

Two week December 2010 trip to India, 33 species of Mammals, 9 different tigers in 3 different Reserves and observations on eco-tourism and conservation in India,

From Dec 04 to Dec 20 2010 I was in India looking at the eco-tourism potential of the Madhya Pradesh (M.P.) “**Tiger Circuit**” – Pench, Kanha, Bandhavgarh, Panna and Assam’s Kaziranga National Park. My tour was arranged by an Indian in-country tour operator – **Royal Expeditions** www.royalexpeditions.com . Royal Expeditions is an exceptional company and our trip operated flawlessly. They have an extensive knowledge of the wildlife of their country and have had a long history in Indian conservation. Their trip pre-departure information on the wildlife and the ecology of each area visited is extensive and at times was like reading someone’s academic dissertation.

On arrival in India in the early morning of Dec 04 my traveling companion Dr. Bob Singer and I passed through the Delhi’s new airport. It is a very modern, clean facility. However one still has to clear Indian immigration which is not well organized and can move at a snails pace. We got to our hotel just before dawn. There later that morning I saw my 1st mammal of the trip, which was a life mammal for me, the ubiquitous **5-striped palm squirrel**. This little charismatic rodent is seen nearly everywhere one goes in Old & New Delhi.

On the morning of Dec 05 we flew from Delhi to Nagpur on a local Indian airline, **Indigo** whose check –in, in-flight service and aircraft were quite good. If you have not flown internally in Indian for some time the level of security may surprise you. To even get into the airport you have to show an actually air or E-ticket as well as a form of identification with photo. For non-Indian travelers a passport is mandatory. At check-in your domestic airline has to tag each piece of your carry-on at check-in before you go through a security screening including an x-ray bag check and passing through a medal detector. After this each tag on your carry on has to be stamped as checked by security. Before boarding your aircraft there is a final check to make sure that each of your carry-on items has the required stamped tag. If your item doesn’t have a stamped tag it is confiscated.

Our flight departed Delhi on time and arrived in Nagpur 2 hours later. We were met on arrival and set off on our first Indian road adventure. The drive was 95 kilometers and took just over two hours. In my 31 years of overseas travel I’ve been driven in some incredible places –eastern Congo, Madagascar, Jakarta, Accra, northern Kenya, the Pan American highway in Peru and the Ecuadorian Andes. None of these wild & woolly places prepared me for being driven on the roads of India. With heavily decorated trucks bearing down on you, big buses with the drivers leaning on their horns to chase you out of their way, the motorcycles & mopeds, bicycles, motorized and man pulled rickshaws, indifferent to traffic Indian pedestrians, herds of driven cattle, lone stray cattle, goats, sheep and pariah dogs all on the road at various times and in some sections all on the road at once, made this an never-ending kaleidoscope of fascinating sights and close call collisions. Within the first few hours I was convinced that the hardest working and skilled person on the entire Sub-Continent must be the professional Indian Driver!

Traveling on the road this day however got me two life mammals – **hanuman langur & rhesus macaque**. I saw both species on several occasions while on the roads in forested areas in Madhya Pradesh outside the reserves. I was told that the macaques in particular are often feed by passing truck drivers many of whom are Hindu devotees of the monkey god – Hanuman, which makes the rhesus the more commonly seen wild primate on the roadside.

Our first stop on the Circuit was Pench National Park. In India each State administers their own conservation areas and the level of protection and management are more determined by the State government than any National authority. The Madhya Pradesh (M.P.) Tiger Circuit is four National Parks. The southern most is Pench, followed by Kanha, Bandhavgarh, & Panna in the north. Each Reserve is a 4 to 6 hour drive from the other. Each Reserve and each entrance gate to the Reserves has a specific number of vehicles that are allowed in each day. I was told by the Indian naturalists I met that during the busiest times of the year for the Reserves - the last two weeks of December, the first two weeks of January and the month of April - pre-booking your game drives as far in advance as possible is strongly suggested. You are allowed in the Reserves for morning game drives starting at sunrise (about 6:30 AM this time of year) and one has to depart by 10:00 – Bandhavgarh, 11:00 – Pench & Panna, 11:30 AM Kanha. You can then have an afternoon drive, which starts at 3:00 PM, and you must vacate each of the Reserves by sunset (approximately 6:00 PM in December). The Reserve authorities believe that the hours between game drives gives the wildlife a respite from the motorized tourists. Having a great deal of experience in African eco-tourism this is in marked contrast to the African conservation areas I have visited. In Africa if you wish you could start at dawn and not have to leave the reserve or return to your lodge/camp until dusk. On each game drive on the Circuit a local guide must accompany you. This is now official policy in M.P. created by the State Parliament as a way for local men to get some income from the Reserves that they live adjacent to. In theory, this policy should help build local support for the Reserves. The local guides earn 200 rupees (a bit less than \$5.00 USA) per drive + tips. It was quickly obvious that the skill and language level of each of these men varied. Some were much better than others but I tipped all of them a bit and the better ones who found tigers, or who knew their species of birds well, I tipped more up to 200 rupees, doubling their normal stipend.

