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Rich Biodiversity, Poor People

It will be a cliché to say that India is a poor country, with nearly 40% of the population below the poverty line and almost the same percentage slightly better off, but still much below the standard of a developed country. At the same time, India has a rich biodiversity, which is still surviving, despite the fact that 1.2 billion people adjust in about 6 percent of the land surface. This is thanks to our culture, values and belief, our strong conservation laws, and a vocal conservation lobby. Somewhere I see an increasing disconnect between the people and the biodiversity, as our rich biodiversity is not helping the poor improve their lot. If we make a map of districts/*talukas* with high poverty levels and superimpose it on the forest cover of India, the two will overlap, with a few exceptions. This is a tragedy of our country that conservationists do not want to face. Why can't we have rich villagers living side by side with rich biodiversity? Why do we have to go to remote areas on bad roads, with no electricity and no running water (for the locals at least) to reach rich biodiversity areas. Why does a poor tribal woman in labour pain have to travel 40–50 km before she can get basic medicine in a decrepit building, which is actually a 'rural hospital'? Why is a village in a forest denied good road connection because it happens to be near a protected area? Why can a school building of a village inside a PA not be repaired without going through a long process of getting permission? Why can an irrigation canal not be built to water crop fields of a forest village? These are the questions that bother me all the time when I sit in government meetings that decide about infrastructure projects in and around protected areas.

Internationally and nationally it is now well-accepted that we cannot protect wildlife without the cooperation of local communities. It is also an accepted fact that we have to leave some areas (for many sensitive species) as strict nature reserves or national parks, where the impact of human beings is minimised if not eliminated completely. However, there are large areas and many species that can live with human beings. It is also a fact that some species, particularly marine fish species, can be better preserved by regulated commercial harvest.

First we develop disconnect between local communities and biodiversity through our laws and actions, and when the situation gets out of hand, we put more restrictions through stronger laws. Lack of governance cannot be an excuse for banning everything: locals cannot graze livestock due to the fear of over-grazing, rotting bamboo cannot be taken out due to fear of over-exploitation, a forest road connecting a remote village cannot be improved due to fear of road-kills by speeding vehicles, removal of invasive species such as *Prosopis juliflora* had to be stopped as some people had started cutting other local trees. In such situations, what we need is better governance that will stop over-grazing or cutting of local trees, not an outright ban. Road repair under the *Pradhan Mantri Gramin Sadak Yojna* cannot be denied to a forest village just because the PA managers cannot control traffic speed. In order to avoid road-kills of animals in high biodiversity areas we should insist on over- and under- passes and speed control, not a total ban on roads.

It has now become almost a fashion in NGO circles to talk about local community involvement; but how many NGOs work with local communities, as Kalpavriksh and Nature Conservation Foundation – studiously. But, do our Wildlife Protection Act allow this in PAs? Even if the Act allows this, is it happening on the ground level? Many PA managers



and conservationists think that tighter control would overcome the difficulties of good governance involving local people. Is the disconnect between wildlife and people growing? Let me give you an example which is typical of our large PAs where thousands of people live in and outside them.

The Desert National Park (DNP) in Jaisalmer and Barmer districts of Rajasthan sprawls over an area of 3,162 sq. km. It is not a classical park as it has more than 80 villages and numerous small settlements, and many more villages outside the Park. According to the Indian Wildlife Protection Act, no private settlement is allowed inside a Park. When the DNP was established more than 30 years ago to protect the gene pool of typical desert fauna and flora, the intention was that at least some areas would become *sanctum sanctorum*. Therefore, large enclosures of 300 to 1,000 hectares were established. In the last 30 years, human population has grown, and with increase in mobility and electronic connectivity, the aspirations of people have also grown. Who does not want to have good roads, who does not want to have piped drinking water (from the Indira Gandhi Canal) and who does not want to have a mobile connection. But according to our laws, or the interpretation given by government servants, villagers inside the DNP cannot have all these facilities. The area was selected for establishing a Park mainly because more wildlife was surviving here than in other parts of the desert. Are we punishing local people for protecting wildlife?

When I went as a Committee Member, three years ago with Dr. M.K. Ranjitsinh and Dr. Divyabhanusinh Chavda, to study the problem, villagers who were earlier extremely supportive of wildlife conservation had now become hostile. One powerful local leader thundered, “take your Park to Mumbai or Jaipur, we need development”. After studying the problem and meeting thousands of people, we recommended to the government that besides providing basic facilities of *sadak*, *bijli*, and *pani* (road, electricity, and water), there should be special schemes/concessions for the people living inside the DNP, so they will see the benefit of being inside a Park. At the same time, we also suggested involvement of people in protecting wildlife. Tourism is a fast growing industry in Jaisalmer, but DNP gets very few tourists due to an extremely elaborate process of getting permissions. We suggested that the local people should become guides and tour operators, and after improving the lot of the people, a homestay initiative should be taken up so the tourists can enjoy local hospitality. At the same time, there should be large enclosures for wildlife where movement of people should be strictly controlled – no off the road driving, only use of camel carts for taking tourists to see wildlife. We also suggested special hardship allowance to frontline staff of the forest department for working in such a remote area.

It has been three years since we submitted the report; no action has been taken yet, at least we were not informed if any action was taken on our recommendations. Meanwhile, resentment is growing as people living outside DNP see basic development (*sadak*, *bijli*, *pani*) all around while a villager inside the Park cannot sell his own land or a school building cannot be expanded without going through an elaborate permission process. Meanwhile, we expect local people to protect the wildlife of the Park. Such stories are repeated in many large landscape PAs where people who earlier protected wildlife are now turning hostile towards wildlife. Is it time we rethink our conservation approach?

Female Narcondam Hornbill / DHRITIMAN MUKHERJEE



A dream visit to Narcondam Island

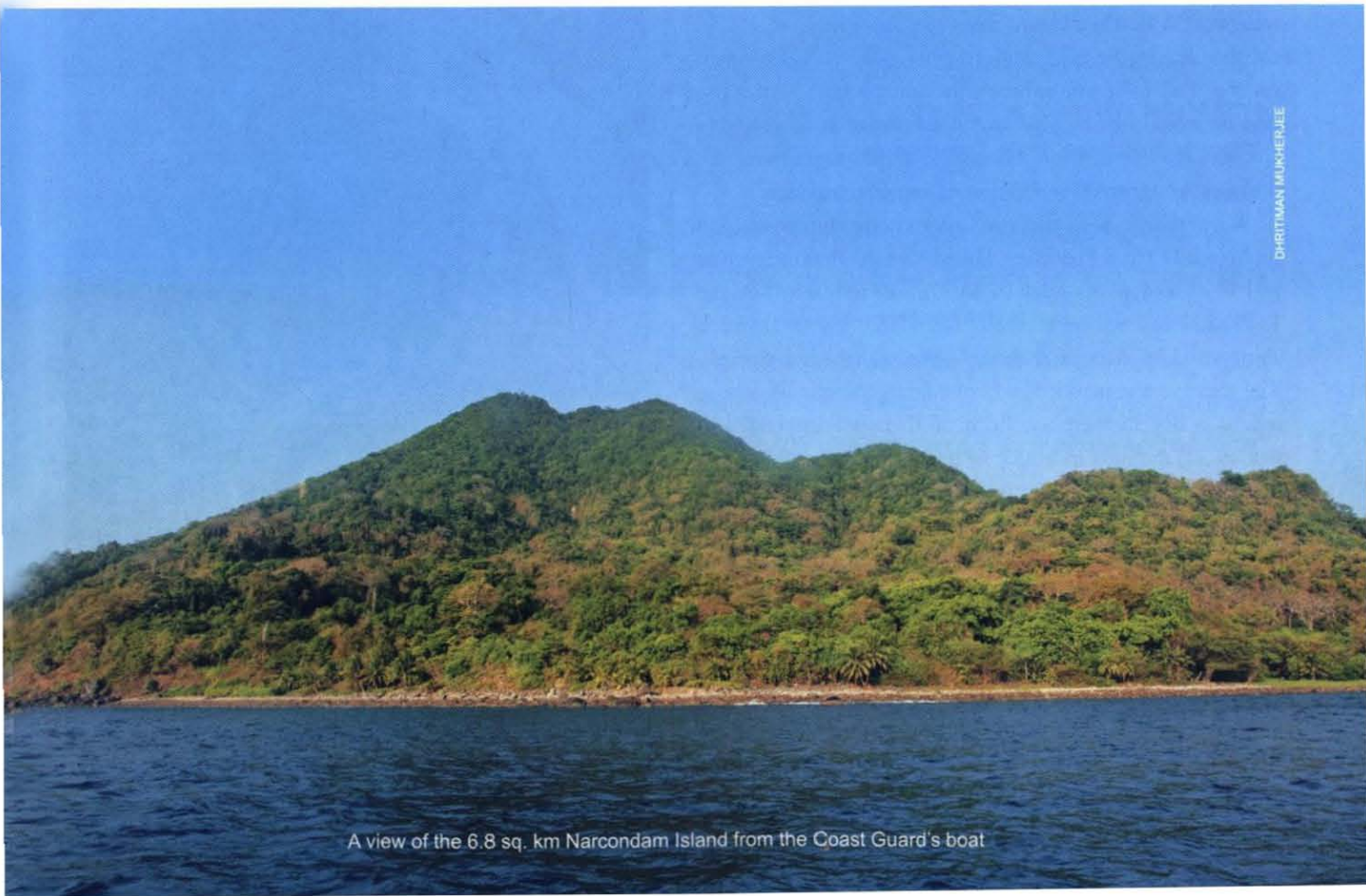
Text: **Asad R. Rahmani**

Narcondam! An island of mystery and a dream destination for any birdwatcher, and for me. A short visit of just five hours on this 'dream island' during an official survey in February 2012 for the Ministry of Environment and Forests (MoEF) was just not enough to satisfy all my birding instincts. I resolved to return to this fabulous place to study the Narcondam Hornbill and other birds in more detail. Even during my short visit in 2012, I could see 21 of these hornbills, so I had already added a 'lifer' to my bird list. As I am not a "bird twitcher" who adds a lifer to one's list and moves on in search of other species, I wanted to study the Narcondam Hornbill in more detail. I wrote to Dr. Shirish Manchi, Senior Scientist of Salim Ali Centre for Ornithology and Natural History (SACON), who was given the project by the MoEF on my initiative, that I wanted to go with him to Narcondam for 10 to 15 days. As Narcondam Island is a Wildlife Sanctuary, the first permission had to come from the Forest Department, which was quite easily obtained. The difficult part was to reach the island – about 142 km from Diglipur and 189 km from Port Blair, the capital of

Andaman & Nicobar. This small, isolated 6.8 sq. km extinct volcanic island can be reached only by hiring an expensive yacht, certainly out of the question for me, or through the Coast Guard who patrol our territorial maritime zone. Since Narcondam Island is quite close to Myanmar and Thailand, the movement of fish poachers in this region is not unknown.

After getting Narcondam Island in exchange for Cocos Islands with Myanmar in the mid 1960s, the Government of India, in its wisdom, had placed policemen on Narcondam to keep away poachers. These policemen have to be replaced every month. As the Police Department does not have its own vessel, the Coast Guard helps them. Most of the researchers who have been to Narcondam have gone there with the help of the Coast Guard. As soon as I got news that the Coast Guard had agreed to take me, along with Shirish and his assistant, I jumped at this once-in-a-life-time opportunity. All appointments for the next 15 days were cancelled.

Dhritiman Mukherjee is perhaps India's best wildlife photographer today. Although I know him since 2000, as he attended several workshops of our Important Bird Areas programme, I met him last year after a long gap when he came to Mumbai. When I told him about my brief visit to Narcondam and my frustration at not getting a good picture, he requested me to take him along. I was quite impressed



DHRITIMAN MUKHERJEE

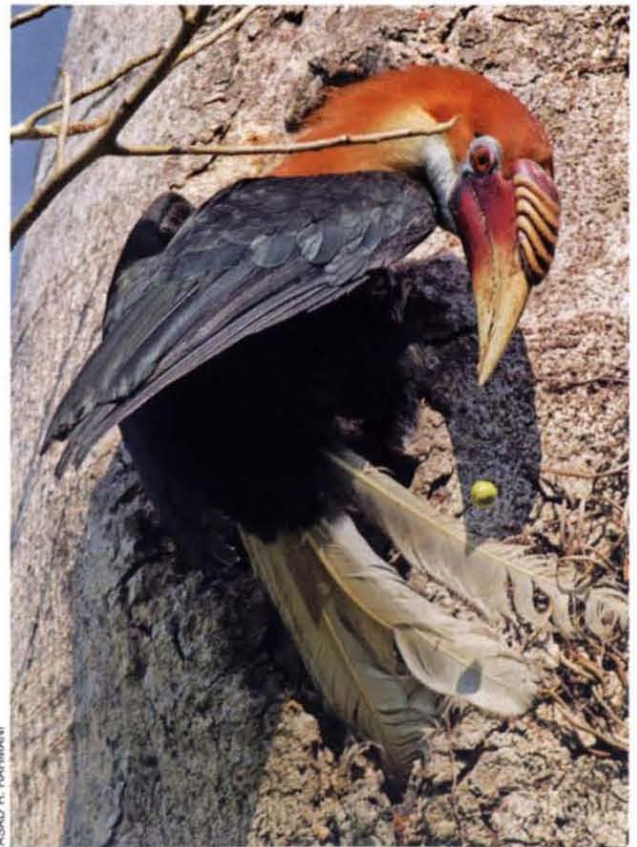


DHRIITIMAN MUKHERJEE

Male Narcondam Hornbill collecting fruits to feed his female and young ones

with his Snow Leopard pictures, which he took after three years of preparation, finally sitting in a hide for eight days in minus 20 °C weather. I knew that this was the man who could rough it out in the field. My one phone call and Dhritiman cancelled all his commitments, including telling Carl Zeiss that he would not be able attend the function to receive a Conservation Award on March 23, as photographing the Narcondam Hornbill was far more important to him.

