

## FAIR CONCERN



### Health and Management of Captive Elephants in Sonpur

N.V.K. Ashraf and Kadambari Mainkar



Wildlife Trust of India (WTI), is a non-profit conservation organisation, committed to help conserve nature, especially endangered species and threatened habitats, in partnership with communities and governments. Its principal concerns are crisis management and the provision of quick, efficient aid to those areas that require it the most. In the longer term it hopes to achieve, through proactive reforms, an atmosphere conducive to conserving India's wildlife and its habitat.

Suggested Citation: Ashraf and Mainkar (2004). 'Fair Concern' : Health and Management of Captive Elephants in Sonpur. Wildlife Trust of India, New Delhi.

Keywords: Welfare, Wild Rescue, Asian elephant, Captive elephants, Health camps, Sonpur mela, Micro-chips.

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This report was prepared in December 2004

First published in this form in October, 2007

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NVK Ashraf and Kadambari Mainkar

December 2004

An Occasional Report of a Captive Wildlife Welfare division activity conducted by the  
Wildlife Trust of India



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## **PREFACE**

Sonpur is the largest cattle fair of Asia. It is also the largest legal market for elephants in India. Clandestinely, it is a venue for illegal trade, though the sale of elephants has declined precipitously over the years (99 elephants in 2001 to 67 in 2004). It is remarkable that for almost its entire recorded history, no attention has been given to providing health facilities at this, the largest traditional congregation of elephants in the country. Set up for commerce, welfare always took a back seat and it was only now hundreds of years after the practice first originated, that a health camp has been set up at Sonpur. As is seen in this report, an analytical one involving four years of observation, welfare still continues to be a concern. Though the health of the elephants is becoming more of a concern to the owners, their welfare is still not a priority. In this land where the elephant is still holy and where welfare and respect of all life is enshrined in the ethics of the people, its treatment of elephants still beggars belief. It is by chipping away assiduously at the tradition of negligence (malevolent cruelty is still not a majority Indian practice) that welfare of elephants in captivity can be realised. For an animal as social and intelligent as an elephant, any captivity can be soul destroying. However, with subtle changes in husbandry and care, this can be made a little more tolerable.

The efforts of the WTI and IFAW teams at Sonpur aim to do exactly this. They intend to be where the action is, to learn more by observing and to act, while there, by providing care to the individuals who come to Sonpur. Also, the data collected and analysed would allow even more sweeping policy changes that could benefit captive elephants, not only at Sonpur, but also across the Indian landscape.

Vivek Menon  
Executive Director,  
Wildlife Trust of India.

## **ACKNOWLEDGEMENTS**

The Captive Elephant Care project of Wildlife Trust of India (WTI) has been run in partnership with the International Fund for Animal Welfare (IFAW) for the last four years. We thank IFAW for their continued support to this project.

The authors are indebted to BA Khan, the then Chief Wildlife Warden of Bihar for his support and cooperation to this project and for granting all the necessary permissions and facilitating with accommodation and other logistical support during the health camps.

We would also like to thank the "haathiwallas" who have cooperated with us for each of the health camps conducted at Sonpur.

We express our gratitude to the eastern railways for providing us accommodation at the railway guest house each year at Sonpur itself. Last, but not the least, we would also like to thank our colleagues Vidya Deshpande for assisting in the first health camp at Sonpur in November 2001 and also facilitating in securing accommodation at Sonpur for our team and our colleague Dr RK. Singh for assisting in the Sonpur mela in November 2003.

The investigation team has primarily comprised of two members from WTI (Dr NVK Ashraf, Deputy Director and Kadambari Mainkar, Programme Officer, Wild Rescue) except for the health camp conducted in November 2002, when veterinarians Dr Khyne U Mar from the Zoological Society of London and Dr Sunil Chawla from the NGO, Help in Suffering from Jaipur joined the team.

## **EXECUTIVE SUMMARY**

As part of its Captive Elephant Care project, the Wildlife Trust of India (WTI) has, since 2001, been conducting special health camps for elephants, which congregate at Asia's largest cattle fair in Sonpur, Bihar. The fourth such health camp was conducted from 22<sup>nd</sup> to 28<sup>th</sup> November in 2004.

Over the years, the number of elephants at the Sonpur Mela has been declining. At the first health camp in 2001, WTI veterinarians had examined 92 elephants; at the second camp in 2002, there were 77 elephants; at the third camp, there were 56 elephants but the number increased marginally to 67 at the fourth camp. All the four camps were conducted in partnership with the International Fund for Animal Welfare (IFAW) and with the cooperation and support of the Department of Environment and Forests, Govt. of Bihar. All the four camps have been by and large the same, except that in 2004 two new activities were initiated at the camp, namely micro-chipping of the elephants and distribution of reflectors. Reflectors were distributed to 55 elephants and the WTI veterinarian assisted the Forest Department in micro-chipping 28 elephants.