I stayed two nights at the Pench Jungle Camp Lodge & Tented Camp. This was a good introduction to the Circuit. The Pench Jungle Camp has a 30-acre - Eco-park nearby where one can do a night walk or day birding trips. The Eco-park is adjacent to Pench N.P. and according to my guide, naturalist Pahir Patil, at least once per month a leopard or tiger makes a kill here. A night walk with Patil turned up **Indian flying fox** and what I am convinced by its flight pattern and white belly was a **big-eared horseshoe bat (Rhinolophus macrotis)**. Temperatures in December at night range 40 to 50 degrees F. resulted in poor mammal viewing on this particular visit. However, having this much area for birding walks or night mammal spotting should make Pench Jungle Camp a preferred accommodation for the serious naturalist. Patel is willing to do night walks or drives in either the Eco-park or the local buffer zone. He knows a good spot for looking

for giant red flying squirrel. Having seen this species in Sumatra I declined his offer to look for them because I needed to site inspect a nearby lodge.

We had 3 game drives with Patil in Pench and although we were close to at least two of them we never saw a tiger there. However, it was here that I first experienced how the local diver/ naturalist/ forestry guides most frequently find tigers. They listen to alarm calls of the deer, langur and peafowl and stake out an area, waiting for a tiger to appear. Once you know what sounds to pay attention to, one can follow the trail of the tiger or other larger carnivore as they move through the forest. This method must work well when the vegetation is not as thick and full as it is in December or the other post-monsoon months of October, November and January. Each of the Tiger Circuit naturalists I talked with felt that the best month for tiger viewing in their reserves was February and March. It is then that the vegetation was open enough (cleared mostly by herbivore grazing/browsing) to more easily see the cats after they were located by listening to the alarm calls. They all felt that in April there were more local Indian tourists which made the reserves too crowded and getting game drive reservations more difficult. In May & June the weather is so hot that tigers tend to move around less during the limited hours the reserves are open to tourists making sightings more difficult. Looking for tigers reminded me of looking for leopards in Africa. You need to have a driver/guide/naturalist that uses good tracking skills and has knowledge of the habits of the cats, combined with some luck in getting the opportunity to see them.

Pench is primarily Sal forest, but a large reservoir occupies a good part of the Reserve, which adds to the diversity of bird life, making it a good destination for birders as well as mammalogists. Since Pench was my first Indian game viewing I got a few new life mammals there including spotted deer (or chital) – very common and at a very high density, nilgai – this antelope species reminded me very much of the African eland, 3-striped palm squirrel – only one and gaur – one male who was sparring with a small tree. We also saw several sambar deer - a species whose alarm call I had previously heard in Sumatra and a few golden jackals – a species I had first seen in Tanzania years before, as well as hanuman langurs & rhesus macaques. Between the langur & macaque, the langur was the primate species most frequently seen inside Pench and the other Reserves on the Tiger Circuit as well.

Pench may have as many as 50 adult tigers. Patil and the other naturalists I spoke with at Pench thought that the tiger population is doing well in Pench and is increasing. One naturalist I spoke to in Kanha was not so sure about this since he speculated that the large spotted deer population was perhaps an indicator of a low tiger population. In any case one section of the tourist area of the Reserves that we were assigned was recently closed because a female tiger had recently given birth to 4 cubs. Other large carnivores seen with some frequency in Pench include leopard, sloth bear and Asian wild dog or dhole.