We were informed that the Coast Guard ship would sail on March 17 from Port Blair. Shirish was the first to reach as he had a lot of paper work to do, Dhritiman reached on the 14th and I reached on the 16th. On March 17, we all sailed along with 17 policemen at about 11 p.m. with the coast guards. The ship was commanded by Capt. Manjeet Singh Gill, whose wife is a BNHS member. Both of them are interested in wildlife, so the next morning we had a lovely time talking to Manjeet Singh about various conservation issues, including those of Narcondam Island. By 8 a.m., we could see the island. The Coast Guard ship, being large, anchored about one nautical mile from the island and we were slowly transferred in dinghies, affectionately called *jimini*. By noon, the new police team was in place while the old team was taken back to Port Blair by the Coast Guard ship. Like returning school children, the old team was obviously happy in anticipation of being with families and friends soon, while the new team members were slightly depressed at the thought that they would have



ASAD R. RAHIMANI

A five-year male on the nest to feed the family.
Oops! Dropped the fruit

Goats gone? Rats arrive!

The late Dr. Ravi Sankaran was the first to set the alarm bells ringing regarding the presence of goats – an extreme invasive in small islands – on Narcondam Island. In order to provide meat to the policemen, the administrators of Andaman and Nicobar brought goats to this small island. I quote from Sankaran's *A Study of the Ecology, Status and Conservation Perspectives of Certain Rare Endemic Avifauna of the Andaman & Nicobar Islands* (Final Report, 2000, SACON, Coimbatore) "In 1976, the police personnel introduced two pairs of goats to Narcondam Island. Over the years the number of domestic goats that are maintained in the camp had at one time crossed over 400 animals, and there was a sizable feral goat population. In the late 1980s/early 1990s, the Ministry of Environment and Forests (MoEF) directed the A&N administration that the goats on Narcondam must be removed... Some of the goats were removed to satisfy the MoEF's directive."

When Ravi Sankaran conducted his studies in 1998, he recorded 135–150 goats around the camps, and over 200 feral goats. He strongly recommended that all goats should be removed, as they were damaging the fragile ecology of this tiny island by preventing forest regeneration. Fortunately, the administration took him seriously and the remaining goats were removed (or eaten up). Subsequent visitors did not record goats. During our visit too, there were no signs of goats, though we meticulously looked for goat pellets inside the deep forest. We could not climb the steep mountain top, so we do not know if feral goats persist. I hope they are all gone. Who needs a perky goat on an island where no ungulate has ever lived, and the vegetation has flourished without grazing pressure for millions of years.

But now we have another problem. Rats! Large fat rodents

everywhere, particularly around the police camp, thriving on carelessly discarded leftovers. The rats are bold and aggressive, not the timid creature of the night running away at the slightest human disturbance that we see on the mainland. On Narcondam, rats are seen even during the day, moving between chairs and tables looking for food, and at night, which comes early there, they take total control of the camp. The kitchen, the policemen's rooms, even the dispensary in which I slept, is their playground. Many times I was woken up by a large rat running

over me. Every two days, I had to wash my linen as a rat had dirtied it. Even the lemons (*nimbu*) that I had taken from Mumbai for my *chai* were nibbled and gnawed, rendering them useless.

Dr. Vibhu Prakash of BNHS who had visited Narcondam in 1993, and Ben King, the famous birdwatcher who went with Mr. S.A. Hussain in 1989, had not observed such rats, so they must have arrived later.

Interestingly, Ravi Sankaran, a highly meticulous observer, does not mention rats in his report.

Did the rats arrive much later, may be early this century?

When the rats arrived is beside the point. They need to be exterminated from Narcondam Island. Rats, along with cats, mongooses, dogs, foxes, and goats have exterminated more than 50% of the world's birds that became extinct during the last 400 years. We do not want this to happen to our Narcondam Hornbill and other breeding birds. We do not know how far the rat menace has spread on the Island. The A&N administration should start a rat extermination programme in Narcondam Island at once. On this study visit, we were not permitted to collect any specimens, so we could not collect a skin to identify the species. I suspect it is *Rattus norvegicus*, one of the world's most destructive rodents.



DR. VIBHU PRAKASH

to spend a month with no contact whatsoever with their near and dear ones. One young man had got married only in February, so he was particularly depressed to leave his young wife so soon – we all tried to cheer him up. By evening, the policemen were ensconced in their primitive living quarters, while they gave me a cot in the dispensary which looked more respectable to accommodate my ‘stature’. The compounder was a genteel man and he tolerated my presence with a composure that comes with experience. I do not know if I had disturbed him with my loud snoring, but he did not indicate it even once during my stay.

For the next 14 days, we not only studied the Narcondam Hornbill but also saw the gentle side of the policemen. They have a lovely custom: the outgoing police party prepares food for the incoming party. Another custom is to provide sweet drinks to anyone who arrives on the island. For instance, when a boatload of 24 labourers came to repair a broken pipeline and the decrepit camp, the policemen greeted them with *sherbet*.

Another thing which I noticed was the bonhomie and friendliness of the team. In 14 days, I never heard anyone talking loudly, *no swear words were ever used* (not uncommon with policemen of our mainland), and there were no fights. All were young – the average age must be 25. Their untamed energy was spent in doing mundane household chores, such as fetching water, cleaning the camp, washing clothes, picking out bits of stone from rice and *dal*, and playing volleyball in the evenings. As electricity was provided for two hours after sunset, this precious time was used to see dubbed Hollywood movies, while we used the opportunity to recharge camera and laptop batteries, and download our day’s pictures. Besides a compounder, there was a cook who had earlier worked in the famous hotel of Port Blair – *Megapode*. Every day he proved his culinary skills with the limited food items that they could bring from Port Blair. Rice-dal and dal-rice were the ‘two dishes’ that we had to bear, with an occasional fish or crab. The ingredients that he lacked were made up for with the



ASAD R. RAHMANI

Dhritiman Mukherjee suspended from a tree to get an unusual shot of the Hornbill



Dr. Shirish Manchi and his assistant studying the Narcondam Hornbill foraging on a tree top

affection with which he fed the hungry policemen and us too. Lunch and dinner were the times when we all sat together and literally ate from the same plate – further bonding us. Twice I was softly woken up at midnight to celebrate the birthday of a policeman. When we all were in place, with cake made of *atta* and a hastily prepared candle, the birthday ‘boy’ was woken up to face half-naked and half-sleepy colleagues singing “Happy Birthday”. Such small incidents will remain etched in my memory forever.

As I saw more and more images taken by Dhritiman, I developed greater and greater admiration for this young man. He is a class apart. I consider him not a wildlife photographer, but an artist who uses a camera creatively. I would love to work with him in more areas, but it is not easy to catch him as he keeps moving from the lofty Himalaya to the Lakshadweep. Dhritiman is a rock climber, trekker, diver, and a very committed conservationist. He can sit for hours like a field scientist, quietly observing the behaviour of his subject before clicking a single picture, or he can hang from a tree to get a particular angle. Unlike many photographers, Dhritiman never compromises on the welfare of animals. On one nest of Narcondam Hornbill, an irritating leaf would hide the face of the male when it came to feed the female and chicks. We had the choice of removing the small branch to get clear shots,

but Dhritiman refused to do any ‘management’ of the nest. Fortunately, after a few days, the leaf shed on its own, giving us an opportunity to take unhindered pictures. All pictures were taken when the birds were totally relaxed and doing their normal activity. It was a pleasure to work with Dhritiman. I hope some day we will bring out a book that would do justice to his work and also to the magical biodiversity of India that he has captured during the last ten years.

While not photographing, Dhritiman would spend his time checking pictures, deleting what he felt were not up to the mark, and improving the remaining ones, all the while singing Urdu *ghazals* and songs in his heavy Bengali accent. I would repeatedly correct his Urdu pronunciation, but he would unlearn as quickly as I taught him. In 14 days I could not teach him Urdu, but I picked up some words of Bengali, another beautiful language of our country.

Once the nests of the hornbills were found, Shirish and his assistant spent most of their time observing them – many full-day observations were conducted to see how much food is brought by the male to the incarcerated female and chicks, the type of fruit given, the number of visitations, and so on. As the hornbill’s age can be assessed from the number of wreaths on its casque (enlargement on the upper mandible), we found that most males were three years old, there was

even a seven year old. Besides nuts, berries, and drupes, the male also brought large insects, particularly praying mantis.

Among the nine species of hornbills found in India, the Narcondam Hornbill was the last one to be described for science. In 1873, A.O. Hume, one of the supporters of BNHS and the Indian Congress Party, in his journal *Stray Feathers*, tentatively described it as a new species when he landed on the island during his Andaman visit. He found them exactly like the Papuan Wreathed Hornbill *Rhyticeros plicatus ruficollis* of West New Guinea, but looking at the vast distributional gap between *narcondami* and *ruficollis*, prima facie, he justified describing it as a new species. Later, it was considered as a subspecies of the Wreathed Hornbill *Rhyticeros undulatus*, hence its full name Narcondam Wreathed Hornbill, but it has regained the status of a full species, and is endemic to Narcondam Island. Its scientific name is *Rhyticeros narcondami*. Many people have described it as a smaller version of the Rufous-necked Hornbill *Aceros nipalensis*, found in eastern Nepal, Bhutan, north-east India, and Myanmar, but the latest classification places it under *Rhyticeros* (wreathed hornbills), not *Aceros*.

The first thing I noticed when I saw the birds closely, and from Dhritiman's excellent images, was that the Narcondam Hornbill is a remarkably handsome bird, with marked differences between the male and female. The head and neck of the adult male are rufous; body and wings black, and upperparts have a metallic green sheen. Tail is white and very conspicuous. The bill has a casque with a series of low wreaths across the base. Eyes are deep orange-brown with a yellow inner rim. The female, which is slightly smaller, is a pretty bird with black head and neck, and eyes olive brown with a yellow inner rim. She also has a white tail. This somewhat comical bird has a very harsh voice which it uses quite often, particularly when flying from one tree to another. Its loud *ka-ka-ka-ka-ka* or *kok-kok-kok-kok-kokkok*, is followed by a cackle like a domestic fowl. Whenever the male came to feed the female, it would always call. The time gap between two feeding bouts varies from 15 to 25 minutes, enough time for us to doze off in the sweltering heat and humidity of a tropical moist forest. But the cooperative hornbill would unintentionally alert us with its call, so we were ready for observation and photography.



DHIRITIMAN MUKHERJEE

Dr. Asad R. Rahmani (L) and Dr. Shirish Manchi (R) discussing the birds seen in Narcondam Island, while the tired policeman takes rest



DHRTIMAN MUKHERJEE

Tytler's Skink *Eutropis tytleri* is very common in Narcondam. It is also relatively tame and allows approach to less than a metre. It feeds on insects (inset), and fallen fruits

As Narcondam Island is small, difficult to land on, and comprises a single large hilltop of an extinct volcano, and with a single water source, it was never occupied by human settlers. Therefore, the birds are almost fearless. This behaviour of hornbills has been noted by everyone who had ventured into the island. We also found them exceedingly tame, allowing approach to 5–10 m, fearlessly feeding on fruits while we went mad clicking pictures. When Dhritiman and Shirish sat on a large *Ficus* tree, a few birds came as close as two metres. A few times, I saw birds flying over the police camp, while the men were noisily playing volleyball. We found a nest within 30 m of the camp, and one pair was found investigating a hole in a tree growing in the police camp!

