

SANCTUARY

A close-up photograph of a Nilgiri Tahr's head and horns, looking down at grass. The animal's fur is a mix of brown and tan, and its horns are thick and ridged. The background is a soft-focus green field.

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Rs. 15/-

NILGIRI TAHR

GREAT INDIAN BUSTARD

ARABIAN ORYX

SAGARMATHA

ASSAM

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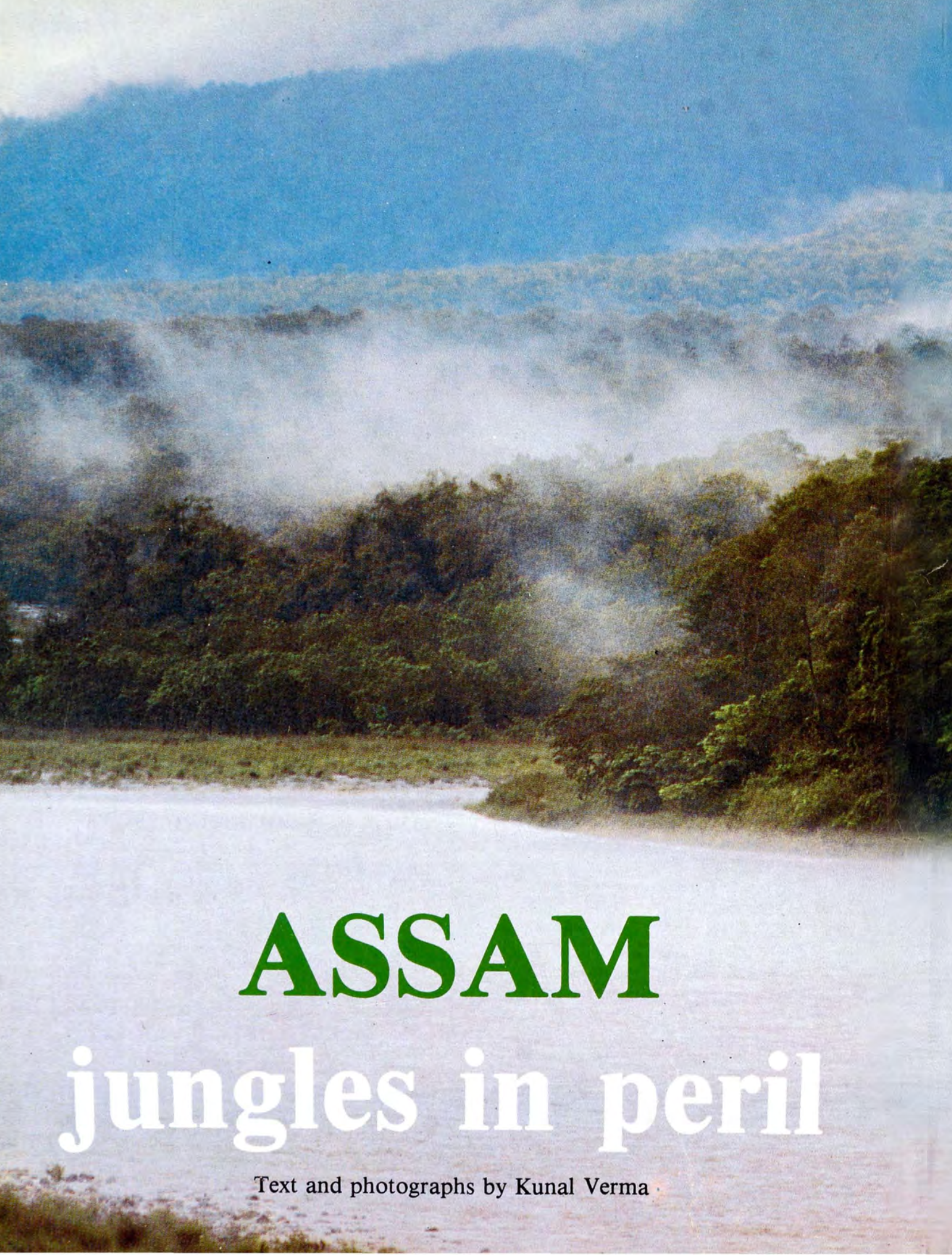
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jungles in peril