At each of the health camps, every animal was assessed for body condition and age. Individuals were examined for the presence of wounds and abscesses and localized and/or generalized oedema. Foot pads of all animals were examined for evidences of fissures and wearing. Toenails in both fore and hind limbs were also examined for crack marks. The mucous membrane of all individuals were inspected as were eyes for any evidence of blindness and/or corneal opacity. A standard format was followed for collecting all clinical and non-clinical data on each animal.



The height of each of the elephants was also measured using a bamboo pole and a measuring tape.

The findings of this report are that a majority of the animals are sourced from Assam and neighbouring Arunachal Pradesh and that there is a possibility that calves are being added on to the captive stock through wild capture. Elephants are generally in good health but welfare concerns at the fair continue to persist.

This publication is a combined report of all the four health camps that have been conducted by WTI in Sonpur, since 2001. The report recommends that the Bihar Forest Department should enforce the following:

**Better crowd control in the area where the elephants are exhibited.** Vendors should be confined to one side of the grounds and the elephants on the other. The forest department with the help of the local police should enforce the landlords who own different patches of the mela grounds to do the same.

**Welfare of elephants:** Ideally baby elephants should be let loose in specially erected paddocks. If this is impractical, baby elephants should be shackled loosely with tying of one limb only. All elephants must be shackled loosely at night to allow them to sleep and rest.

## **1. INTRODUCTION**

### **1.1 Wild Rescue Programme**

The Wild Rescue program is conceptualized as a rehabilitation and veterinary skills unit of the Wildlife Trust of India. The goal of the programme is to rescue, rehabilitate and release (including reintroduce) wild animals in distress, promote humane methods to optimise wildlife welfare and provide health care and other veterinary services to manage and conserve wildlife. The aims of the programme are:

- To rescue temporarily disadvantaged wild animals, which have been confiscated, injured, maimed, orphaned, sick and or, stray.
- To optimize the conservation value and re-introduction potential of the rescued wild animals, without endangering their behavioural, conservation and health status during the period of confinement, or in anyway diminish its re-introduction potential.
- To release back to the wild, following prescribed international guidelines on re-introduction and monitoring.
- To promote ethical and humane methods of handling, care and treatment of wild animals.
- To provide veterinary service to both captive and free-living wildlife in the management of viable populations for long-term conservation

It is envisioned to meet these goals and aims through the following the following three thematic divisions:

- a) Emergency Relief and Rehabilitation (ERR)
- b) Captive Wildlife Welfare (CWW)
- c) Wildlife Veterinary Service (WVS)

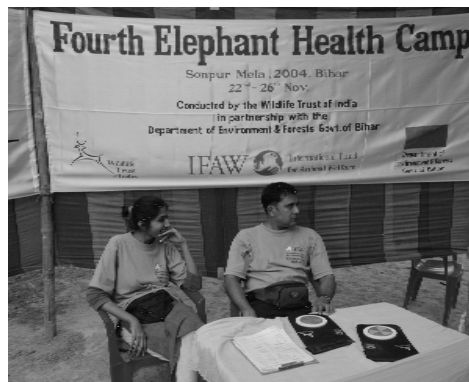
## **1.2 Captive Elephant Care Project**

Following are the aims of the Captive Elephant Care Project under the thematic division Captive Wildlife Welfare (CWW), which was initiated in the year 2001.

- To address the health and welfare needs of the captive elephant population of India.
- To address policy and welfare standards whenever necessary to see that it is consistent with the welfare needs of captive elephants and the conservation needs of its wild cousins.
- To build capacity amongst veterinarians, keepers, captive elephant owners on welfare standards.
- To develop and maintain a database on such captive population
- To build, operate and run lifetime care centres.

## **1.3 Health camps**

Veterinary care and elephant husbandry are integral parts of the Captive Elephant Care project. The Wild Rescue programme has, therefore, been conducting special health camps for the captive elephant populations in Bihar and Assam since 2001. Through these special health camps veterinary care is provided to captive elephants and advice on scientific husbandry and management practices is given to the mahouts and elephant owners. Valuable morphometric and, clinical data on captive elephants are also collected, for a national database on captive elephants.