During the initial days of our trip, a *Ficus* tree, about 30 m from the camp, would attract many hornbills with its ripe fruits. The birds were mainly seen from early morning till about 9 a.m., and then in the evening. One evening, Shirish and Dhritiman counted a total of 59 hornbills around the police camp. Before and after feeding, they would noisily fly around from tree-top to tree-top. Aerial skirmishes, locking of bills and chases were a delight to watch. While I could never photograph them in flight, Dhritiman got some good shots. Within five days of our landing on the island, Shirish was able to locate a nest quite close to the police camp. It was

about 41 m high, so I could not get good shots with my 300 mm lens, but the male provided us with good behavioural data. Soon another nest was discovered by Shirish's assistant at a much lower height; this gave us a good opportunity to study and photograph the bird. By the time we left on March 31, Shirish and his assistant had already identified eight nests.

Although many people have described their trips to Narcondam, perhaps the most detailed study was conducted by the late Mr. S.A. Hussain in 1973, during an expedition led by Mr. Humayun Abdulali. His work was published in the *JBNHS* in 1984. Dr. H.S.A. Yahya and Ashfaq Ahmed Zarri conducted studies in 2000. Dr. Ravi Sankaran conducted a three-month study in 1998 from February 26 to June 2. Unfortunately, he never published his findings in a scientific journal. Let us hope that his student Dr. Shirish Manchi will continue the excellent work of Hussain and Ravi, and add further insights to the knowledge of this enigmatic and endemic Indian bird. ■



Asad R. Rahmani is the Director of the BNHS since 1997. He has authored a number of books, peer-reviewed research papers, popular articles, and book reviews.

Dainty but scanty: Tibetan Gazelle nearing extinction in India



Tibetan Gazelle *Procapra picticaudata* wandering in the Hanle valley

Text: Tsewang Namgail

The Hanle river glitters in the morning sun, and freshly sprouting grasses cast an emerald sheen to the sedge meadow along its shore. Herds of *Kiang*, or Tibetan Wild Ass *Equus kiang*, enjoy this green boon set against a splendid mountainous background. Our team from the Nature Conservation Foundation is on a quest to understand the status and conservation of the

Tibetan Gazelle *Procapra picticaudata* or *Gowa* in the immense rangelands of India's Changthang region in eastern Ladakh.

After a jerky drive, we see a pair of Black-necked Crane *Grus nigricollis*, a bird listed as vulnerable by IUCN and BirdLife International, ambling around a small lagoon close to the road—perhaps scouting a suitable breeding site. Struggling to contain our excitement, we take pictures before they move away. We continue further up the Hanle valley, looking for the Tibetan Gazelle, the focal species of our

investigation. The valley is the last refuge of this dainty antelope in India.

The sun rises higher and the shimmering heat waves blur the distant slopes. A wayfarer told us that a few of the gazelles had been observed recently on the desiccated plateau to the left of the road. Unfortunately, we do not see them, but there are thousands of sheep and goats grazing on verdant pastures to the right. Across the river, smoke billows from the *rebos* (makeshift tents) of Changpa nomads who move from pasture to pasture with their livestock.

Two hours later, we drive by Khaldu village, small mud-houses scattered on an ostensibly marshy area. Small kids tarry on the dirt road and wave at us. It is a beautiful day, and we relax at the guesthouse of the Indian Institute of Astrophysics, which operates the world's highest astronomical observatory, at Hanle. In the afternoon, I climb up the tawny slope above the guesthouse, and see a man chasing off *kiang*. Certainly things are not as hunky-dory as they appear.

The following day, late in the afternoon, we are camped at Kalak Tartar plateau, about 14 km south of Khaldu. I saunter around looking for *gowa*, but no luck. I am overwhelmed by the vast expanse of barren land. After a simple dinner of vegetable curry and rice, I squash into my cramped canvas tent. Soon, a fierce wind batters the tent, sending it into a fluttering frenzy. "*Ina tsogchig lusana* (This is a usual scene here)", snaps Paljor, my field assistant.

The golden light of the morning sun illuminates the crown of the distant mountains. No *gowa*, but wild asses are everywhere. As the day progresses, a flock of Tibetan Sandgrouse *Syrrhaptes tibetanus* gathers near a spring to drink. At mid-morning, I cross the low ridge next to our camp, and there they are—three male *gowas* nibbling on some herbs.



GEORGE SCHALLER

Small and lithe the Tibetan Gazelle is difficult to spot



TSEWANG NAMGAIL

As I watch them through the spotting scope, something disturbs them and they bounce away like ping-pong balls.

Gowa are small and lithe, weighing about 23 kg. Greyish brown with a short, black-tipped tail in the centre of a heart-shaped white rump-patch, these gazelles have long, thin legs that enable them to outrun predators, such as wolves. I was told that it is very difficult to spot them, but after my first sighting I am confident that I will be able to locate them frequently to unravel their secrets.

As I sit at the camp sipping steaming tea, a military truck drones across the plateau, leaving a cloud of dust stretched across the horizon. The local people are increasingly replacing their traditional means of transport – yaks and horses – with trucks and motorbikes. But off-road driving has become a major cause of concern to the pastoralists and conservationists, for it not only degrades the pastures by destroying the topsoil, but also takes a toll on burrowing animals like marmots. Moreover, it disturbs the *gowa*, and might affect their reproductive success.

The most recent estimate suggests that there are fewer than 100 Tibetan gazelles left within India, mostly around the Kalak Tartar plateau in eastern Ladakh. If protective measures are not taken soon, the species may soon become extinct here. Hunting is thought to be the most important factor pushing the gazelles to the brink of extinction. I learned that during the 1962 war between India and China, military personnel with the help of the local people hunted *gowa* indiscriminately.

Fortunately, the nomads look more favourably upon the *gowa* compared to other wildlife such as *kiang*, partly because they are found in very low numbers and do not pose an immediate

Above: Black-necked Crane *Grus nigricollis*, ambling around a small lagoon

Below: Hanle valley in Changthang region in eastern Ladakh



TSEWANG NAMGAIL

threat to livestock. But there is an adverse effect of livestock on the *gowa*. Our data indicates that, apart from other factors, pasture degradation associated with excessive livestock grazing contributes toward a decline in the *gowa* population. We also discovered that the gazelles avoid domestic sheep and goats.

One afternoon, I counted about 3,000 sheep and goats on the Kalak Tartar plateau, the most critical habitat for the animals in Hanle. Later, a livestock census showed that Hanle had about 27,000 heads of livestock, including yak and horse. Tallying this with the population size in the past, we inferred that livestock population had almost doubled in the last two decades, largely due to the influx of Tibetan refugees and their livestock following the Cultural Revolution in China.

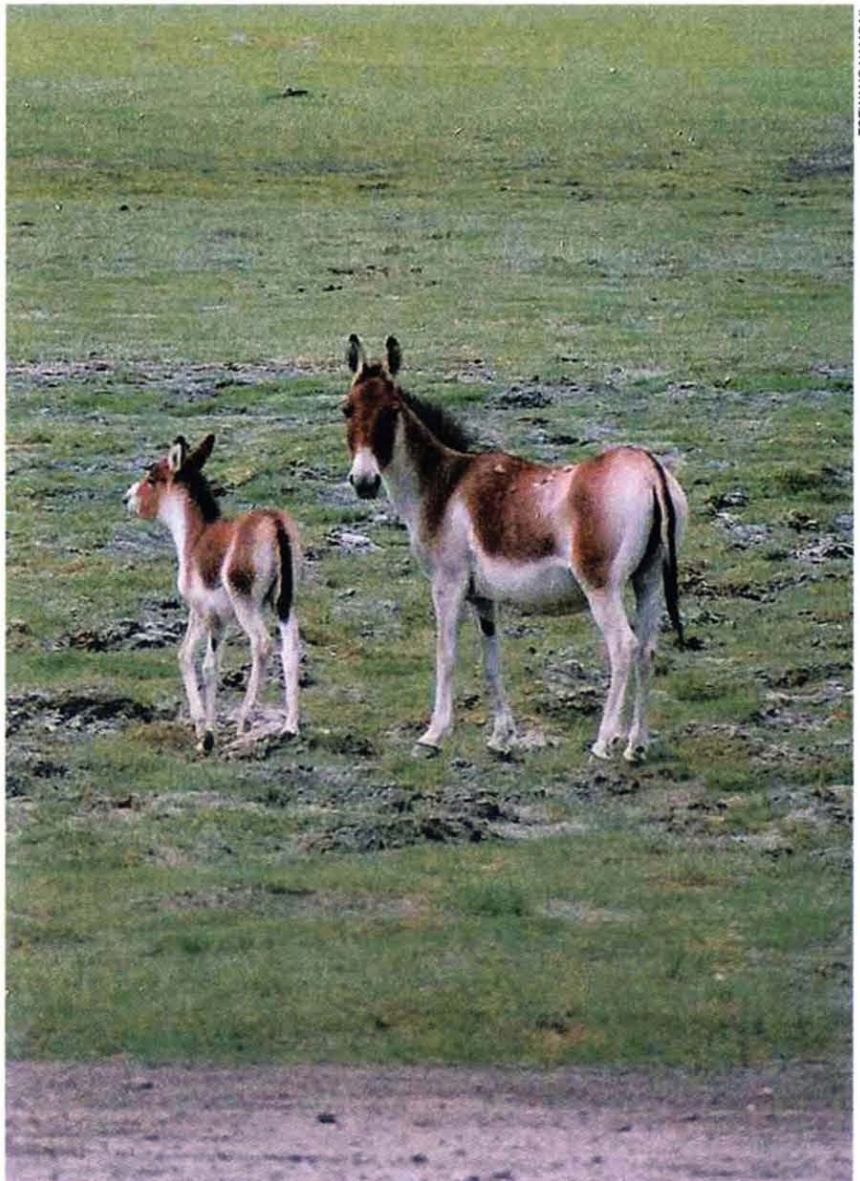
One day, we visited some nomads in an obscure valley. Tashi, a wizened herder, informed us that the low numbers of *gowa* are the result of high mortality during a heavy snowfall in the winter of 1998. "The animals cannot dig snow to uncover small herbs," he says. Even the hardiest animals like yaks are tested by the severe Changthang weather. The fissures on Tashi's sun-tanned face are testimony to the harsh elements.

Supplementary feeding is an option to reduce *gowa* mortality during severe winters, but an earlier effort by the local wildlife authority was not successful because the gazelles would not accept the food. The only solution seems to be to protect their natural habitat, especially the south-facing slopes where snow melts faster due to greater sun exposure.

The conservation prospects of the Tibetan Gazelle are bleak in the Hanle valley due to the low economic value of the region, and therefore administrative



TSEWANG NAMGAL



TSEWANG NAMGAL

Above: A flock of Tibetan Sandgrouse
Syrrhaptes tibetanus

Below: Kiang or Tibetan Wild Ass
Equus kiang is the largest wild ass
species in the world



TSEWANG NAMGAIL

Predators like the Tibetan Wolf are one among the many threats that the gazelles face at Hanle

apathy. The value of the region and its wildlife can however be enhanced by promoting ecotourism. Following the Sino-Indian war in 1962, foreign tourists were restricted from visiting Hanle. But with the ostensible thaw in relationship between the two countries, Hanle may soon be open to tourists, providing new economic opportunities. However, the wildlife, nomads, livestock, and other

vital components of the region must be integrated and conserved, if the ecotourism programme is to be successful. This can be achieved only with the support of the local people.

Before leaving Hanle, Paljor and I visit Ishey's *rebo* one last time. Ishey is a local nomad, who had helped us during several surveys in the past. In the middle of the *rebo*, a stew simmers on an open fire, and

The growing market for pashmina fibre has led to an increase in livestock. Pashmina or cashmere wool is an internationally marketed fibre produced from a local breed of goat. The wool is taken to Kashmir to be spun and woven into exquisite shawls. Until recently, Changpas sold only small quantities of the raw wool to middlemen for a minimal price, who then sold it to traders from Kashmir. But a pashmina processing plant was established recently in Leh, the regional capital of Ladakh in Jammu and Kashmir. The plant requires a constant bulk supply of pashmina to remain in operation. Moreover, the ban on trade in shahtoosh (one of the finest natural fibres in the world) has led many workers in Kashmir to switch to pashmina, further increasing the demand for the fibre.

the smoke pierces my eyes. Ishey's wife offers us butter tea, and as we converse, a gust of wind puts a thin layer of dust over the tea. Life here appears tough, but they seem to get along with ease. I ask Ishey if the villagers would help us conserve the gazelles. He promises to put the proposal before the people and let us know during our next visit. As we drive back toward Khaldu, two tiny specks appear on the horizon. As we drive closer, they turn out to be two men on horseback traversing the infinite space. I visualize hundreds of *gowas* moving across this majestic plateau and hope that our work with the locals will soon carve out a way for the Tibetan Gazelle from its present grim situation. ■



TSEWANG NAMGAIL

Life in Hanle valley is tough, but the locals seem to get along with ease



Tsewang Namgail is a wildlife biologist from Ladakh. He has been studying the flora and fauna of Ladakh for over a decade.

