



# NATIONAL VETERINARY LABORATORY

P.O. Box 239, 1Tice Road

Franklin Lakes, NJ 07417

877-NVL-LABS (877-685-5227)

[www.natvetlab.com](http://www.natvetlab.com)

## NEWSLETTER

### India/Nepal and Kathmandu (“Cat Man Do”)<sup>©</sup>

Evelyn E. Zuckerman, Editor

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#### In This Issue:

Once again we find ourselves on a transatlantic flight home from a wonderful safari through India and Nepal. This trip was stimulated by our 2013 and 2014 safaris to East Africa and South Africa where we observed the magnificent lions, leopards and cheetahs in their natural habitats. On this trip, we spent 17 days touring cultural sites of these intriguing nations and photographing their wildlife. When traveling in these very devout countries we experienced great warmth and friendship from their people. Our main interest was to learn about, and photograph, Bengal tigers in their natural habits; tiger preserve areas, in Nepal and India. In this Fall, 2016 NVL Newsletter, we will review the animals of these beautiful countries with emphasis on infectious diseases.

#### Nepal:

Our trip began in New Delhi with the ever present traffic jams, crowds and historic palaces. We then flew to Nepal’s capital Kathmandu where we witnessed ceremonial cremations along the Bagmati River, a tributary to the holy Ganges



River. Everywhere we went we were confronted



with cattle, and packs of stray dogs in the streets. Our next day was filled with a flight to see the tallest mountain on earth, Mount Everest, nestled in the Himalayan mountain range. Mount Everest

rises above a blanket of clouds and has taken many lives of mountain climbers over the years.



A visit to a Kopan Monastery and an area with centuries-old temples, damaged by the 7.8 earthquake that hit this area 1 1/2 years ago killing 100,000 people, rounded out our cultural tour. On to Chitwan National Park.

#### Chitwan National Park, Nepal:

Chitwan National Park is a UNESCO World Heritage site, and it’s Rapti river is fed by the Himalayan snow melt. The park is noted for conservation of the rare and endangered greater one-horned rhinoceros which is the largest of the rhino species. The species was



very close to extinction in the early 20th century and by 1975 there were only 600 surviving in the wild. Rigorous conservation efforts increased their numbers to 3,555 by 2015. They are identified by a single black horn, about 8-25 inches long, and a grey-brown hide with skin folds, which give it an armor-plated appearance. Within 10 minutes of the beginning of our elephant safari, we encountered a young rhino, in the tall grass, only 500 yards from our safari lodge. The Bengal tiger population in Chitwan National

Park is slowly increasing but at present there are only about 130 in the park and we did not see any. Back to India.

#### India:

Our preconceived notions of India were: a crowded country with great disparity of wealth, a reverence for animals, and a very educated population. After spending 15 days there, all of these notions were confirmed. The streets were dirty, garbage strewn, crowded, stray dogs, pigs, monkeys, and sacred cattle were everywhere and yet life seemed to continue in spite of it all.



Human rabies deaths are the highest in the world with 21,000 occurring yearly in India due to ubiquitous unvaccinated stray dogs. Most of the Dogs were thin and more than half appeared sick



with skin and eye disease. Interestingly, although we saw thousands of dogs, cattle, pigs and goats

in the streets we only saw 3 domestic cats, 2 of which appeared to be owned. India doesn't even rank in the top 10 countries for pet cat populations. One of the most disturbing observations, from a health standpoint, was the ever present piles of garbage everywhere, next to homes and businesses. It appears there is very little garbage pick-up and we saw people just dumping their garbage in the streets and streams. Dogs, cattle, goats and birds were seen eating the garbage but, unbelievably, we did not see any rats in the piles of garbage. Even though we did not see rats there are outbreaks of plague, carried by rat fleas, in India. Fleas must be rampant in India which can transmit tapeworm, plague, *Bartonella*, and many other pathogens. In a review of the *Bartonella* literature from the National Library of Medicine there are no publications on the prevalence of *Bartonella* in any Indian animals. Our assumption is that many of the stray dogs and pet cats are infected carriers of *Bartonella*. There are a few reported cases of bartonellosis in humans.

We did spot several people with deformities due to leprosy on the streets. India has the most cases, more than 50%, of leprosy in the world, despite effective antibiotic therapy.



Of course there are wonderful sites in India and one must see the Taj Mahal and temples to really experience the Indian civilization.