Text and photographs by Kunal Verma

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I was struggling to find a comfortable position atop the elephant while keeping a wary eye out for red ants which had the knack of deftly dropping out of the trees onto us. I was about to tap the mahout on the shoulder with the intention of heading back to the Manas guest house when we both saw four sambar does standing at the edge of a large patch of grass, their ears upright as they watched us lumbering along towards them. The light was superb and though I had had an exciting time with wild elephants, this was the closest I had got to sambar in three back-breaking days. We edged cautiously along, trying to cut the deer off from the tall grass. Even as we stopped, one of the females panicked and bolted past the elephant, so close that one could have grabbed her. The sambar called out loudly in alarm, and as we spun around we were just in time to see a young tiger take a swipe at the startled sambar. We had blundered onto the tiger's evening stalk and photographing the sambar was soon forgotten as our attention was riveted on the 'bagh'.

His ears were disproportionately large which suggested he was a young animal. And his coat was thick and reddish in the winter light. The cat seemed to lose interest in the sambar and instead sank slowly down to the ground behind a log; all we could see now was the top of his head. He soon got up and trotted off into the grass. We followed him awhile before we lost him to the jungle.

It was February and we were in Assam's Manas Tiger Reserve. My love affair with the jungles of the north-east had begun. I had been sent by *India Today* to do a story on rhino-poaching and after spending my allotted days I had decided to come back for a longer visit. Though my trip had orbited around rhinos and the illegal traffic in their horns, almost every wildlife officer I had met talked of the massive deforestation that was threatening the region's ecological balance. I wanted to take a closer look and subsequently set off again from Delhi, driving from Calcutta to upper Assam with a couple of friends. We covered over 2,600 km. which took us through Jaldapara, Buxa, Manas and Kaziranga before terminating our journey at

Dibrugarh in upper Assam—the stronghold of the plywood industry.

It was mid-May when we left Calcutta in a Matador ambulance and the sky seemed to close in on us. Driving along the lush countryside of West Bengal, running along the Bangladesh border, my two companions, Brinda and Ronojoy Datta got their first lesson on birds. (Ronojoy was to later identify a red jungle fowl in the heart of Calcutta!) Banyan trees lined the highways and palm trees surrounded the village where neat and clean huts marked the unbroken landscape. By mid-day we crossed the Ganga over the famous Farakka barrage and our bird list kept increasing as white ibis and open-billed storks joined cormorants, blue jays and parakeets. At night we reached the famous Teesta river beyond Baghdogra and here we crossed the coronation bridge and entered the Duars, which are known for their tea plantations.

The Duars are the western tip of the corridor between Bhutan and Bangladesh, and a few years ago the area abounded in elephants and leopards. Tired and exhausted we were still hoping to see some wildlife, but except for the odd long-tailed nightjar which rose up under the headlights, we saw nothing. We halted at a tea garden situated on the Leesh river. I had hardly closed my eyes to sleep when day seemed to break. Some cuckoos were creating a racket outside, and the first thing to greet my eyes were leechi trees laden with fruit, attended by rose-breasted parakeets. As the day wore on, we saw many birds which one never generally sees around North India—secretary mynahs, yellow bulbuls and a host of woodpeckers which visit the orchid-adorned trees in large numbers. The Teesta gorge added even more colour to the brilliant landscape and our two days there seemed to fly past.

The road from the Teesta to Jaldapara snakes along the foothills, with dry streams winding down and disappearing into the plains. The vegetation has a liberal sprinkling of sal and teak, but large patches, even on the road, have been felled. At first we missed the sanctuary, but after checking further up the road we doubled back and entered the thick forest. Huge ferns and creepers gave it an awesome

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look, but thanks to our rattling vehicle there wasn't much hope of seeing anything exciting. A flock of green pigeons took off from high up on a tree and the rustle of their wings added to the chirping of the crickets. A bittern standing on the edge of a small swamp had us scrambling out for a closer look, but it ducked effectively back into the weeds in an instant.