Avian treasures of Konkan



Karli river backwaters in Konkan, Maharashtra

Text: **Atul Sathe**

Maharashtra, like most states of India, is rich in biodiversity, and thus, is a potential destination for ecotourism. But compared to the industrial growth and “land of opportunities” story, the wild side of Maharashtra is not so well known. The wildlife (including birdlife) of the state has not been documented in detail as in some other states. Moreover, within Maharashtra, the wildlife and forests of the Konkan region, especially the southern districts of Ratnagiri and Sindhudurg, survive unknown to the outside world.

The forest tracts of Konkan are largely privately owned and till now stand as a good example of successful community conservation, with a background of deep cultural, spiritual, and sustainable livelihood concepts. The forests, ranging from tropical semi-evergreen and moist-deciduous to mangrove, and a mixture of plantations and natural vegetation support a vast diversity of birds, some of which are rare and endemic to Western Ghats (or Sahyadri, as the region is known in Maharashtra and Karnataka). Over the years, I have visited most talukas of Ratnagiri and Sindhudurg and have had a good opportunity to see the wonderful birdlife of the region first-hand in all

its beauty and spectrum of colours on every visit, as I moved on the winding *ghat* roads that are so typical of Konkan.

The most celebrated bird of the Western Ghats is perhaps the hornbill. Of the four species found in the Western Ghats, I have many times seen the Indian Grey Hornbill, Malabar Grey Hornbill, and the spectacular Malabar Pied Hornbill. I had sightings of the latter at various places in the talukas of Dapoli, Chiplun, Ratnagiri, Kankavli, Malvan, and Dodamarg. Villagers refer to the seasonal movement of these birds from the Western Ghats slopes to the coast and back, and this offers great scope for further research. The bird is locally known by various names such as

Garud, Maad-garud, and Kakner. The Great Pied Hornbill still evades me, but there are confirmed reports from many locations of its presence, including in and around the outskirts of the bustling Chiplun town.

In May this year, during my visit to Konkan with my colleague Sujit Narwade, I had wonderful sightings of a pair of Malabar Pied Hornbill in the Kudavale sacred grove in Dapoli taluka on the Dapoli-Mandangad road. This sacred grove has many ancient mango, jackfruit, jamun, hedu, and peepal trees. Kudavale sacred grove is surrounded by a mixture of natural vegetation on the hill slopes and valleys, and adjoining mango plantations. It is an excellent example of the type of mosaic of vegetation found in Konkan that is home to rich birdlife. During the same visit, I saw a Malabar Pied Hornbill basking in the early morning sun on a coconut tree, just after a pre-monsoon shower in Sarambal village of Kudal taluka. The bird was quite used to human activities and was oblivious of the people below, as it enjoyed a sun bath on its high perch!

Further south, I saw another Malabar Pied Hornbill flying majestically over a clearing in a densely forested stretch of Dodamarg taluka. This clearing was created while laying an interstate gas pipeline cutting across many kilometres of dense forest while crossing over the Western Ghats to the Deccan Plateau. The talukas of Dodamarg and Sawantwadi on the border of Goa are now being increasingly sought for commercial rubber plantations, and so, privately owned forests on entire hillsides are being sold off by the poor locals to earn a quick buck. These villagers will only be able to preserve their age-old green lifestyle if sustainable livelihood opportunities are made available. The forests are also known to have the Tiger, Elephant, Gaur, and Sloth Bear.



Crested Serpent-Eagle *Spilornis cheela* can be identified by its high pitched screaming whistle

RAJU KASAMBE



Malabar Pied Hornbill *Anthracoceros coronatus* sitting on a coconut tree

ATUL SATHE



ANAS PISAL

An ancient Hedu tree in Kudavale sacred grove (above); A view of forests of Dodamarg (below)



ANU SATHE



RAJU KASAMBE

Brightly coloured Orange-headed Ground-Thrush *Zosterops citrina* is pretty noticeable



GOPI NAIDU

Grey Heron *Ardea cinerea* are found in shallow waters

The Malabar Whistling-Thrush, with its heavenly melodious call has been greeting me in places like Parshuram and Amboli over the years. As its sweet call echoes across the forested hillsides under an overcast sky, it gives you an experience as serene as transcendental meditation. I have often seen this bird flitting about in backyard gardens among patches of hibiscus, banana, and tagar trees at Amraban Resort in the sleepy mountain village of Parshuram near Chiplun. The locals have a funny interpretation of its call in Marathi, “*Tanhya bala, mala topi de na*” which roughly translates into English as “Little baby, give me your cap!” This village has a beautiful ancient temple of Lord Parshuram. The forested slopes harbour other birds such as Common Iora, Brown-headed Barbet, Chestnut Munia, Common Flameback, Jungle Nightjar, and White-cheeked Barbet. An occasional Leopard also makes its presence felt, and one such feline had carried away a dog from the village a

couple of years ago.

If you visit Konkan just before the monsoon, the call of the Indian Pitta that migrates from the southern states every year would be music to your ears. This lovely bird is a riot of nine colours on its little body and is aptly named *Navrang* in Marathi and Hindi. I find its call very similar to how a boy whistles at a girl in Indian movies! Probably, this dainty bird also tries to impress its prospective partner this way.

A visit to the Casuarina plantations along the beaches such as Devgad and Tarkarli, and you can rest assured that you will see the majestic White-bellied Sea-Eagle, as it gracefully soars over the sea in search of fish. Along the shoreline in places like Anjarle and Kelshi, you are also likely to see the Critically Endangered Indian White-rumped Vulture *Gyps bengalensis*, which is disappearing from across the country. Along the myriad creeks is seen the Brahminy Kite with its contrasting

plumage of maroon above and white below. A quick boat ride down one of the rivers such as Vasishti can be fruitful with sightings of Open-billed Stork, Grey Heron, and Purple Heron. The Muggier or Marsh Crocodile in these rivers is an added attraction.

Typically, in a densely forested habitat, one has to rely more on the calls to spot a bird, although sightings also happen as your eyes get trained to the sea of green. The sweet calls of White-rumped Shama, Pied Crested Cuckoo, Black-hooded Oriole, and White-browed Fantail soothe your ears, while the deep whistle of the Crested Serpent-Eagle gliding over lush vales and the mysterious call of Indian Scimitar-Babbler trigger your imagination! The brightly coloured Orange-headed Ground-Thrush is equally conspicuous.

Apart from these, there is a long list of avian friends that I have seen and heard in Konkan including Yellow-legged Green-Pigeon, Orange-fronted



Logging in Dodamarg for rubber plantation

Pigeon, Rufous Treepie, Scarlet Minivet, Oriental White-eye, Indian Peafowl, Grey Junglefowl, Indian Blackbird, Red-whiskered Bulbul, Puff-throated Babbler, Jungle Babbler, Indian Nightjar, White-breasted Waterhen, White-throated Kingfisher, Small Blue Kingfisher, Stork-billed Kingfisher, and Green Bee-eater. On a recent visit, while travelling from Dodamarg to Tillari, I saw a beautiful male Peafowl standing near the roadside. As we came closer, it flew off across the road into the forest on the other side – a truly dazzling display of blues and greens. During an earlier visit on a motorbike ride from Harne to Dapoli, a White-throated Kingfisher and a Small Blue Kingfisher were flying parallel with me at different heights for a few moments. Then the Small Blue flew off overhead to the

other side. Suddenly, the White-throated Kingfisher took a turn to fly across the road just a couple of feet above the surface. It flew headlong into the second car in a line of about five cars coming from the opposite direction and was killed within seconds. This coastal stretch of Dapoli taluka is witnessing increasing traffic of private cars attracted by the mushrooming “second homes” along the sea face.

There is so much to see and experience, so much to conserve, and so much to lose in the Konkan. With “development” happening at a rapid pace, habitats are disappearing and the local belief systems of “live and let live” are slowly giving way to a city-bred materialistic culture. The sacred groves, private forested hills, mango plantations, mangroves, grassy plateaus, and wetlands

all need to be conserved. Without conservation, the relentless juggernaut of industries, mining, and infrastructure development may swallow this avian paradise even before it is fully explored. Let us all hope and work for a sustainable tomorrow for Konkan, where the red soil and lateritic rocks, reddish brown Mangalorean tiled roofs, emerald green plantations, deep green forests, ripe yellow mangoes, azure seas, serpentine creeks, and the marvellous birdlife will continue to charm and soothe human senses in times to come. ■



Atul Sathe is a student of nature, trekker, poet, and writer, and currently works as Manager-Communications at BNHS.

Agonising kismet of the vanishing 'Moon Bear'

Almost all faunal and floral extinctions are irrefutably linked to excessive exploitation of Nature's resource-basket by mankind. Presently, the alarm bells, are tolling loud and clear for the Moon Bear as they are being harvested for Traditional Chinese Medicine (TCM), far in excess of the natural recouping capacity of the species. Now an average Indian may well ask: "What is a Moon Bear?" Well, it is none else but the Asian Black Bear who on an otherwise totally jet black, smooth and glistening coat have prominent, crescent moon-shaped white hair on their breast, which provides them their alternative, romantic sounding name!

The Moon Bear has a vast range south of the line, from Iran in the West to Korea-Japan in the east. Unfortunately, in Iran, Afghanistan, Pakistan, and parts of Indo-China the species is close to extinction, but in the Himalaya where they inhabit the upper stretches of the tree-line (c. 3,000–3,600 m above msl), the bears are comparatively out of harm's reach. However, in winter-times when they invariably descend as low as c. 1,500 m, man-animal conflict does occur; though generally rare but mostly it is fatal, especially if a man chanced to 'stumble' over a sleeping bear. Unlike the Himalaya, in Laos, Cambodia, Thailand, Vietnam, China, and Korea, the Moon Bear inhabits both tropical rainforests, as also temperate, broadleaf, and dry forests.

Today, the survival of all Moon Bears throughout their home-range is in jeopardy. The Animals Asia Foundation has been at pains to arouse the conscience of the world in the last decade through two, full page insertions in Time magazine, each spaced a fortnight apart and repeated regularly for two years. The first appeal carried an ink caricature of an anonymous Moon Bear whose right eye was a mere empty socket in the skull and the left, shrivelled and half shut. One tear-drop suspends from the left eye pouch, which benumbs the viewer's senses out of instant empathy. The bold, hand written text supporting the caricature, goes on to reveal the indignities being inflicted on an estimated ten thousand similar Moon Bears, mostly on mainland China, thus:

"HOW TO RESCUE A MOON BEAR: 1. Cut Free From Tiny Cage. 2. Assess Extent of Wounds. 3. Operate to Remove 7" Metal Catheter Embedded in Gall Bladder. Use Qualified Vet this time Unlike on Bear Farms. 4. Release in Bear Sanctuary. 5. Watch Bear Recover From 15 Years of Torture! (TCM doesn't even need bear bile.)"

A fortnight later, Time magazine published a full-page, coloured landscape of "The Bear Cemetery at Animals Asia Bear Rescue Centre, Chengdu, Sichuan Province, China," run by the International Fund for Animal Welfare. The inscription on one of the two tombstones in the foreground, firstly leads

us to the identity of the ink-caricatured Moon Bear and then we throw-up as we read: "KIKI, the moon bear, RIP (Rest in Peace). Kiki finally succumbed to liver cancer, chronic gum and lip ulceration, necrosis, stomach bloat, hyperkeratosis, 7.5 cm gall stone, pus-infected bile, rotten right eye, partly rotten left eye, 15cm ulcer on hinder leg, diseased spleen, septicemia..." the remaining three inflictions and the date of death are out of focus.

Kiki's obituary ends with what may be termed a universal appeal, by all the dead/suffering Moon bears (nay, all the forsaken creatures of the animal kingdom) to the collective conscience of mankind globally, and in particular to the arrogant and insensitive, 5,000 year old Chinese 'civilisation', who have the monopoly on production and marketing of TCM.

Once the Moon Bear goes extinct, mankind would have lost yet another marvel of faunal evolution. All bears evolved with high-domed mouths and long lips detached from gums which enable them to bellow forcefully and suck deeply. Now, honey being their favourite food, nature further provided them non-skid pads and curved long claws on front limbs, so as to climb trees effortlessly. Having reached the vicinity of the honeycomb, they bellow away the bees and then suck in the honey! The comb is seldom damaged in the process and the bees often reclaim and restock it with honey! Similarly, when they locate a termite mound, they knock it down, and then blow away the debris of the mound and finally placing the lips over the exposed termite tunnels, they suck in the food delicacy!

Now on the other hand, The Brunos (Brown Bears) of Europe are known to knock down telephone poles out of sheer disgust. To a passing Bruno the hum emanating from telephone wires resembles the drone of honey bees. So they clamber up but finding no honeycomb, they knock down the pole out of black rage! How could *Homo sapiens* kill such interesting creatures?

Laboratory tests have conclusively demonstrated that Urodeoxycholic acid is simply no different to bear bile and in fact is much cheaper than 'milking' the bears for it. But the Chinese simply cock-a-snook at all international entreaties, which they consider inimical to their Heaven-given right to manufacture and market TCM.

