how I learnt the names of the birds as I am not educated. I did not learn from books or from any person. I grew up watching birds, but it took me several years to learn and remember the names, especially the English ones. When some big officers or bird watchers come, they use books and discuss among

themselves about the birds they see. I took interest in listening to their discussions and sometimes peeped into the books to have a closer look at the picture of birds.

Now I can identify almost all birds of Nalsarovar and I also know when they arrive and where they nest. Many birds, like Jacanas and moorhens nest on the floating vegetation. So I have to be careful while taking the boat near the grassy areas of the lake or even while walking near the bank. I want my fellow boatmen to learn and teach about the birds. Often boatmen give the wrong names of birds. They may even pass off a Black winged Stilt as the chick of a Flamingo! They make up their own stories to entertain the tourists. I feel uncomfortable about this. We should not sell Nalsarovar in this way. It is birds that draw tourists to Nalsarovar, and we must provide at least the correct information about them.

It is important to create awareness among the boatmen. It is we who could save the birds. Forest officers get transferred every now and then. So, it is in our hands to help preserve the lake. My dream is to make this place a well protected one. I want to document Nalsarovar in all its moods and seasons. If this could be shown on the television, more people would come to know about this lake. It will be nice if an education centre is opened in the office area where the visiting public should go first and then come for boating.

People around the lake need to be told about the value of this lake. I feel there should also be awareness programmes 'in the villages around, especially for the young boys and girls. They need proper guidance and should feel proud that they live near this bird paradise.

The advantages of being a boatman and a birdwatcher are plenty. It allows me to get closer to birds without disturbing them. I get to listen to a variety of calls very clearly and also get opportunities to observe their behaviour and nesting locations. I feel that Nalsarovar is my home, and the birds my neighbours. I feel happy doing my small bit for Nalsarovar and I am looking forward to a day when every villager feels as much a part of Nalsarovar.

*As narrated to Ambika Aiyadural of Centre for Environment Education.*

**Look Out, Here I Come!**

## Archana Bali

Archana Bali took her first step on the path to a conservation career when she participated in a nature study camp. Since then, she has continued to combine this passion with academics. She has been one of the founder members of the Green Hearts Nature Club, Bhopal. This club has been actively promoting environmental activities in local schools and colleges; as well as in the Van Vihar National Park where the club volunteers interact with visitors, to create awareness and share information related to the Park and its animals. Archana is also part of the resource group that works with the Regional Museum of Natural History, Bhopal to develop environmental activities and modules for school children. She is also part of a group studying visitor behaviour at the museum. She sees herself getting more involved in such activities over time.

I always wanted to do different things. When I was a kid I wanted to become a lawyer. But I was an unconvincing liar, so I decided to become a doctor instead! That too, not an ordinary one, but rather to get involved in some research, perhaps in cancer or genetics (not that I know much about these either). And added to all these aspirations was the interesting fact that I always hated biology!

When I was in 10th standard, I got into a nature club. It was called 4F Forum, that was 'Forum for Forestry Furtherance'. Through that I went for my first-ever nature camp. It was a 5-days winter nature camp in the woods of Barwani Forest. Those were surely among the most unforgettable days of my life. The forest was so enchanting and inviting that I wanted to stay there forever.

That camp changed my attitude. From then, for me, nature was something to be taken care of, not for fun only. Then, I discovered what I really wanted to do. I made up my mind to make "environment and forestry" a career. But the credit also goes to my mother to whom I shall remain indebted for having always encouraged me 'to cultivate my passion for nature.

Funnily enough, I've just completed my graduation in commerce and computer applications and I'm currently doing IV semester of a software development and information technology course. But now I plan to do post-graduation in forest management from the Indian Institute of Forest

Management (IIFM), Bhopal. And so, I'm also waiting for the results of the entrance exam of IIFM.