Dholes are seen with some regularity here. A pair was seen a week before our arrival. The Tiger Circuit naturalists I talked with have noticed a pattern with dhole sightings in their respective reserves. According to their observations dhole numbers seem to be cyclic. Pairs or trios are seen infrequently at first. Then the number of animals per pack

increases up to a dozen or more for a few years and then the species disappears usually after a heavy monsoon season until it comes back with a pair or trio restarting this population boom and bust cycle again. The naturalists suspect that canine distemper causes these population crashes. With the amount of feral dogs I observed on this visit to India I am not surprised that distemper or even perhaps rabies can spread quickly into a wild population of canids. A similar domestic canine to wild canid diseases transfer is believed to be the cause of the local extinction of African wild dogs in the Masai Mara in Kenya in the late 80's early 1990s. The tiger is certainly the main conservation mission of the M.P. Reserves, however, there is also reason for concern about the State's dhole population.

In the morning of December 07, after our last Pench game drive we departed by road to Kanha Reserve 200 kilometers to the north. Another Indian road adventure of 5 + hours got us to the Kanha area. Our lodge for the next two nights – the Kanha Earth Lodge had recently been opened and due to local government regulations, permission for direction signs had not been granted so our driver had some difficulty finding it. Kanha Earth Lodge is located in the buffer zone west of the Reserve and is part of the Indian Jungle Lodge Company - Pug Dundee Safaris. Pug Dundee has lodges in Panna, Bandhavgarh and Earth Lodge is their newest most modern looking facility. It reminded me very much of some of the African game lodges that I have seen. Each Pug Dundee Lodge has its own team of naturalists. Those I met were very good and I learned a lot about Indian wildlife and the management of the Tiger Circuit Reserves from them. Pug Dundee also purchases or leases land around its lodges, which become small private reserves. On my first afternoon at Earth Lodge I saw a small carnivore from the porch of my room, which moved away before I could get a good look at it through my binoculars. From how it moved and its coloration, a **jungle cat** was my best guess. Although the Lodge is a half hour from the Reserve entrance gate the drive is interesting and in the early morning hours it becomes a predawn game drive. I was told that during the warmer months wildlife is often spotted en-route, especially reptiles, and once a tiger was seen.

The most experienced naturalist at Earth Lodge was an enthusiastic young Indian – Harsh. Through Harsh I was the first Lodge guest to do a night drive out of the Lodge into Kanha's buffer zone. I did two drives, each lasting up to 2 hours. The route passed through open community land, fields and rice paddies and ended up on a river that borders the Park. It was cold at night so animal sightings were limited although I saw jackals, spotted and sambar deer, one **little Indian field mouse (Mus booduga)** and on both nights a wild canid that moved and looked like an **Indian fox (Vulpes bengalensis)**.

We had three game drives within Kanha, 2 mornings and 1 afternoon. Before you enter the Reserve you can see a small colony of Indian flying fox in a huge tree in the village of Khatia. Kanha is the largest Reserve in the Circuit and is a mix of Sal forest interspaced with grasslands meadows. The meadow most central and frequently visited by tourists is Kanha Meadow where Dr. George Schaller did his study of Indian predator/prey relationships summarized in *The Deer and The Tiger* published in 1967. The park also has highland forest with thick stands of bamboo that reach up to a high

plateau that is 2,900 feet in elevation. We did one drive here to look for the 4-horned antelope or chowsingha, which we did not find, but saw instead a small group of **ruddy mongoose (Herpestes smithii)** a life mammal and an **Indian muntjac** or barking deer, (a species I had previously seen in Sumatra) and our first **wild boar**. In the lower elevations spotted deer were common as were langur. Jackals were frequently seen, as well. Also seen were sambar and 4 gaur. We also saw swamp deer or barasingha on every game drive. These are the hard ground **swamp deer (Cervus duvauceli branderi)** and were a new mammal for my life list. During the 1970's the population of these dropped to only 60 individuals. A concentrated breeding program using a core population protected by a predator proof fence, is one of India's best conservation success stories. As of June 2006 the estimated population is over 1,200 individuals and the subspecies is believed to be extinct in the rest of the country.