There are no reliable population estimates of the Moon Bear. Besides bear bile, they are also hunted extensively for meat and especially for the delicacy, bear-paw soup. Their claws encased in silver foil are much sought after good-luck charms. And all that the Moon Bear has is a life span of just about 25 years!

Lt. General Baljit Singh (Retd.)
Chandigarh

Rhesus Macaque feeding on insects

Though largely vegetarians, monkeys are also known to feed on insects, eggs, and birds. Among the apes, chimpanzees and gorillas are now well-known to occasionally hunt monkeys and even small antelopes. Likewise, the macaques found in India mainly feed on fruits, seeds, grain, shoots, and other vegetable matter, but also feed on small birds, eggs, and insects. Sometimes, probably in search of minerals, they have also been recorded eating soil.

During a visit to Hardia area in Tala Range of Bandhavgarh Tiger Reserve, we saw a male Rhesus Macaque (*Macaca mulatta*) dropping bark from the dead branch of a Sal (*Shorea robusta*) tree. On closer observation, we found that it was peeling the bark in search of insects. It would pull the bark from the top, pull it downwards and examine it minutely to see if any insect was sticking to it, and eat them. After that, it would drop the bark and check the tree trunk. We watched him for about ten minutes repeating this action.

Satyendra K. Tiwari and B. Sapsford
via email



SATYENDRA K. TIWARI

ABOUT THE POSTER



Asian Black Bear (*Ursus thibetanus*)

SHRIKANT RANADE

Can there be any relationship between bears and dogs? Yes, fossil remains of primitive forms reveal that bears and dogs are descendants of a common ancestral stock. The Asian Black Bear is the most carnivorous of all bear species found in India. Its shorter smoother coat and black claws with a distinct V-shaped breast-mark, which is white, yellow, or buff distinguish it at once from the Sloth Bear. It is found in Kashmir, the Himalaya, and Assam, extending eastwards into China and Japan, southwards into Myanmar and the Malay countries, and westwards into Baluchistan.

It spends the day sleeping in a rock cave or in the hollow of a tree trunk and wanders out at dusk to find food till sunrise. Its food varies with the season. During summer, it lives largely on wild fruits and berries or raids orchards of pears, apricots,

and nuts of various kinds. This is the season when they feast on honey from the honeycombs found in hollow tree trunks. Ripening corn and maize fields are raided during autumn. If food is scarce, they may turn to eating livestock such as sheep, goats, and cattle. The mating season is in late autumn. The female gives birth to usually two or more cubs. Only the mother takes care of the infant since the male leaves the female after mating. Mother bears are extremely dangerous if human beings interfere with them at this point and there can be fatal encounters. The cub stays with its mother till two or three years of age, and then wanders on its own.

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Asian Black Bear (*Ursus thibetanus*)

SHRIKANT RANADE



A Dhole-Sambar Encounter

Text and Photographs: **Nikhil Bhopale**



Nikhil Bhopale is the owner of Gaia Eco Tours. He is an avid birdwatcher and a co-author of *BIRDS OF THE INDIAN SUBCONTINENT – A FIELD GUIDE* published by the BNHS.

It was the last day of the BNHS camp in Parambikulam Tiger Reserve in Palakkad district, Kerala. We were on our way back by bus from an exciting trek of the Karian shola, looking forward to the steaming hot lunch awaiting us at the guest house. Suddenly somebody shouted, “Stop, Stop, STOP!” The bus screeched to a halt, and all eyes were soon focused on a pond to our right.



A female Sambar *Cervus unicolor* and her fawn were in the water; their tails were cocked-up in alarm, and they were staring at the extreme right corner of the pond. A Dhole (Indian Wild Dog) *Cuon alpinus* was sitting on a dry rock jutting out of the water.

The Dhole, however, was not looking at the alarmed pair, and instead it had its head turned away from the Sambar and appeared to be 'not interested'.



The uneasy mother and fawn edged towards the shore to make a quick escape. The 'resting' Dhole appeared to be disinterested in the pair. But that was not so – the moment the mother and fawn reached the shore, the Dhole sprang at them. The mother bristled aggressively and rushed forward, stomping the water and giving out the typical Sambar alarm honk to face the attacker.



The Dhole almost managed to get hold of the fawn, but somehow the fawn slipped away. The odds were against the Sambar, as the escape route was uphill, and the fatal mistake of leaving the safety of the pond had already been committed by them. But luckily for them, it was only one Dhole and not a pack after them, which was rather unusual.



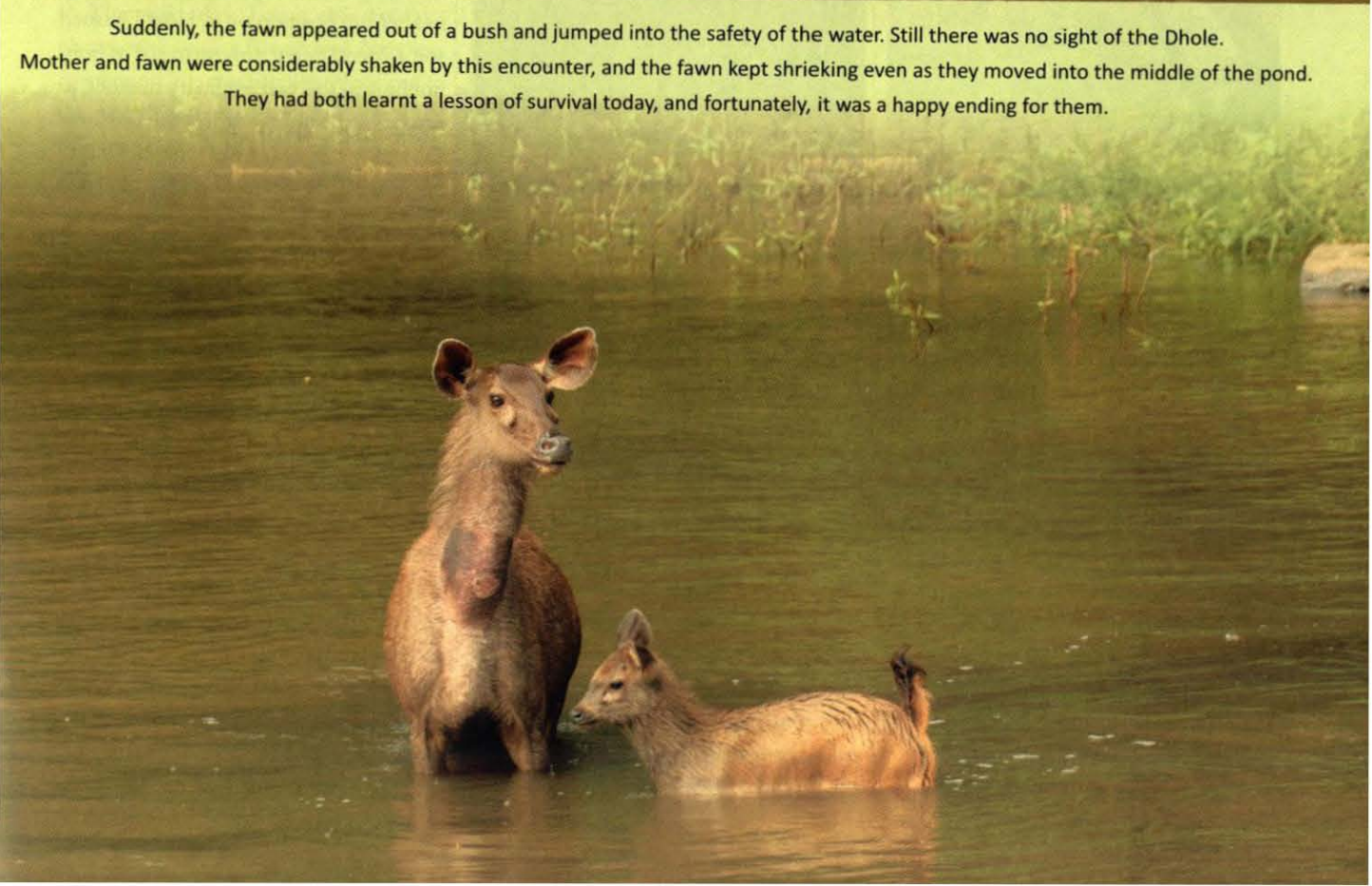
The Dhole had set its sights on the fawn, and ignoring the mother, it lunged at its prey. In panic, while escaping the attack, the mother and fawn got separated.



The alarmed mother soon returned to the pond, but without the fawn. The Dhole too was not to be seen.
The mother looked agitated and stomped the water, sending ripples into the placid water of the pond.



Suddenly, the fawn appeared out of a bush and jumped into the safety of the water. Still there was no sight of the Dhole.
Mother and fawn were considerably shaken by this encounter, and the fawn kept shrieking even as they moved into the middle of the pond.
They had both learnt a lesson of survival today, and fortunately, it was a happy ending for them.



Bird Photography in India

A machan was built beside and close to it the following day, and since the bird showed no fear, the hide, with a bottle protruding through the cloth, was introduced at the same time and remained in position overnight. I spent the whole of the 15th observing and photographing the birds, visiting the nest again for the same purpose on 20 April, 3, 6, 14, 25 and 27 May, and 1 June. During this time our acquaintance quickly ripened till, in the end the parent birds fed the young regularly while I was seated beside the hiding-tent fully exposed to their view. On 20 April, however, the behaviour of the female was extraordinary. Just to see to what lengths I could go with the bird I slowly put my hand out towards her until I actually found myself passing my index finger through the feathers of her back, head and breast; tickling her really. She did not move a muscle, but when I put my little finger close to her bill, she seized and shook it vigorously. No attempt did the bird make to leave the nest or even to alter her position on it. How I wished some friend might turn up to see us hobnobbing in this extraordinary manner, to record by means of camera the boldness shown by this brave-heart in sticking to her post. It is interesting to relate that later (1 June) I handled the almost full-grown daughter (as I like to think she was) in exactly the same way and that she shook my little finger as her mother had done before although (like mother) she did not object in the least to being tickled.”

When I was preparing a work plan for the forest of Sidhi district in Madhya Pradesh, during March 1974, I was able to locate a nest of the Crested Treeswift. Lowther's detailed description helped me in doing so. There was an opportunity to photograph the bird and also to witness its reaction to human touch. In the early stage of erecting the machan, both male and female incubated, but later, the male avoided the nest and came



E.H.N. LOWTHER



E.H.N. LOWTHER

The machan was built beside and close to the treeswift's nest

Text: P.M. Lad

Till I read E.H.N. Lowther's book *A BIRD PHOTOGRAPHER IN INDIA* in the early 1970s, I never knew that bird photography could be as fascinating as hunting. Those were the days when hunting was coming to an end. As foresters, we had early exposure to birdwatching during our training, but in the field, hunting was more exciting. After some years of other diversions (i.e., hunting), birdwatching was again our main interest. This is how bird photography books replaced books on hunting.

One thing is common to hunting and photography of birds – the machan (a camouflaged shelter – a hide). A picture of the machan in Lowther's book for photographing the Crested Treeswift surprised us. Such a tall machan is not necessary in hunting! To find out the reason for the tall machan, I read the chapter, and learnt about Lowther's unbelievable description of the reaction of a female Crested Treeswift to human intrusion. He writes:

“I have now photographed three different pairs of crested swifts at the nest, but for the present let us return to the nest which I found on 13 April 1934.



P.M. LAD



P.M. LAD

The male (L) and the female (R) Crested Treeswift observed by the author

to it only when there was nobody in the machan. The female was almost unconcerned with our presence.

The next day, I was able to take photographs with a 50 mm lens. Needless to mention, the machan was very close to the nest. The female simply ignored my presence though there was no hide. After much thought, I decided to touch the female. With a bit of hesitation, I extended my hand and touched her, using my index finger and passing it over the bird's head and back. The female quietly sat on the nest as if nothing had happened. Since I had read the experience of Lowther, I was not just excited but extremely amazed by the indifference of the bird. One cannot even imagine any other bird behaving like this.

During the last 34 years, I have seen many nests of the Crested Treeswift, but could not get a reasonably acceptable photograph. The nest of a treeswift is invariably on a leafless branch 4–15 m up, and difficult to locate from the ground, unless the bird calls. Changing of incubation duty is so fast that unless



E.H.N. LOWTHER



E.H.N. LOWTHER

Crested Treeswift besides her half-grown young (above), treeswift's nest and egg (below)

the exact position of the nest is known, it looks as if a bird just passed by.

In the middle of November 2008, I heard the birds calling in Shivpuri district in Madhya Pradesh. There was no nest, but the birds 'co-operated well' to give me a chance. My effort was insignificant compared to Lowther's hard work, considering the bulky equipment used 75 years back, and when even changing film for a second shot was quite difficult. Even focusing the camera on a machan was not an easy job. Lowther's choice of bird photography as a hobby is commendable, let us salute him for his hard work. ■

Editors' Note: The author is an experienced professional forester. We do not encourage amateurs to try replicating his experiment.