On foot, Jaldapara seemed eerie—it reminded me of Tolkien's enchanted forest—and I was, I must confess, a bit apprehensive of bumping into a rhino. However the next hour was an absolute treat as different kinds of butterflies flitted past, almost as if on review. They seemed particularly attracted to a salt lick but were extremely wary and despite all our efforts we managed to photograph only a couple of species. Golden orioles and a few species of flycatchers added to our afternoon entertainment, but besides a herd of chital we saw nothing else. Jaldapara like Kaziranga, has a major rhino-poaching problem, and though the terrain cannot be compared, the dense forest made one realise how easy it would be for poachers to trap rhinos which are known to follow regular trails. From Jaldapara to Manas there is supposed to be a continuous forest belt running along the Bhutanese foothills. The stretch includes the Buxa Tiger Reserve and runs through the Kokrajhar and Dhubri districts where there has been a sudden spurt in the number of sawmills. While Kokrajhar has a predominant Bodo population, mass-scale felling of sal trees has encouraged large Nepalese settlements, and in Dhubri an overspill from Bangladesh has resulted in a tremendous demand for land. This, combined with the fact that sal in these two districts is of the Class I and II variety (a mature tree fetches as much as Rs. 10,000) felling has become the common-man's business. Though regular felling started in 1901, the pressure on land as well as the 'quick buck' attitude has all but wiped out the forests. The so-called 'corridors', therefore, exist only on paper.

Kokrajhar perhaps, underwent the biggest tragedy—in 1960 there was evidence of a good tiger population here and besides it served as the main corridor for elephant migration between the Manas and Golpara districts. But

these were de-reserved and backward tribes like the Bodos, Rajbansis and Santals were resettled here and subsequently, sold their holdings to large numbers of Bangladeshis. With no land to till, they have taken to felling trees on which the sawmills thrive. The police, who are required to check indiscriminate felling, are glibly happy, claiming that with this denudation dacoity too has diminished!

So Buxa, like so many of our sanctuaries, finds itself an isolated pocket of wilderness, heavily encroached upon on either side. Floods were unheard of in these areas until the start of this decade, but with riverbeds having gone up by five metres, the air force has had to be pressed into service (during floods) to air-drop food in the area. Interestingly, Bhutan has completely banned felling for these reasons, but on the Indian side the carnage continues. Summer streams have dried up and in the monsoons, flooding takes place with a vengeance. But standing like a park in a city, Buxa remains a splendid patch of green. The highway cuts clean through the wilderness here, and pussy-cat orchids give the trees a pinkish look.

A beautifully marked monal paused long enough to let me take some photographs and a herd of chital galloped off as we approached. A few wild boars darted across the road, but heavy rainfall dissuaded us from stopping for too long. The area obviously abounded in game. Aside from its wildlife, however, Buxa's charm lies in its Duar setting. With the streams bursting into the plains from the Bhutanese hills, the Duars are India's terai. Buxa was given the status of a tiger reserve under Project Tiger only recently, and the main reason for its inclusion was to keep the corridor with North Bengal open. But unless Project Tiger officials can stem the felling outside the sanctuary's core area, Buxa may well fail to achieve its main purpose.

By late evening both Jaldapara and Buxa seemed far away as the road from Barpetta to Manas glistened under our headlights in the rain. Both Brinda and Ronojoy were dozing. We were all exhausted but I was much too excited to sleep. A forest guard sat in the passenger seat with a rifle, for Deb



A solitary wild buffalo (**top**). The tall, grassy jungles and swamps afford the animals food, shelter and place in which to wallow. The wild buffalo combines formidable strength with courage, its only real enemy being the tiger and, of course, man. Another unhappy victim of ruthless poaching, a rhino with its young (**above**) stares through the tall grass. Rhino-poaching in Assam is often backed by political clout; the horn of this animal, when it finally reaches its market in Singapore or South-East Asia, is valued at roughly Rs. 92,000 per kilo.