### Big Cats of India:

It is remarkable that there are still big cats surviving in India today despite the enormous population pressures. Presently there are 5 species of big cats in India: tigers, leopards, Asiatic lions, snow leopards, and clouded leopards. The world tiger census is presently 3,890 with 2,226 found in India. Tiger litters are 2-3 cubs every 2 years but half of the cubs die within the first 2 years. To their great credit, the Indian government enacted the Wildlife Protection Act of 1972 (Project Tiger). This act allowed governmental agencies to take significant measures to ensure that the Bengal tiger remained protected. Since 2006 there has been a dramatic 60% increase in the Indian tiger population. The creation of India's tiger reserves in the 1970s helped to stabilize numbers, but poaching to meet a growing demand from Asia in recent years has

once again put the Bengal tiger at risk. The mangroves of the Sundarbans—shared between Bangladesh and India—are the only mangrove forests where tigers are found. The Sundarbans are increasingly threatened by sea level rise as a result of climate change. Tigers are the largest member of the cat family and the scientific name of Bengal tigers is *Panthera tigris tigris*. Their average weight is; females- 300 and males 500 pounds, adults are 10 feet in length and live 8-10 years. After a century of constant decline, the number of wild tigers is on the rise! According to the most recent data, 3,890 tigers now exist in the wild, up from an estimated 3,200 in 2010.<sup>1-4</sup>

### Bandhavgarh National Park: Tigers

This park has the largest population of Bengal Tigers in India. It is managed very strictly with every vehicle checked carefully to prevent poachers from entering the park and a limited number of tourists are admitted. The park is patrolled on foot by unarmed rangers. Expert licensed naturalists guide each elephant or vehicle safari in the park. We had only 5 safaris planned and did not see a tiger on our first two. On our third late afternoon safari, our naturalists heard alarm calls of monkeys and spotted deer (below) and drove in the direction where they thought the tiger would appear.



Sure enough, the tiger emerged from deep in the woods and walked slowly toward our vehicle allowing, we euphoric tourists, to take wonderful pictures of a young female tiger.

### Leopards:



There are an estimated 12-14,000 leopards in India. We did not spot any leopards on our safari but our naturalist, Shivendra Singh Devda, had found and photographed 2 young leopards just days before. His picture is so outstanding that I asked for, and was granted, permission to reproduce it here. Indian and African leopards are indistinguishable to the average person.



Reproduced with permission: Shivendra Singh Devda, Madhya Pradesh, India, 2016<sup>®</sup>

### Threats to Tiger Survival:

**People:** Before the international ban on tiger trade in 1993, tiger populations were being decimated by poaching. Despite the ban in the past few decades, the illegal demand for tigers as decorative items and folk cures has increased dramatically, causing a new poaching crisis. Poaching driven by the international illegal wildlife trade is the largest immediate threat to the remaining tiger population. Tigers suffer from a loss of natural prey like deer and antelopes. Prey numbers decrease due to poaching for meat and trade, and habitat degradation because of wood collection for cooking. Tigers continue to lose their prey animals and habitat causing them into increasing conflict with humans as they attack domestic animals and rarely people. In retaliation, they are often killed by angry villagers. The world must come together to preserve the majestic tigers.<sup>1-5</sup>

**Pathogens:** Tigers, like all other cats, are susceptible to numerous pathogens. The major threat appears to be the canine distemper virus (CDV) which infects large cats and causes fatal neurologic disease. Stray dogs are a major threat as they are unvaccinated and roam in the tiger preserves from nearby villages. In fact, tigers will predate on stray dogs when the opportunity presents. Awareness of CDV is a critical component of a successful tiger conservation management policy. FeLV, FIV and *Bartonella* do not appear to be major threats to tiger survival as none of the 24 tigers we tested were positive for these pathogens.

### Ways to Help the Tiger:

1. <http://www.earthfriends.com/bengal-tiger/Conservation Programs for the Bengal Tiger>
2. <http://www.indiantiger.org/wildlife-organizations/bandhavgarh-tiger-trust.html>
3. World Wildlife Fund: [www.worldwildlife.org](http://www.worldwildlife.org)
4. Wildlife Conservation Society: [www.wcs.org](http://www.wcs.org)
5. Chundawat, R.S., Khan, J.A. & Mallon, D.P. 2011. *Panthera tigris ssp. tigris*. The IUCN Red List of Threatened Species 2011: e.T136899A4348945. [http://dx.doi.org/10.2305/IUCN.UK.2011-2\\_RLTS.T136899A4348945.en](http://dx.doi.org/10.2305/IUCN.UK.2011-2_RLTS.T136899A4348945.en)

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