P.M. Lad served in the Forest Dept. and retired in 1992. Inspired by Dr. Sálim Ali, who visited Lesser Florican areas in M.P. during 1981–1983, he continues birdwatching and photography.



Predator on Hunt!

Text and Photographs: Dharmendra Khandal and Divya Khandal

An 'apex predator' doing what it does best – predation – is one of the most spectacular sights in the world! One afternoon, while in the Nalghati area of Ranthambhore National Park, we were witness to an amazing scene. We saw a Crested Serpent-Eagle with its wings fully spread, its nuchal crest feathers erect, and the nape all ruffled. The tail feathers were spread, showcasing the black and white bands. Its yellow eyes appeared to be bulging out of its head.

Three peacocks were watching the eagle curiously. This made us curious too, as to why the eagle would make such a magnificent display for the peacocks. The peacocks moved slightly at the same moment as the eagle moved, and lo, we saw a monitor lizard in the tight grip of the eagle's powerful talons. The moment the eagle turned, we saw the beautiful black and white wing-bars, and the brown feathers of its belly fluffed up.



Dharmendra Khandal is working as a Conservation Biologist with Tiger Watch in Ranthambhore and is involved in reform of Mogya, a traditional hunting community.



Divya Khandal is an amateur wildlife writer and photographer, and runs a social enterprise Dhonk, which works with local communities around the Ranthambhore NP, promoting local crafts.

Considering the size of the monitor lizard, we were amazed as to how the eagle had managed to make such a huge kill. The head of the monitor lizard was damaged, while the body was still intact. The eagle was unable to fly with the monitor lizard, and the peacock's interference must have agitated it – the crest is generally erected when the bird is agitated. The peacocks kept going up and down near the eagle, which kept changing its position, preventing its inquisitive visitors from coming near it. The eagle dragged the kill a bit upwards, but was unable to eat it as it could not open the tough skin of the monitor lizard.

The Crested Serpent-Eagle is a widespread species of Indian forests. Lizards, snakes, frogs, and small birds compose its primary diet. Three species of serpent-eagles exist in India, namely Crested Serpent-Eagle, Andaman Serpent-Eagle, and Great Nicobar Serpent-Eagle, two of which are endemic to the Andaman and Nicobar Islands.

The Crested Serpent-Eagle is found throughout India, except for the Himalaya and the desert areas. It usually resides close to streams. It is a medium-sized raptor with a wing span up to 510 mm. These forest eagles have short wings and a medium length tail, which allows them to twirl and turn easily, a benefit when chasing prey at high speed between tree trunks and branches. They have long legs with needle like talons on their feet which can grip and kill prey that they set their eyes upon! Interestingly, their legs are not covered with feathers but with thick scales, which protects them against snake bites.

These forest birds need ample perching grounds and tranquil space, clean water streams and abundant prey, and for this we need good jungles. These birds are indicators of the health of the jungles, and we should work for the conservation of forests for their survival. ■



(Above): The Crested Serpent-Eagle displaying its 'magnificent structure' to protect its kill
(Below): The Peacock tried to take a sneak peek but the Crested Serpent-Eagle was in no mood to exhibit its prey





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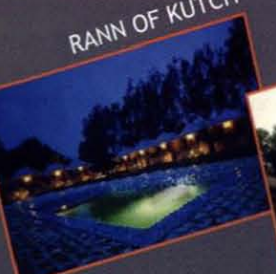
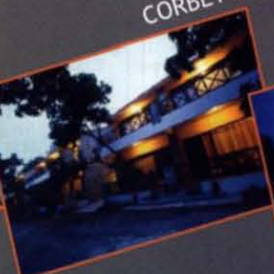
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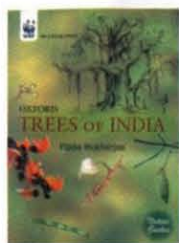
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Trees of India

by Pippa Mukherjee, 2008
Published by: Oxford University Press,
New Delhi
Size: 25.5 x 18.5 cm
Pages: 100
Price: Rs. 195/-
Paperback

Reviewed by: **Atul Sathe**

Trees are one of the most conspicuous components of nature, and fortunately, are still found all around us, even in the most urbanised environment. People of all age groups do not fail to notice the stately Coconut trees *Cocos nucifera*, or the melodious rustling of Peepal *Ficus religiosa* leaves, or the massive spread of the Rain Tree *Samanea saman* that provides shade from one footpath to another. The more sensitive among us will enjoy and appreciate the beauty and serenity of these trees. A few may even get inspired to pen down poetry! But people are at a loss when it comes to identifying the trees that grow around us.

This book by Pippa Mukherjee, a former Executive Committee member of the BNHS, who has taught environmental science and geography, at schools in India and abroad, will come in handy for beginners, when it comes to identifying trees and knowing about their characteristics and uses. A part of the Nature Guide series of WWF-OUP, this book is informative and will definitely enhance the layman's interest in the green world. It has a text book like appearance and would be also of interest to students, parents, and nature enthusiasts.

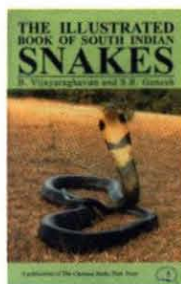
The book contains photos, sketches, and information on some of the commonly found Indian and exotic trees that are seen in our country, along roadsides, in parks and gardens, and in rural areas. It gives interesting information on trees such as the different flowering seasons in different parts of the country, the importance of the outer protecting bark on the trunk, the evergreen and deciduous nature of trees, the phenomenon of buttress roots of tall trees, the utility of trees, ways of identifying trees based on the characteristics of different parts of a tree, and has a glossary of terms associated with trees.

Some of the common trees covered in the book include Banyan *Ficus benghalensis*, Deshi Badam *Terminalia catappa*, Copperpod *Peltophorum pterocarpum*, Gulmohar *Delonix regia*, Flame of the Forest *Butea monosperma*, Indian Laburnum *Cassia fistula*, Jamun *Syzygium cumini*, Neem *Azadirachta indica*, Tamarind *Tamarindus indica*, Teak *Tectona grandis*, Temple Tree *Plumeria rubra*, Mango *Mangifera indica*, Cannon Ball Tree *Couroupita guianensis*, Silk Cotton Tree *Bombax ceiba*, Date Palm

Phoenix sylvestris, Palmyra Palm *Borassus flabellifer*, and Mahua *Madhuca longifolia*. Names in Indian languages have also been given for each tree.

The book does have some drawbacks. Many photos are not of quality. Some of the names in Marathi are wrong. For instance, *Babeda* should have been *Bebeda*, *Saru* should have been *Suru* and *Nimbay* should have been *Kadulimb*. Judging by these, there could be such mistakes in other regional languages too.

Nevertheless, the book is likely to create an interest among readers about the trees in the neighbourhood, encourage them to experience the joy and tranquility that comes from the company of trees, and perhaps also prompt them to save existing trees and plant more for a better tomorrow. ☺



The Illustrated Book of South Indian Snakes

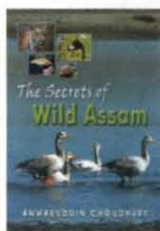
by B. Vijayaraghavan and S.R. Ganesh, 2011
Published by: The Chennai Snake Park
Trust, Chennai
Size: 18 x 11 cm, Pages: 84
Price: Rs. 65/-
Paperback

Reviewed by: **Isaac Kehimkar**

Dedicated to the memory of Mr. J.C. Daniel, THE ILLUSTRATED BOOK OF SOUTH INDIAN SNAKES is a well brought out book. Aimed at beginners, the book geographically covers five southern states and the union territory of Puducherry. In all, 71 species of snakes are depicted in colour, including the newly described Ashok's Bronzeback *Dendrelaphis ashoki*. Though the book basically covers the snakes of southern India, it can also be used by those living in the northern states as 25 of the described species occur throughout India. Some of the snakes shown are those seen for the first time in a publication.

An important section in the book covers the biographical sketches of prominent contributors to the study of Indian snakes, starting from Patrick Russell to Indraneil Das and Ashok Captain.

The book is authored by B. Vijayaraghavan, a retired IAS officer and the Executive Chairman of the Chennai Snake Park Trust, and S.R. Ganesh, an upcoming and dedicated herpetologist. The size of the book is just perfect to carry in the field, and is also reasonably priced at Rs. 65/-. A must buy for all those who share a fascination for snakes. ☺



The Secrets of Wild Assam
 by Anwaruddin Choudhury, 2012
 Published by: Bhabani Offset Pvt. Ltd.,
 Guwahati.
 Size: 25 x 17.5 cm
 Pages: 102
 Price: Rs. 850/-
 Hardbound

Reviewed by: **Atul Sathe**

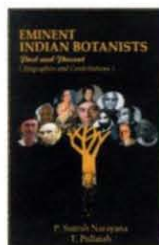
Historically called Kamrup or Pragjyotisha, Assam is well-known for its miles of greenery, extensive tea gardens, the mighty Brahmaputra river, heavy rains, and Great Indian One-horned Rhinoceros. Eastern Himalaya, including north-eastern India is considered to be a biodiversity hotspot, along with the Western Ghats. This book with good photographs and information gives an insight into the wild wonders of Assam and glimpses of the biodiversity of the state including birds, reptiles, insects, mammals, and plants.

The introductory chapter on the geography of the state covers most of the known and unknown wilderness areas, taking the reader beyond Kaziranga and Manas to other important parks and sanctuaries, such as Orang, Nameri, Dibru-Saikhowa, Barail, Pabitora, Marat Longri (literally meaning "Abode of Wildlife" in the local Karbi language), and Chakrashila. In one of the chapters, the author discusses the 'mass suicide' story of birds in Jatinga village. Here, every year, when there are strong winds, fog, and drizzle during the rainy season, hundreds of birds get attracted to lights in the village and end up getting killed by people. It is this and not 'suicide' that is the cause of the mass bird deaths that occur.

All regions of India have a long history of community conserved areas, based on local traditions and age-old sustainable lifestyles. The government is now slowly realising the importance of local participation in conservation. The book throws light on such community participation in Assam. The success story of Manas has been explained in detail, where the forests and wildlife that were degraded during the Bodo insurgency have been revived by local participation. Interestingly, BNHS takes its nature camps annually to Manas and participants stay in small resorts and home-stay facilities that are run by the local Bodos. The author also recommends encouragement for community conservation in areas of North

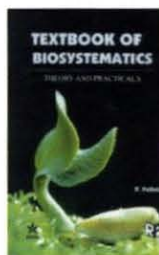
Cachar Hills, such as Laiké Peak and Mahadeo Peak. Lastly, the book highlights the threats to Assam's wildlife, including encroachment on forests, habitat loss, poaching, and increasing development projects.

This book serves as a basic handbook and an introductory guide for nature lovers, tourists, students, and teachers visiting Assam. It will also be useful to civil servants. However, the price is quite high, keeping in mind the elementary level of the book. ☹



Eminent Indian Botanists – Past and Present
 by P. Suresh Narayana and T. Pullaiah, 2010
 Published by: Regency Publications, New Delhi
 Size: 24 x 16 cm
 Pages: 426
 Price: Rs. 1,500/-
 Hardbound

Description: The book includes the biography and contribution of 75 eminent Indian botanists; explains the foundations of botany in India and its development from the 16th century to modern times. ☹



Textbook of Biosystematics – Theory and Practicals
 by T. Pullaiah, 2013
 Published by: Regency Publications, New Delhi
 Size: 25 x 15.5 cm
 Pages: 166
 Price: Rs. 700/-
 Hardbound

Description: The book contains a comprehensive account on biosystematics with emphasis on plants. ☹



Caralluma (sensu lato) – Antiobesity Plants
 by S. Karuppusamy, A. Ugraiyah, and T. Pullaiah, 2013
 Published by: Regency Publications, New Delhi
 Size: 25 x 15.5 cm
 Pages: 202
 Price: Rs. 1,000/-
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Description: The book includes the history of *Caralluma*, molecular taxonomy, *in vitro* propagation, systematic enumeration and much more. ☹

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Killer Bunds: Mangroves under assault

Text: Deepak Apte, Swapna Prabhu, and Vishal Bhawe

The Konkan region in Maharashtra stretches along about 720 km shoreline of the Arabian Sea from River Tapi in the north to River Terekhol in the south. The coastline is indented by numerous river mouths, creeks, small bays, sandy and rocky beaches, cliffs, etc., including 15 rivers, 5 major estuaries, and over 30 backwater regions. In a stretch about 15 km wide along the coastline, there exist deep deposits of soil formed of silt accumulated from the erosion of the

steep slopes of the Sahyadris, and transported there by the large number of rapidly flowing streams rising in the Sahyadri range. These deposits have been serving as the ideal nurseries for mangroves.