The forested hill sides of Assam provide an ideal home for the sambar (**top**), the largest deer in India which stands over one metre at the shoulder. Sambar feed on grass, leaves and fruit and provide a prey base for carnivores such as tigers and, occasionally, leopards. Elephants (**above**), rhinos, tigers, etc. share a fine ecological web in Assam which is being seriously damaged by poaching that has reached alarming heights.

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Roy, the park's delightful Field Director, had warned us of elephants.

The grassland started slowly, and at first we didn't realise the sanctuary had begun. But we were all alert now as this is the best area for the rare pygmy hog (*Sus salvanius*) as well as the hispid hare (*Caprolagus hispidus*). Lady luck however, wasn't with us. The trees were rich and green and one was bent across the road—the result of elephants tugging at the fruit which grows on them. The guard moved out and I dared not switch the engine off as elephants were uppermost in our minds.

Where exactly the grassland gives way to the tall trees of the jungle, I don't quite remember, but you can zip along the gravel road at quite a fair pace except for when you come to the wooden bridges which run over dry sandy streams. We saw some sambar, which seemed to have raw sores on their throats. The canopy here wasn't very thick, it was more the filtering type of vegetation—semi-evergreen and sal forests—so there were vines, thick and long, and ferns and orchids. In some areas plants similar to ginger seemed to thrive.

This time the rain haunted us and in the morning the Manas river was a swirling mass of chocolate-coloured water. The mist on the river almost hid Bhutan which was less than a stone's throw away and sitting on the balcony, I thought of the golden langurs which I had seen during a prior visit. I had crossed early one winter morning by boat, cameras in tow. Half a kilometre from our landing spot, the King of Bhutan's cottage on both sides of which the river meanders, was visible. A swish overhead and a swinging branch revealed a langur loping off, whistling loudly. At the best of times langurs are attractive animals but the golden langur has a charm all of its own; its yellowish-golden body and black face give it an unreal look. On that day however they were too wary to let me take good photographs, as some people had thrown rocks at them recently. I cursed these people under my breath.

The rain continued for five days and Deb Roy chuckled half in sympathy, half in amusement. We would sit and talk of many

things like the mahseer which fought the way only mahseer do in clear water. Listening to Deb Roy one can easily get lost in the magic of Manas, for he has been there for over fourteen years. He loves Manas and his men love him. There isn't a tree he cannot identify and he knows his birds and animals equally well. He talked angrily of poaching, for even though Manas is isolated and has little human pressure, rhino and elephant poachers are a menace. And when I later asked about the dam which they say will come up and flood Manas, his normally smiling face clouded over. Such is the madness of those who wish to 'develop', that Manas, a haven for our threatened wildlife is itself threatened by the design of short-sighted planners.

Even in the rain one saw a fair amount of game—a herd of wild buffalo snorted and rose from the river, the mist giving them a mystical look. Capped langurs clutched their babies and stared back at us as the rain slanted in relentlessly. A herd of over forty gaur looked up startled from the grass—then a sharp alarm call followed as they thundered through the jungle. A young velvet-fronted nuthatch fell off a tree and had our huge bull elephant doing a tap dance as it shied away from the chick. There were the butterflies and the beetles and the insects and, of course, the red ants with their vicious bites. Giant hornbills, their wings going 'swoosh swoosh', as they flew across the river, and finally, the mouse in my room which I suspect stole one woollen sock!

Manas is a wild, wild sanctuary and for me its greatest attraction lies in the fact that to see game, one has to work. Every sighting has to be earned. Red jungle fowl scampered through the undergrowth, and scarlet minivets danced in the trees; even a barking deer or a tiger delivered the same pleasure, for nothing about Manas is easy, including getting there. Besides, Manas has *twenty one* animal species which figure in the Red Data book of the IUCN as endangered species and some of them, like the hispid hare, are found only here.