Kanha is also where I saw my first **tiger**, a lifetime goal for this mammalogist and ex big cat zookeeper. It was on our 2nd drive in Kanha (our 5th overall). We were just heading back after an uneventful afternoon of wildlife viewing when on a narrow forest road ahead was a row of nearly a dozen stopped vehicles. The word filtered down to us that two tigers (male & female) had been seen on the road before moving off into the forest. Our forest guide quickly showed that he knew what he was doing by directing our driver into a position that allowed a short but very clear look at a large male tiger. It was just a glimpse but produced an incredible rush of excitement in everyone who saw it. These were the only two tigers seen in this section of the Reserve that day. A June 2006 survey in Kanha reported 133 tigers within the Reserve. Some local naturalists believe that the population now may be as low as 40 adult individuals. They point to several trends, fewer tiger being seen recently and more sightings of leopards and jackals. Tigers that leave the Reserve are sometimes poisoned due to predation on cattle. Our naturalist also believed Kanha is not as well watered a Reserve in comparison to Bandhavgarh. The limited number of water sources could increase tiger to tiger aggression with resultant fatalities during the dry hot months of May & June. The best place to see tigers in the Reserve appears to be Kanha Meadows. A tigress with 3 cubs was observed there on our last drive in the park. Upon my return I reread "The Deer and The Tiger and found that Schaller also recorded a female with 3 cubs here over 40 years ago. In retrospect an indication of the presence of tigers were the several species of vultures and scavenging species of eagles that we saw around the meadow as well as numerous jackals.

It was then on to the 3rd Reserve on the Circuit – Bandhavgarh. The drive is 250 kms and for us took 6 hours. Due to our late departure from Earth Lodge we arrived at our accommodation – Kings Lodge after dark. Although we arrived safely I would highly recommend not driving at night on Indian roads. Kings Lodge is located near the Reserve's northern boundary and the Tala entrance gate and is located within the Reserve's buffer zone. It is a comfortable Lodge with good accommodations and common areas. Our naturalist here was Karan Rana, an ex-pat Nepalese who previously worked in Chitwan Nepal's Tiger Tops Lodge. He had a wealth of knowledge about the wildlife of both India and his native country. From the other Pug Dundee naturalist I discovered that Karan had trained them all. Pug Dundee also has a nearby lodge adjacent to the Reserve boundary – Tree House Hideaway. Tree House is located right along the

Reserve boundary. It is surrounded by a private reserve that has good bird and mammals sightings although the possible presence of Euro-Asian wild boar means that you need to be escorted by a lodge guard during dusk to dawn hours. The Tree House also has a waterhole with a viewing hide I was told that the waterhole has very good game viewing, particularly during the dry season, especially for leopards that frequently jump the Reserve boundary fence to drink or hunt at the Tree House waterhole. Occasionally from either Lodge wildlife, even wild species of cats both big & small, are seen while driving to the entrance gate in the predawn hours. On the morning of our last drive we saw an **Indian hare (Lepus nigricollis)** another life mammal for me.

In Bandhavgarh the vegetation in the lower elevations is primarily Sal forest that flank long narrow grasslands. These grasslands make this Reserve the definitive place on the planet to see a tiger in the wild. We saw 7 different individuals. Bandhavgarh is not only for tigers. We saw numerous wild boar, as well as good numbers of spotted deer, sambar, langurs, macaques, a few jackals and a pair of ruddy mongoose. In a small human built cave easily accessed from one of the Reserves roads, was a colony of big-eared horseshoe bats. Karan told us that elephant-back safaris are no longer conducted in Bandhavgarh because it is now believed to be stressful for the tigers. However, on our second morning in the Reserve a group of Indians, heavily escorted by Reserve staff and police, were assisted with getting on several elephants to get closer to a tigress with 3 nearly adult sized cubs. Obviously, for tiger viewing on the Circuit “rank has its privileges”.