It is a well-established fact that mangroves play a key role in ecology, socio-economics, and in some instances the culture of the region. Check on soil erosion through anchorage, mechanical barriers of the coast in case of

As per a notification published on December 25, 2003, there are 575 khar land development schemes in four districts of Konkan to reclaim 49,120 ha of land (<http://www.mahakharlanddevelopment.org/>)

District	No. of Schemes	Total
		Reclaimable Area (ha)
Thane	108	13,631
Raigad	165	22,559
Ratnagiri	170	6,794
Sindhudurg	132	6,136
Total	575	49,120

cyclones/storms, providing breeding and nursery grounds to a wide range of marine animals are some of the well-known prime functions of a Mangrove ecosystem. The local communities in Konkan utilise mangrove forest resources traditionally. However, in spite of the legal framework for protection, mangroves all along the coast of Maharashtra are under various threats and being deteriorated with respect to health and extent. According to the studies conducted during 1990s, about 40% reduction in the mangrove cover of Maharashtra during the last 25 years has been due to human interference and the State Khar Land Development Board. Habitat conversion and wood felling are the two major threats observed for the mangroves of Maharashtra.

What are Khar lands?

During high tide, sea water ingresses occur over shallow areas impacting the adjoining agricultural lands due to concentration of salts. Such areas are popularly known as khar lands. However, in government documents, khar lands are defined as “such tidal land that is made cultivable or otherwise beneficial in any matter whatsoever by protecting it, by means of an embankment, from the sea or tidal river, and includes all such land in whatever manner described, whether as khar, khajan, kharepat, gazni or otherwise.”

The practice of embankment of khar lands by earthen bunds/dykes (locally known as Khar bandhara) to restrict the intrusion of salt water and bring them under cultivation

has been in vogue since the last 800 to 900 years. After Independence, in 1947, the Government’s attention was drawn to the problem of ‘protection’ of khar lands, and this resulted in the enforcement of the Bombay Khar Land Act 1948. Through Clause 3 of the Act, the Khar Land Board was established in 1949. More recently, as per the Coastal Regulation Zone (CRZ) notification in 1991, a detailed review of proposed khar land development schemes was undertaken. Taluka-wise maps were prepared by the concerned field officers after studying the CRZ of four districts, namely Thane, Raigad, Ratnagiri, and Sindhudurg. In many places, restricting ingress of sea water into agricultural land or settlements is necessary.

However, once inducted with a genuine objective to protect agricultural land from saline water, khar bandharas are gradually being constructed to convert mangroves to other land uses. Expansion of agricultural land and development of aquaculture plants are the major threats for mangrove forests along the Maharashtra coast. The process involves construction of a dyke (with soil, rock and cement) with an elevation greater than the highest high tide. The interference by the bunds has resulted in mortality or changed community structure of mangrove forests in many areas, affecting plant and animal communities dependent on mangroves and the fluctuating water regimes that sustain them. Therefore, there is an urgent need to undertake studies of the impact of the construction of bunds on mangroves in khar lands in Maharashtra.

Out of 575 Khar Land Development Schemes, 373 (covering 39,607 ha) have been completed. For the remaining 202 schemes: 27 schemes are under progress, costing Rs. 1,017 lakhs, and 175 schemes require funds worth Rs. 9,761 lakhs. The total cost of this development scheme to bring all identified khar land under cultivation is Rs. 10,778 lakhs (source: <http://www.mahakharlanddevelopment.org/>).

Ongoing schemes for khar land development (http://www.mahakharlanddevelopment.org/ ; data till 2008-09)									
S. No.	Name of Khar land Scheme	Taluka	Creek/ Subcreek	R.A. (ha)	L.B. (m)	Total Cost (lakhs)	Cost per (ha)	Present Status	Remarks
1	Shirgaon	Ratnagiri	Mirya	74	2485	64.38	0.87	Work Stopped	Opposition by villagers?
2	Juve-Jaitapur	Rajapur	Jaitapur	168	1890	188.81	1.12	On going	
3	Sadye	Ratnagiri	Are	24	750	27.66	1.15	On going	Opposition by villagers
4	Nevare-Chichavane	Ratnagiri	Navare	26	845	29.75	1.14	On going	
5	Arwali Tak	Vengurla	Mochemad	75	80	54.50	0.51	Work stopped	Opposition by cultivators
6	Phansewadi	Deogad	Vijaydurg	71	1440	35.34	0.40	On going	
Under-renovation schemes for khar land development									
1	Wadapalaye	Rajapur	Vijaydurg	16	390.00	24.47	1.17	On going	

R.A. = Reclaimed Area; L.B. = Length of Bund

Some prominent examples of Khar Land bund construction affecting mangroves, especially in Ratnagiri district are:

I. Jaigad creek: Lagvan – Kasari – Satkondi mangrove patch

Total length of the bund: 1 km

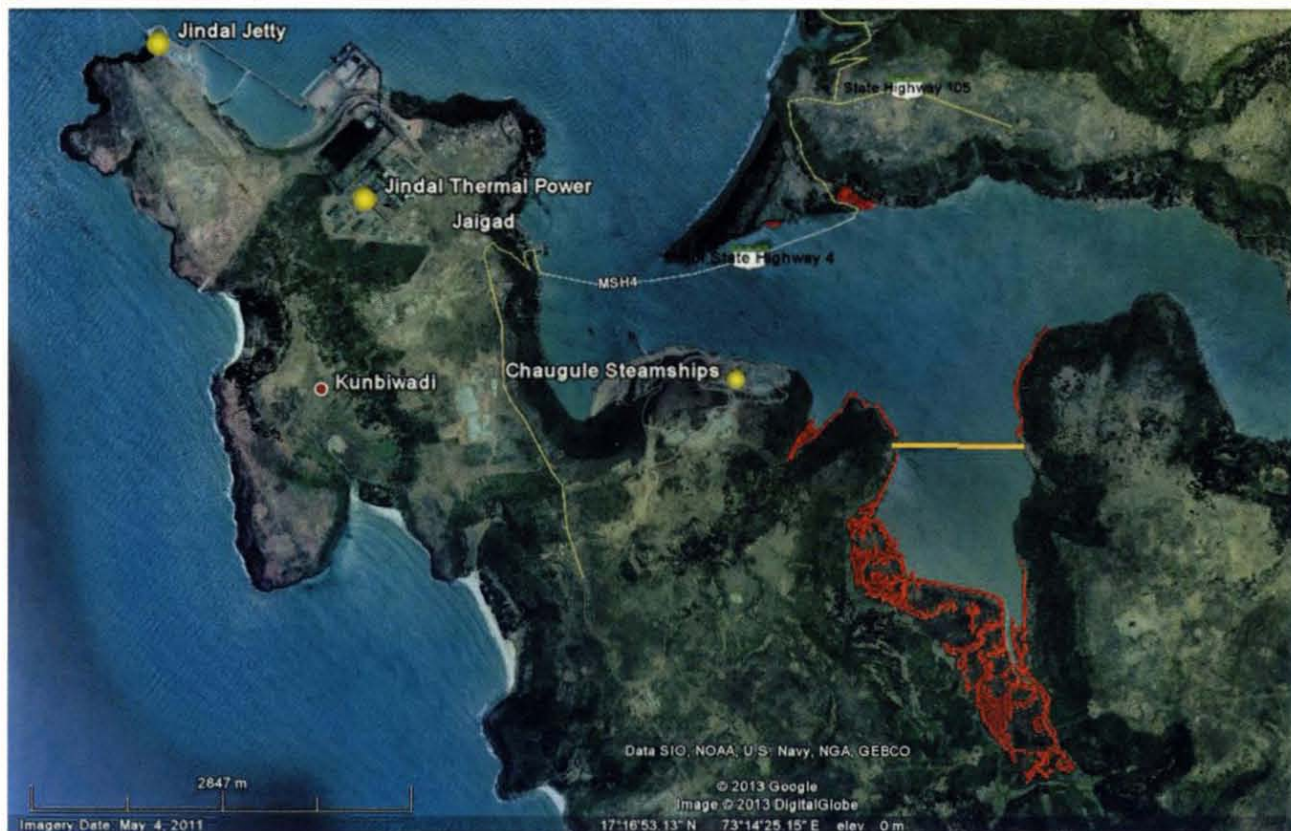
Total area of mangroves affected: 108 ha

A bund constructed by Khar Land Development Board and Irrigation Department in this area controls the flow of tidal water vital for the survival of *c.* 108 ha of mangrove forest along the creek. Historical images of this area reveal that there was a thick mangrove cover of *c.* 108 ha during 1989, when the bund construction was initiated. Since then, there has been gradual siltation and disappearance of mangroves from this area. Our recent visits to this area revealed that the mangroves are now confined only to the margins of previously existing large tracts, leaving the central part barren or invaded by grasses. This is also supported by recent Google images which show that the area under mangroves has declined from 108 ha to 35 ha. Earlier, a few floodgates of the bund were kept open to let the tidal water run into channels, but in recent years, all, but one, gates are closed, which is affecting the mangroves. Even the last floodgate is now

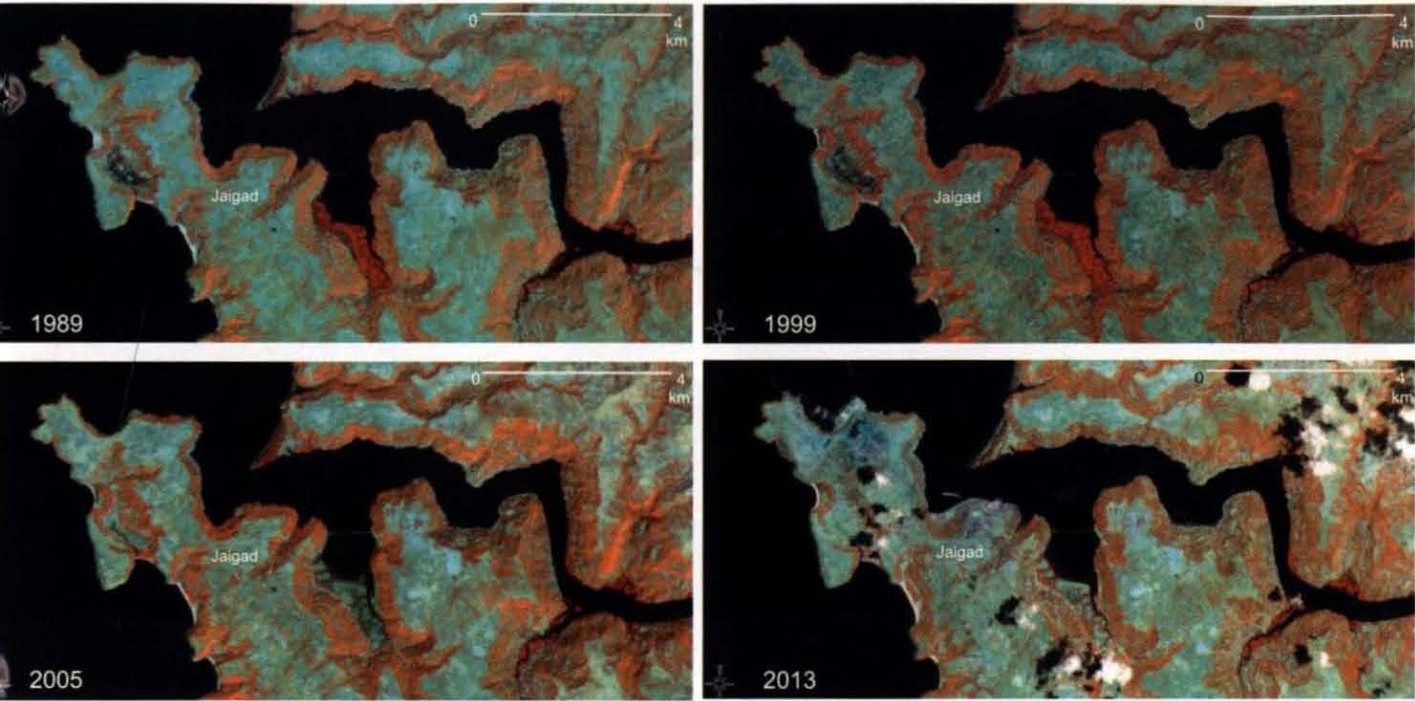
proposed to be closed permanently stopping the tidal water completely.

The benefits of this bund are not clear and different groups in the villages have different views. According to the villagers, construction of bund and consequently drying of *c.* 100 ha mudflat area surrounding the mangroves coincided with the drying-up of the wells in the vicinity. Though the exact reason for the closing of floodgates are not known, some locals believe it is meant to store fresh water for industrial use while some says it is to create more land for either agriculture or industrial purpose.

We recorded a rare mangrove species, *Xylocarpus granatum*, from a few localities close to these mangrove patches. Though this species is categorised as Least Concern in the IUCN Red List (Ellison *et al.* 2012), the conservation notes on it emphasize its declining populations all over the country due to severe habitat loss.