As a child, I remember, whenever we had guests at home from out of town, along with other sightseeing we used to take them to Van Vihar also. On one such visit, we had gone to Van Vihar with my cousins. It was a Sunday, and several other families were also there. The children of one large family were having a competition--a sort of "Hit the Bear" contest. They were very dedicatedly throwing stones at the poor animal. I went to one kid and asked him not to do so. He started yelling and crying bitterly as if I was going to kill him. His mother came and started shouting at me. I really felt insulted at that and in turn started throwing stones at them. Ultimately we ended up having a "Mahabharat". My brother had to interfere and came to their rescue, and I felt as if I had won the battle. But later on, I got a good spanking from my mother. Still, that's an unforgettable incident for me.

Though I used to visit Van Vihar with my family, I started visiting the park regularly since the summer of '93. Initially I used to go there early in the morning with my three other friends, Narayan who is in IIT, Mumbai now, Avi who is doing his engineering degree, and Kaustubh who is a keen birdwatcher. At that time we all were members of the 4 Forum.

Now, for the last one year, on weekends I have been volunteering at Van Vihar along with other members of a Nature Club called GreenHearts Nature Club.

Woods have always fascinated me. Van Vihar is not a mere zoo, but is a modified zoo, or, rather, a national park. It gives one a feel of a real jungle with so many wild animals and beautiful birds, right here in middle of the city. I developed a sort of obsession for Van Vihar. It's something I can't explain. Like when you see a tiger sitting a few feet away just in front of you, you can't help falling in love with that beautiful and majestic animal. And so it is for other creatures too.

Our GreenHearts Club used to have its weekly meetings in Van Vihar itself. As members we had the desire to do something related to wildlife. But we also wanted to do this with some sense of authority or purpose. It was our club advisors Somit Dev Burman and Dal Sharma who proposed a plan that GreenHearts members could volunteer for the Park.

The main idea behind this was that volunteers could help to make ordinary visitors and common people aware of their natural resources, in a way that they could relate to. In addition, they could help to implement the DOs and DONTs in the park. Mr. Amitabh Agnihotry, the then Director of Park, liked and appreciated the idea. Things worked out and now we GreenHearts are the park volunteers.

An interpreter's job is to interact with visitors,,that is, basically to interact with strangers. The reactions of people and their queries are often very interesting, and sometimes funny too.

Once, a man got up on the fence and started calling the lion. He was literally calling out as if it was not a lion, but instead someone known to him, even an old friend. Coincidentally at that very moment the lion appeared. I went to the man and asked him to stop calling and to get down immediately. And he replied, 'Ma'am, I've been calling the lion for the last ten minutes. And it's only because of my call he has come to see me, and you are asking me not to talk to him'?

Though I was annoyed with him, I just couldn't help bursting into laughter at his reply. Funny, no?

Along with such funny, and some interesting experiences I do have some frustrating ones too. And for a volunteer such experiences are very likely. I'll tell you one. One Sunday, a group of boys and girls had come to the Park. It was very obvious that their plans did not include enjoyment of nature. They were constantly shouting, playing loud music in their car and blowing the horn. All this is prohibited in the Park.

I was with two other friends. I politely asked one boy not to blow the horn and also to put off the music because that was prohibited. I warned him that he could be fined. The way he talked to me was just disgusting. He started abusing us, and that was something very intolerable for me. I retaliated in the very same manner as I had in my childhood, and soon there was another 'Mahabharat' scene. One of the guards noticed the trouble and went to close the gate. But by then that boy sensed that there could be big trouble, and immediately ran away in his car.

That day I really felt very humiliated and helpless. But that is what we call life. Now I am mentally prepared for facing such problems and challenges. I am trying to learn that the most important thing is to be cool.

What are my responsibilities as a zoo volunteer? Well, the first thing is to create awareness among the visitors about the park and its inhabitants, to try to make people at least call a tiger a tiger, and not a cheetah!; to help the Park authorities in implementing the Dos and Don'ts; try to make sure that visitors do not tease animals, or create a nuisance in the Park; to help the visitors with environmental information and education; and to help the Park staff to do their duties properly.

A day in the life of a zoo volunteer may be interesting, frustrating, or tiring, but it's definitely fun-filled.

As, I stated before, my goals are set. I'll do my post graduation in forest management and enter the field of environment and forestry formally. Remember my name-- "Archana Bali", as one day you may hear of it as the name of a Park Director or an eminent environmentalist!

**END**