Our best look and only photos of tigers were of a tigress with 3 cubs of 17 months - 2 males and 1 female. This occurred on our 2nd drive in Bandhavgarh (our 8th on this trip). Again there was a line of nearly a dozen vehicles waiting for this quad of tigers to appear. Karen who was driving and our accompanying forest guide passed by this row of vehicle twice as they looked for different tigers. However, they made sure we got back to the location at the time they expected the cats to move and they got the timing exactly right. All 4 started moving across one of the grassland areas and as we jockeyed for position we got some incredible looks at them. That experience, in my opinion, sums up tiger viewing in all of the reserves of the Circuit. After you see the first tiger the “edge” is off! You can take your time to avoid crowded roads and look for your own tigers. If you can't find tigers on your own you then go back to the location of the last tiger sighting. In Bandhavgarh we saw tigers on every drive except for our last. And even then, on our last morning drive on the way out of the Reserve we came across a National Geographic film crew led by wildlife photographer Steve Winters. Steve and I had an on site conversation based on Asian wildlife areas we had both visited and wildlife scientist that he knew and I had met. He then showed us on his camera a photo of what we had just missed 20 minutes before, a male and female tiger mating along side the road. An occurrence like this shows that in spite of the tourist traffic in Bandhavgarh the great cats are relaxed enough to engage in one of their most potentially stressful and intimate behaviors. As I chatted away with Steve we all heard a loud roar, which this ex zookeeper quickly recognized as a post copulation tiger growl just out of sight. Steve suggested that we stay here another ½ hour or so and the tigers would again be on the road. Since we had seen the female of the pair the afternoon before, the male would have been my 8th tiger for

Bandhavgarh and my 9th at this point on our trip. However, we needed to drive on to the next Reserve on the circuit – Panna.

The drive to Panna was 195 kms and took 4 hours. On the mountain passes we saw macaques and large patches of forest. In some lowland areas we saw signs warning of the potential of wildlife in the road, similar to deer crossing signs in the States or the ubiquitous leaping kudu signs of Southern Africa. From Nagpur to here this was the first region that appeared to me to have the potential for good numbers of wildlife outside the formal Reserve system.

Panna once had some of the most easily observed tigers on the M.P. Tiger Circuit. By 2006 (a detailed study is presented in *Oryx* [FFPS] July 2010 Volume 44 # 3 pages – 383 – 389) uncontrolled poaching had eliminated all but one male tiger. This male left for parts unknown, leaving Panna an official Tiger Reserve with no tigers at all! The Madhya Pradesh has since re-introduced a male tiger from Pench and two females – one each from Kanha and Bandhavgarh. The Bandhavgarh female has since given birth to 4 cubs, 2 of which still survive. Of the 4 Reserves on the Circuit, Panna is the second largest and is perhaps the most diverse ecologically. Extensive plateaus characterize the terrain of the Reserve along with gorges, with patches of forest and some open grassland areas with species of acacia. The latter were, to me, reminiscent of an African savanna. In addition the Ken River flows 55 kms through the Reserve south to north. The Ken has a healthy population of marsh mugger crocodiles (we saw several large ones), turtles and aquatic birds. In Panna you can do game drives, elephant safaris and boat rides on the Ken River. Among the species of animals we saw within the main reserve were **Indian gazelle - chinkara** (another life mammal), nilgai, sambar spotted deer, wild boar and langur. We also got strong indicators of a near-by tiger kill. Also seen was a diverse collection of vultures roosting in trees along the road – slender billed and redheaded vultures and Eur-Asian and Himalayan griffons as well as the tracks of a striped hyena. A final confirmation was meeting a team of Reserve tiger biologist who related that all of the above that we saw confirmed that the radio collared Pench male had killed a samba. If we had more time we would have most likely seen him.

For a serious mammalogist, the Ken River Lodge also offers the only Night Safari in India. Dr. Singer and I were the only participants on the evening of December 12. The program starts at the Lodge, which you need to reach by 4:00 PM. You can store excess luggage here, freshen-up and then met and transferred to a remote camp located within the Reserves buffer zone. Remote is a relative term since you do travel through some local settlements, fields and past a few Hindu temples. Again, I mention that mid-December is not the best month for animal viewing in Central India. With Pugmark Dundee naturalist Trigun Vir Singh Pathania, however we saw a lot. Trigun is an excellent birder, serious about his observations, working hard to get each one correct, and is a good overall naturalist as well. We saw 3-striped squirrel, Indian hare, Indian flying fox, and numerous nilgai, spotted deer, a few Indian gazelles, one **common palm civet** and two rodents. I missed seeing what I think from the description was a **soft-furred field rat (Millardia meltada)**. I did, however, see a large rodent with a clearly distinct white under tail that I believe was a **white-tailed wood rat (Cremnomys blanfordi)**.