Whereas Manas sent my spirits soaring, Kaziranga had the opposite effect on me. Here the landscape differs completely, with small clumps of trees dotting the open

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grasslands which are situated on the banks of the famous Brahmaputra river. Though Kaziranga is one of the richest wildlife areas, it is plagued with problems which leave you wondering about its future. In fact, a study of Kaziranga clearly spells out the gaps in Assam's wildlife policy.

Firstly, in Assam, as in so many other states in the country, wildlife is treated by the State Government as being secondary to forestry. This is perhaps a rather strong statement for anyone to make, but how else can one explain the absolute lack of resources to control poaching. In Kaziranga, at the beginning of this year, there were only seven elephants available to patrol the 430 sq.km. of grassland—the other elephants being either ill, pregnant, too young or reserved for tourism purposes. In 1983, 36 rhinos were killed by poachers in Kaziranga, while 55 were killed elsewhere in the state and in Jaldapara.

To make matters worse, even if perchance a forest guard kills a poacher in a shoot-out (the poachers carry far more effective firepower), the guard is punished and locked up until the park authorities get him out. The government allocates Rs. 20 per day for a lawyer and often the guard is beaten up while in police custody, for rhino-poachers are often backed by political clout. Though the rhino horn fetches something close to Rs. 92,000 per kilo by the time it hits the retail markets in Singapore and South East Asia, the poachers who kill the rhino by trapping it in a pit get less than Rs.1,000 for it. And with rhinos following fixed trails in the dense grass, which is impenetrable during the monsoons unless one is on elephant back, the guards are practically helpless. Senior wildlife officials in Gauhati openly said they lacked political support to implement more effective policies and counter-measures. Political interference in forestry and wildlife matters is probably the root cause of Assam's problems. Meanwhile, forestry is all important for Assam's plywood industry. And that's where the big money lies.

Kaziranga is situated on the Gauhati-Jorhat highway. Across the highway are small hills for which Rs.4.71 lakhs had been paid to the government three years ago to extend the park to the high ground. But even today, the

Kaziranga authorities have no jurisdiction over this high ground and when the floods come, the animals that flee there are slaughtered. Besides rhinos, hundreds of hog deer are killed—those which somehow escape the floods must face the threat of man.

There is of course another side to this story. If you drive off the main highway and enter the villages near the sanctuary, the poaching problem gets even more complex. All pretences of having schools and other benefits, disappear and children run from jeeps, their bellies swollen and their bodies half-naked. For these people the sanctuary next door is nothing short of a disaster, for not only do the animals come out and eat their crops, but their cattle are locked up if they stray into the park area. It's all very well for us to say that the sanctuary will benefit them and their future generations in the long run but it has a different meaning to them now. Unless the sanctuary benefits the local people in *real* terms, poaching will always remain a major problem. Meanwhile, Assam's forest machinery cannot see beyond the profits gained from felling trees. No one seems to have time to think of the local people.

Problems aside, for game viewing and wildlife photography Kaziranga remains one of the best areas in India. Since the rains had followed us here too, we decided to forgo elephant rides and drove into the sanctuary in a jeep. Whistling teal greeted us by flying past and in a small clearing we saw over five hundred hog deer grazing together with barasinghas. A herd of buffaloes quickly rose to their feet and faced the jeep before moving off into the grass. And then we were driving on, wheels churning mud as our vehicle struggled to get a grip on the slushy track.

A serpent eagle landed on a tree and we scrambled out to get its picture as a solitary bull buffalo, his majestic horns sweeping backwards, glared at us from behind a tree, nostrils flaring as he tried to catch our scent. Cameras clicked, and whispered superlatives preceded the bull's crashing return to the undergrowth. For a while no one said anything. A herd of elephants and some pelicans passed by and we saw the pug marks



The elegant bamboo orchid (top), a fairly common flower species found in Assam. Deforestation near Buxa (above). The Kokrajhar and Dhubri districts near Buxa have witnessed a sudden and alarming spurt in the number of sawmills, which has encouraged large scale felling of the Class I and II variety of sal trees, and also a heavy demand for land resulting from human settlement. This pressure on land, added to a 'quick-buck' attitude has virtually wiped out much of Assam's once-vast forest lands.