Area occupied by mega industries, namely JSW Thermal Power and Chaugule Steamships; location of the bund (yellow line) and the mangroves affected (red)



False colour image of affected mangrove area at Jaigad from 1989 onwards. The red colour represents mangrove cover which fades out drastically from 1989 to 2013, especially after the completion of construction of the bund after 1999. The mangrove cover is currently restricted to the margins along the creeklets, while the interior areas are completely barren.

(Image Source: NASA Landsat Program, 2003)



Bund constructed on Jaigad Creek near Kasari



The area affected due to bund



Mangroves are now confined to the margins of the large patches which existed before the bund was constructed



Xylocarpus granatum, a rare mangrove species, is now declining due to severe habitat loss

II. Bankot creek: Shipole–Veswi bund

Total length of the bund: 1.5 km

Total area of mangroves affected: 35.5 ha

A bund connecting Veswi and Shipole villages passes through an old mangrove patch spread over 48 ha, dividing it into a 12.7 ha patch towards the creek and a 35.3 ha patch landwards. Although two floodgates in the middle of the bund are presently open and supply water to the

mangrove area, there is some construction underway which is likely to divert the floodwater to existing and upcoming aquaculture units. Subsequently, the larger tracts of mangrove (35 ha patch) will be at stake due to inadequate water.



Location of bund within the mangrove area at Shipole–Veswi on Bankot River. Aquaculture units are seen in the bottom right corner.



On-going bund construction connecting Shipole to Veswi



The affected mangrove patch near Veswi



One of the aquaculture units near Shipole adjacent to the mangrove forest

III. Sakhartar creek: Shirgaon

Total length of the bund: 2.5 km

Total area of mangroves affected: 75 ha

A bund of 2.5 km length encircles *c.* 75 ha of mangroves near Shirgaon in the Sakhartar creek. The original grove was a pure stand of *Sonneratia alba*. Heavy mortality of mangroves occurred after the bund was erected. Recently, the bund was demolished

at a few places (reasons and parties not known), which resulted in subsequent colonisation of mangroves, but with significant changes in composition, which is now dominated by *Rhizophora mucronata*.



Location of bund within the mangrove area at Shirgaon on Sakhartar creek



The original patch of mangrove (on the right side of the bund) and high mortality within the area encircled by bund (on the left)

Dead Mangrove trees within the area encircled by bund in absence of adequate tidal water

The issue of negligence of mangrove areas is crucial and mainly linked with the allocation of mangrove swamps to revenue department rather than a forestland. The process of identifying mangrove areas under the forest department was initiated in 1986. Recently, the directives have been provided by the High Court to the State Government to map the mangrove areas along the coast with the help of remotely sensed data and transfer the rights of all mangrove lands to the forest department. Further, the court has imposed a total ban on using mangrove lands as dumping grounds, or waste

disposal areas, or for construction. The directives are also provided to the local bodies for the protection of existing mangroves and rejuvenation of degraded mangrove areas along the coast.

Awareness among local communities is a key factor in conservation of mangroves and in absence of it these formal efforts are inadequate. Unless the people are aware of the fragility of their resources and changes that are harmful to these resources it is difficult to bring a check on such 'developmental activities'. ■



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



Swapna Prabhu works as a Plant Taxonomist and Ecologist at the BNHS, and is involved in plant research and education activities oriented towards conservation.



Vishal Bhawe is a marine biologist, at the BNHS. He has been awarded the Sanctuary RBS Young Naturalist Award in 2009 for discovering more than 150 species of opisthobranchs from the Indian coast.

Man has been endowed with reason, with the power to create, so that he can add to what he's been given. But up to now he hasn't been a creator, only a destroyer. Forests keep disappearing, rivers dry up, wild life's become extinct, the climate's ruined and the land grows poorer and uglier every day. [Uncle Vanya, 1897]

— Anton Chekhov



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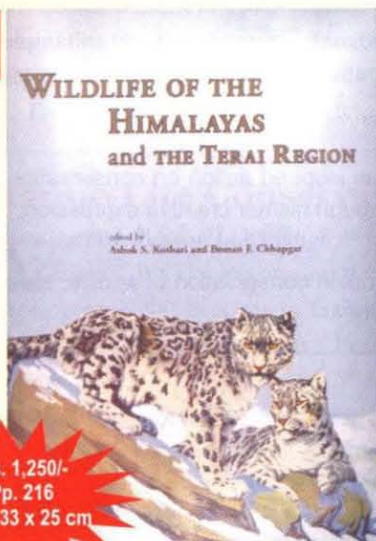


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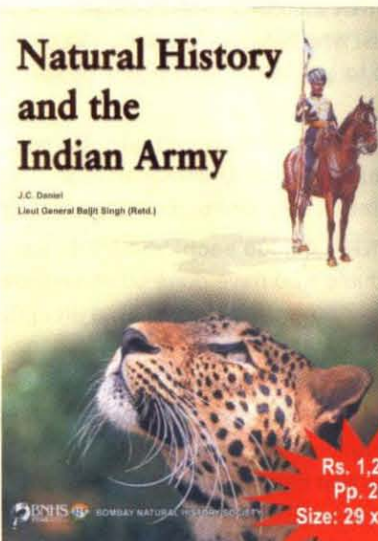
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RBS Earth Heroes Awards 2013

Call for Applications

The Royal Bank of Scotland (RBS) in association with the Bombay Natural History Society (BNHS) will present the RBS Earth Heroes Awards 2013.

The RBS Foundation India, as a not-for-profit entity of RBS, is actively supporting conservation by providing sustainable livelihoods to forest dependent communities, especially in the ecologically fragile landscapes and other locations in the country. The livelihood projects are helping poor households enhance their income from alternative sources of livelihoods, undertake natural resource management and thereby pave way for a constructive relationship between communities and efforts towards conservation.

As an extension of work done, RBS has institutionalised the RBS 'Earth Heroes' Awards from 2011 to recognise and honour individuals and institutions that work exceptionally hard to preserve and protect our critical ecosystems.

Award categories include:-

1. RBS 'Earth Hero' Award (Felicitation) Individual

This award recognises extraordinary achievements of an individual who has worked a life time in conservation of wildlife, natural resource management, and environment, and has influenced policy. No nominations will be accepted as this will be the Jury's choice.

2. RBS 'Earth Guardian' Award (INR 2,50,000) – Institution

This award recognises an institution (NGO/Corporate/Government) that has made exceptional contributions in the field of conservation of wildlife, human life and property in wild habitats, natural resource management, environment, wildlife research, and awareness building.

3. RBS 'Protect the Tiger' Award (INR 2,00,000) – Individual

This award recognizes an individual who has been involved, directly or indirectly, in protecting any endangered species and has also contributed to education, awareness programs, capacity building, and resolving man-animal conflict.

4. RBS 'Inspire' Award – (INR 1,50,000) Individual or Institutional

This award recognises an individual (journalist/filmmaker/artist) who has inspired action on conservation of wildlife, natural resource management, and environmental protection through his/her creative expression.

5. RBS 'Green Warrior' Award – (INR 1,00,000 each) 2 individuals

This award recognises two individuals who have done commendable work in conservation of wildlife, natural resource management, environment protection, human lives and property.

The Selection Process

The jury will include experts from the field of conservation, biodiversity, science, government, media, The Royal Bank of Scotland N.V., National Biodiversity Authority, and Bombay Natural History Society. The jury will evaluate the nominations and select a finalist for each award.

The timelines for the selection process are as follows:

Last date for submitting nominations: - 31st July, 2013

Selection of finalist for each award category: - 2nd September, 2013

Award winners to be informed by: - 9th September, 2013

To request a nomination form, please contact



RBS Foundation India
Email – foundation@rbs.com
Phone - +91 -22 – 66232469



Bird Conservation and Awareness Work

BNHS continues its work of public awareness for the cause of bird conservation through all possible platforms. This year the annual Maharashtra Pakshimitra Sammelan was organised in Amravati by our IBCN partner, Wildlife and Environment Conservation Society, with the support of BNHS from January 12–14, 2013. The conference was attended by over 300 birdwatchers from all over Maharashtra. From BNHS, Dr. Raju Kasambe gave a presentation on the “Breeding behaviour of Purple-rumped Sunbird *Leptocoma zeylonica*”, while Atul Sathe spoke on “Birdlife in Konkan”. BNHS books and souvenirs displayed at the venue were well-received.

Another major annual event was the Global Bird Watchers Conference organised by Gujarat Tourism from January 29–31, 2013, at Dhordo near Bhuj. Delegates from 40 countries



Dignitaries releasing the souvenir during the Maharashtra Pakshimitra Sammelan

participated in the conference. BNHS was represented by Dr. Raju Kasambe, who elaborated on “Bird Tourism in India and Gujarat as a Hotspot”, and Ms. Divya Warriar, who spoke on “Data dissemination service of ENVIS Centre on Avian Ecology in India”. The BNHS stall at the venue attracted a number of visitors.

In February, the BNHS-Important Bird Areas Programme conducted a bird survey along the backwaters of Hatnur Dam near Jalgaon, in association with Chaatak Nature Conservation Society. As part of the activities of the IBA Programme, an IBCN state coordinators workshop was organised in Kanha National Park from March 14–16, 2013. ■

Marine Life Conservation

As part of Phase-II of mangrove restoration work in Gujarat, BNHS has undertaken an objective of restoring over 200 hectares in Gandhar and Hazira. So far, large scale plantations have been carried out with support from ONGC, and with the help of the local coastal community. Grey Mangrove *Avicennia marina*, a true

mangrove species, was planted along with *Salvadora persica* – a mangrove associate. During Phase-I, BNHS has successfully completed mangrove plantation over 100 hectares. Along with plantation work, various educational programmes were carried out to spread awareness about mangrove ecosystem, among coastal communities and students.

As part of its marine life conservation work, BNHS is surveying molluscs along the coast of India. In the past two months, BNHS has conducted two surveys in the Marine National Park, Jamnagar, which included a study of ecology and diversity of sea slugs of Poshitra Reef. Monitoring of sea turtles was carried out at Mandvi near Mundra. A nest of Olive Ridley Turtle *Lepidochelys olivacea* was found with 94 eggs, which were handed over to the forest department hatchery, and are being followed up to monitor the hatching success. ■



Mangrove restoration site in Gujarat

Wildlife Sensitisation Workshops by SLTP

A 'Forest Staff Wildlife Sensitisation Workshop' was conducted under the Satpuda Landscape Tiger Programme (SLTP) of the BNHS, in association with the Chief Conservator of Forests, Nagpur Circle. Eleven one-day workshops were conducted in four divisions of Nagpur, Bhandara, Gondia, and Wardha. More than 800 frontline staff members from 44 ranges were present. Sanjay Karkare of BNHS made two presentations, followed by a film on tigers. The first presentation was on issues such as forest fires, poaching, fuel-wood collection, grazing, illicit wood-cutting, forest-water relationship, and importance of protected forests. The second presentation was on wildlife tracks and signs, such as pugmarks, hoof marks, droppings, and scats. All workshops across the four divisions were appreciated by the forest staff. Three workshops each were held in the divisions of Gondia, Bhandara and Nagpur, and two in Wardha. Several suggestions were received, including the need for quarterly



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Workshops were arranged for the forest staff under the SLTP

or half-yearly workshops of this kind, wildlife sensitisation among villagers, village forest protection committees, information regarding animal diseases, sessions on wildlife crime, weapons for self protection, special force for wildlife protection, information on Wildlife Protection Act, issues of man-animal conflict, basic wildlife treatment methods, and provision of cameras and binoculars. ■

Potential Vulture Safe Zones in Assam

An important aspect of BNHS Vulture Conservation Breeding Programme is identification of Vulture Safe Zones (VSZs) across the country. In Assam, the first and second phases of pharmacy surveys have been completed. After initial advocacy meetings with decision makers, such as the Secretary, Environment and Forests, Government of Assam, and Drug Controller Authority of Assam, presentations were made for governmental veterinary practitioners in nine districts. Awareness programmes have commenced in Majuli, the largest river island in the world, in Jorhat district. The programme covers three tehsils under two blocks, and is the centre point for the potential VSZ. Nesting population of vultures was recorded during surveys. The BNHS team carrying out the awareness programme included Sachin Ranade, Centre Manager, Vulture Conservation Breeding Centre, Buxa, Indumoni Chetia, Tapan Das, and Amar Prasad, Biologists, Vulture Safe Zone Programme. The first



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Sachin Ranade, seated second from left, during an awareness programme at Majuli

meeting was arranged in Dhanai Saporì village, which has a dominant population of cattle owners. The importance of vultures as a control of diseases was stressed upon during the presentation. Several cattle owners admitted that they were using diclofenac, but have promised to

discontinue it. Another meeting was organised in Kordoiguri village. During the campaign, over 530 villagers and more than half of the veterinary practitioners from the area were contacted. All the concerned people from Majuli responded positively to the BNHS programme. ■

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