Perhaps not an ideal evening, by African standards, although the wood rat is a potential life mammal. However, in the months of February and March, Trigun told me that on a 2-night stay sighting a sloth bear can almost be guaranteed. The bears are attracted to a type of berry that becomes ripe during those months. Rusty, jungle and leopard cats and striped hyena are also frequently seen on the night drives. The camp itself is very basic but if you are into serious mammal viewing and birding you need to include it on your itinerary. While there I had a long conversation with Mr. Vini Singh, the founder of Pug-Dundee Safaris, about Indian conservation, the loss of tigers in Panna and their reintroduction and Pug-Dundee Safari's philosophy on community conservation. In what may be one of the most surreal aspects of my India trip, Mr. Singh pointed out that as we talked theoretical conservation, all around us we could hear the noise (firecrackers & banging pots) that local farmers were making to chase wild boars and nilgais (both potential tiger prey) out of fields next to our camp. They do this to save their crops from being eaten, crops on which they and their family's livelihood depends.

In my opinion Panna has the best potential for eco-tourism on the Tiger Circuit. The Reserve is 25 kms from Khajuraha International Airport, which makes access from Delhi easy and cost effective. The Khajuraha Temples are also a well-known International tourist destination, which means a good tourist infrastructure already exists. If the number of tigers can be increased to pre-poaching levels, Panna would be one of those rare places where one could fly into an international airport and have a reasonable chance of seeing a large wild cat in its native habitat within the same day. Kenya's Nairobi National Park is the only other location in which I am aware of (seeing lions here is about a 50 % in my experience) that this is still possible. From Khajuraha one can be driven (as Dr. Singer and I were) to Jhansi Railway Station (175 kms 3 to 4 hours away) to board an express train to Agra. From there you will see the Taj Mahal, the iconic symbol of India, the very next morning.

My last three nights in India were supposed to be spent in Assam near Kaziranga National Park. Icy conditions at London's Heathrow Airport kept me another night in India but that's not pertinent to this report. As Dr. Singer headed back down to Jaipur for some additional Indian cultural experiences, I continued on to Eastern India. I was joined by the Managing Director of Royal Expeditions - Vishal Singh. Having grown up on a tea plantation nearby Kaziranga, Mr. Singh was a wealth of information about the Reserve and its ecology, along with the conservation and political history of Assam, and a good traveling companion as well. On local Indian carriers we flew first to Calcutta, then to Jorhat. I have a traveler's tip for those planning to visit Assam. If you are flying east ask for seats on the left side of the plane, flying back west, ask for seats on the right side. You will fly along the Himalayan Range and on clear weather days perhaps see Mount Everest. The flights from the west arrive in Assam too late to do any meaningful wildlife observations, but we drove close by a large Indian flying fox en-route to our Lodge. Our first night was at Wild Grass Lodge. This was at one time the only decent accommodation option for nature-oriented tourist in the Kaziranga area. It is located within a very well settled area, which was a surprise for me. It is showing its age but as Royal Expeditions states in its description of Wild Grass, it has eccentric charm. The slow service is evidently typical of Assam but the dancing performance of local villagers

more than made up for this. The Lodge assigned a local naturalist – Jutin who was the best that I had in Assam..