A capped langur (*Presbytis pileatus*) (top), or leaf monkey, sits peacefully on a branch surveying the forests around it. Called so because of a crown of erect, long, coarse hairs growing backwards from its forehead, four races of this shy primate inhabit the hill ranges of Assam. They keep to the trees, seldom descending to ground level. The ethereal-looking golden langur (*Presbytis geei*) (above), has a coat of deep cream that turns a sparkling gold in the sunlight. Reddish flanks, a black face and a long slightly-tasselled tail complete an elegant picture.

On April 1, 1984, in the very early hours of the morning five rhinos were ushered into the Dudhwa National Park after an epic voyage which took them to Delhi from Gauhati by plane and then on to Dudhwa in a truck (*Sanctuary* Vol.IV. No.3. 1984). This translocation some say, offers a new lease of life to one of the world's most harassed and endangered animals; at the same time the move is being denounced by angry Assamese.

Below are the views of two prominent naturalists/conservationists, Billy Arjan Singh, Honorary Wildlife Warden, and Dr. L.M. Nath, Member, Indian Board for Wildlife.

My views on the creation of a viable rhino population in Dudhwa are well known. The original idea of translocating rhinos to Dudhwa was mine. The opposition from the Assamese was more to do with a desire to maintain a 'monopoly' hold on rhinos rather than a concern for their survival. Even if the animals do not face immediate extinction, experiments to translocate them should be done now as we would hate to experiment in a 'do or die' situation, later. In any event, as an Honorary Wildlife Warden I had access to the field operations when the captured rhinos were released and I must say Ashok Singh (then in charge of Dudhwa) did a fine job. Moreover, the Botanical Survey was proved right when they identified common, edible plant species for the rhinos, as I have seen them grazing away to their hearts' content. Even today I frequently 'look-in' on the rhinos and the two adult males and the sub-adult female are doing well. When the Nepalese send us four more rhinos we should have a good herd and can expect them to start breeding. I would, however, have preferred to pay cash for the rhinos to Nepal instead of exchanging them for 16 domestic elephants.

Today, the electric fence around the rhino's release area is keeping them out of cultivation and Mr. R.L. Singh is doing a good job. But the project can only succeed if political, financial and moral support is provided to the field men, in generous proportions. In truth, this rhino project typifies the problems of centre-state relations as far as wildlife is concerned. Personality clashes have already begun and if some oil is not poured over troubled waters soon, the project could fail.

Billy Arjan Singh.

The rhino-translocation move was a critical one that had to be taken because of the increasing and consistent damage being inflicted on the Assam rhino population by poachers, coupled with the fact that in India, the rhino survives only in Assam. In *Sanctuary* (Vol.IV. No. 3.) it is implied that the continuation of the reintroduction programme depends on the 'success' of the Dudhwa pilot project. This is a dangerous concept for several reasons. Firstly, there is no clearly defined end-point to define a 'success' or a 'failure'. Secondly,

even if the Dudhwa experiment 'failed', could we afford to give up attempts to find alternate homes for the great one-horned rhino?

Fortunately, my question is hypothetical. I had the pleasure of visiting the translocation project at Dudhwa at the end of December '84. I observed the rhinos closely in their new habitat and have no doubt whatsoever that they are happily settled in their new home. Of course, they are still closely supervised and the park's management has provided them with every protection. But the three surviving animals are living free and managing for themselves. I observed the rhinos happily foraging and eating. I did not get the impression that the animals had any trouble in selecting and finding their preferred food. They were alert and looked healthy and contented.

Two of the five animals translocated to Dudhwa have died—however the casualties were from causes unrelated to their new home and do not reflect on the suitability of the Dudhwa habitat for rhinoceroses. There is a lesson to be learnt from these tragic losses and future attempts at capture and transport must take these lessons into consideration.

But reviewed critically the experiment is a success—we have seen that the rhino can easily and comfortably flourish in the Dudhwa ecosystem and it is now time to proceed on to the next phase.