Our first drive was in the central Kaziranga. Vishal and I went on a one-hour elephant-backed safari in which I saw four life mammals – **Asian one-horned rhino**, **Asian elephant**, **hog deer** and **wild buffalo**. We also saw large herds of wet ground swamp deer, a few wild boars and a troop of rhesus macaques. The adult female rhesus found in Assam has very distinct red-colored rear-quarters which is very striking and different from the same species that I saw in M.P. Based on my experience in Kaziranga your best chance of getting close to the Reserve's wildlife is by elephant back versus than by vehicle. We were then met and transferred to the Diphlu Lodge near to the western section of Kaziranga. The lodge is located just across the Diphlu River from the Reserve. Wildlife is often seen just across the River. Surrounded by a fringe of natural vegetation the Lodge grounds would be a great place for night mammal viewing except for the fact that wild buffalo and rhino often cross the River onto the Lodge grounds at night. After dark you are escorted by lodge security to your room to avoid these potentially dangerous visitors. Diphlu Lodge accommodations are excellent, very similar to a 5 star South African lodge. The food and service is exceptional as well. The naturalists here are enthusiastic but still a bit inexperienced compared to the others I had met in India. Vishal and I did an afternoon drive with a Diphlu naturalist to the western sector of Kaziranga along with Jan Knaapen, Executive Director of Diphlu River Lodge and Jungle Travels India. The only new life mammal (for me) we saw here were two groups of **smooth-coated otters**. However the sheer numbers of wildlife – swamp deer, hog deer, wild buffalo and rhino were stunning. In one open expanse we saw 37 individual rhinos. The biomass of large mammals alone must equal some of the more prolific African reserves. From Kaziranga one can imagine what at one time all of the Sub-Continents major river systems – not only the Brahmaputra as this small segment shows but also the Ganges and the Indus must have once been like. Great wildlife areas with immense concentrations of herbivores creating a large prey base for the water tolerant tiger. The bird life is also extraordinary and any serious birder planning to visit India needs to include Kaziranga on their itinerary.

It was also here that I saw my 9th tiger of the trip. She was nearby a water buffalo kill and we had a brief glimpse at a distance. This is evidently how most tourists to Kaziranga sees a tiger. Vishal believes that the visitors most likely to see a tiger here are birders looking out from the various observation towers scattered around the Reserve. He feels that the tigers in Kaziranga are so use to human contact and potential harassment, they are shy and more elusive than elsewhere in India. In any case Kaziranga is reported to have the largest, best-protected and growing population of tigers in India. Vishal has his own theory that these are tigers that have learned to be as invisible or cryptic around people and they therefore survive. There are known population of leopards in Africa that have survived in heavily populated areas using similar strategies.

The next morning we drove to the Hoolock Gibbon Sanctuary located east of the Reserve. The Sanctuary is the only area in India that protects 6 species of primates. Here again, it was a cold wet morning and animal activity was low. However I was shown a

male/female pair of **hoolock gibbons**, one lone male-**capped langur** (both life mammals) as well as one **Malayan giant squirrel** (a species I had first seen previously in Java) and a Indian muntjac. One of our Lodge based naturalist who was walking behind us heard a troop of pig-tailed macaques. The Gibbon Sanctuary has to be a must see for any serious eco-tourist to Assam, not only for its primates but also for the good forest birding.

Vishal and I then were driven to the Brahmaputra where we did a quick site inspection of the Jungle Travels India river cruise boat. For the eco-tourist with more time to travel, Jungle Travels India (www.jungletravelsindia.com) has an incredible natural and cultural history cruise along the Brahmaputra, visiting four different Assam Reserves. We both inspected the boat, which appeared to exceed in size and cabin quality what I had previously read about it. However the highlight for me was, after leaving the boat, seeing at least two **Ganges River dolphins** breaching downstream.

After dropping off Vishal for his return flight to Delhi I had another game drive in the western section of Kaziranga. I saw more hog & swamp deer, water buffalo, one small herd of Asian elephants in grass “as high as an elephant's eye”, another group of otters and lots of rhinos as well. It was then that it occurred to me that the one-horned Asian rhino in the sub-continent must be the ecologically equivalent of the African hippo. That being a large grazing animal, found near water that is normally impervious to predation whose numbers can be at a high density. I was scheduled to fly back to Delhi from Guwahati located west of Kaziranga. This was a flight I made on time but due to road construction and hundreds of trucks on the road it was my most adventurous drive in India.

My post trip impressions of India? With a population of what is now believed to be 1.2 billion people the country still has an incredible amount of wildlife. That combined with the cultural attractions of a 2,000 + years of history make it a World Class travel destination. The accommodations & tour guiding are the equal of any eco-tourist location I have experienced in East & Southern Africa, South East Asian and the Amazon. The Madhya Pradesh Tiger Circuit in particular has the potential of being an important international natural history destination and it offers the best chance anywhere of seeing a tiger in the wild, one of the world's most charismatic and rarest species of great cats. India has been given a great deal of criticism for its loss of wildlife numbers since Independence. However, in spite of immense human population pressure, it has lost only one species of large mammal or primate since 1948 , that being the cheetah. There is something positive to be said for that!

Kind Regards,

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