More animals need to be introduced into Dudhwa as the long-term objective is to establish a viable population of the great one-horned rhino in its erstwhile range, in the Dudhwa terai and elsewhere. Fortunately, in an outstanding example of enlightened co-operation in conservation, His Majesty's Government of Nepal has offered four animals to the government of India for rehabilitation at Dudhwa.

The experiment is a success but observation and protection must continue and it is my fervent hope that the Centre and the State continue to offer financial and technical assistance to the park authorities, uninfluenced by personal or political considerations.

L.M. Nath.

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of a tiger in the wet mud. It was a rich and rewarding experience.

The rain did not let up and soon the Brahmaputra would break its banks and swamp the grasslands. The people outside the sanctuary and the animals would then begin their grim struggle for survival. Each year tells the same story, but despite everything, the rhino population in Kaziranga is still going up, and the animal that symbolises Assam is safe—at least temporarily. But some people are worried as the *bheels* (swamps) where the rhinos wallow and feed are silting over on account of the heavy deforestation in the upper areas of Assam and Arunachal which has led to more and more silt being brought down. And the poachers continue to cross the Brahmaputra at night and dig pits where these huge and ponderous beasts are then slaughtered.

Tired and exhausted, we stopped next at a tea garden on the Nagaland border. Very close to Jorhat—Amguri was a beautiful place with neat rows of tea bushes. Planters spoke of elephants and leopards, but all we saw were birds. Even fast breeding animal species like the hare have disappeared because of the use of insecticides. From Jorhat the real plywood zone starts—one of Assam's main industries. There are today over 47 plywood factories in upper Assam alone! Using mainly soft woods like hollong and hollock in the past, these factories have wiped out the forests from Assam and are today falling back on varieties like champa which were previously scorned by them. While Assam's own resources of soft wood have evaporated, the industries are now turning to both Nagaland and Arunachal Pradesh. Two years ago, the government abolished the contract system and timber is now felled by the forest department; it has become a big business for all concerned.

Plywood in Assam is a two-pronged problem. It has major political angles and is a conservation headache to boot. While the ecological disaster which the loss of trees has caused is obvious, the problem continues to affect other areas of conservation more acutely—the biggest casualty being the by now well-beaten drum of wildlife. Though softwoods were fairly widespread in the '50s and '60s the pressure has started telling on the

stands during the last ten years. And now the mills are becoming the executioners of the neighbouring states' rain forests. Both Nagaland and Arunachal Pradesh, once two of the richest states as far as natural vegetation was concerned, today sport innumerable desolate and barren hill sides as still more timber continues to bounce across Assam's highways en route to the mills. The trees which used to bind the soil don't exist anymore, and erosion is the rule. Corruption is rampant. Backlogs are released at fantastic rates of commission, and the money finds its way to some rather powerful people. It will definitely do the Central Government a lot of good to institute a proper enquiry (independent of the State Government) to dig up the facts. Laws are flouted at the drop of a hat with the police acting as happy bystanders. For example, some states banned the export of soft woods to Assam, but all that the enterprising people had to do was to set up a 'veneer' factory within that state and then coolly transport the bark of the tree. Non-existent companies, no proper checks and heavy 'commissions' are raping the land. Will Mr. Rajiv Gandhi's government do something about *this* Assam problem?

Despite their depleted state the forests of Assam still stand out as sentinels of a near-forgotten past. The north-east is truly an amazing region, and in its preservation there are long-term benefits which cannot be sacrificed for cheap immediate profits. But to preserve for the sake of preservation would be equally ridiculous. Wilderness areas can benefit people in economic terms as well, but the profits have to percolate down to the people. Assam's rich heritage can eliminate poverty. The jungles of Assam must not die, and they mustn't become show-pieces of wildlife either, for there is very little difference between a zoo and a park where human pressure acts as a moat. In truth, Assam's future lies in the hands of its youth. The students, political activists and the state's proud people must look closely at the future course of action they wish to take; and at the consequences for future generations of Assamese and Indians, if long-term conservation steps are not immediately put into action. □