**Fig.1:** The fourth health camp for elephants in 2004

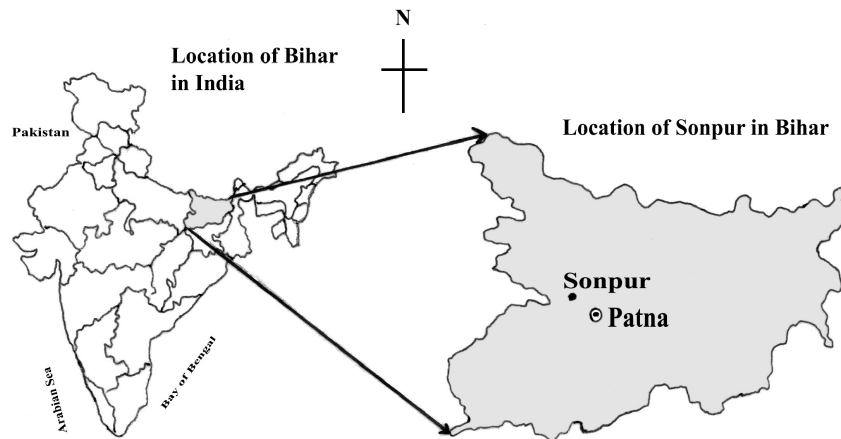
## **2. PROJECT AREA**

Sonpur Mela has its origins in ancient times. This is where Emperor Chandragupta Maurya used to buy elephants and horses across the river Ganga from Patliputra (Patna of ancient times). Now Sonpur mela is one of the world's largest animal fairs. It takes place annually, 35 kilometres from Patna, the capital city of Bihar. Sonpur mela is held for 21 days in the month of November at the confluence of the rivers Ganga and Gandak. It even has a legendary tale attached to it. Many believe that a struggle took place at this spot in Sonpur between the Gandharva ruler, Huhu and Indraya muni; ultimately Lord Vishnu helping the weaker latter. That is why there is a vast gathering of devotees at the confluence of the two holy rivers for the blessed dip at the adjacent "Harihar Nath temple" on the full moon day (Kartik Purnima). Many believe that Lord Ram established the temple on his way to Lanka.



**Fig.2:** A statuette at Sonpur

Animals brought here for sale include various breeds of dogs, camels, buffaloes, donkeys, ponies and monkeys. Many varieties of birds, poultry and fish are also available. It is one of the few places in the world where elephants are sold in large numbers. This mela is like a feast for the local people of Bihar. Temporary shops selling household goods, local and branded clothing and commercial merchandise are also set up. At the Sonpur mela one can buy almost anything.



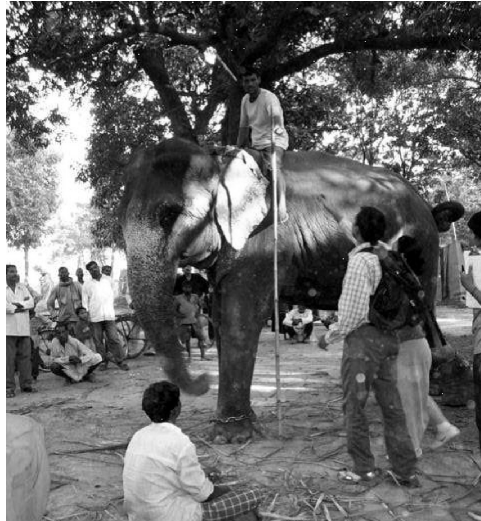
**Fig. 3:** Location of Sonpur in Bihar

The concept of conducting a health camp for the captive elephants of Sonpur was actually initiated by SS Bist, the then Director of Project Elephant, Govt of India, MoEF. This idea was further developed by WTI and today WTI has conducted health camps for elephants not only in Bihar, but also in the states of Assam, Kerala, Tamil Nadu and Rajasthan.

### **3. METHODS**

#### **3.1 Morphometry**

At each of the health camps, information was collected from the owners on the source of the animal (whether captive born, purchased or wild caught), origin of the animal (Assam, Arunachal, Kerala, Bihar etc.) and the place the animal is currently held captive. The origin of the animal gives an insight into which state contributes most to the captive elephant stock. The idea behind enquiring about the source of the elephant was really to determine what percentage of animals are caught from the wild. However, most owners invariably say that the elephant was purchased or gifted. The mode of transportation of the elephant to the Mela and the distance travelled by the elephant were also obtained from them.



**Fig.4:** Measuring the shoulder height of elephants at the camp

Individual identification marks on an elephant were also observed and noted down, primarily to track elephants which are brought repeatedly to each mela. The characteristic features looked out for are usually the shape of the forehead, notches on the ears, broken or cracked tusks, single tusks, convergent or divergent tusks, chronic wounds on a particular side etc.

The shoulder height of all animals was marked on a 10 ft long bamboo pole which was then measured using a measuring tape (Figure. 4). The approximate age of every animal, was also noted down. Wherever possible ownership certificates if available were also looked at to verify the information provided by the owner. Apart from noting down the sex of every animal, males were also identified as makhnas or tuskers.

### **3.2 Clinical data**

Externally, every animal was assessed for body condition. This was done based on Wemmer et.al 2006.

- Good
- Fair
- Poor

The elephants were graded upon examining the following on the elephants' body:

1. Temporal depression
2. Depression in the flank area
3. Lumbar shelf depression
4. Prominent ribs
5. Prominent and protruding pelvic girdle

Individuals were examined for the presence of wounds and abscesses and localised and/or generalised oedema. Feet of all animals were examined for evidence of fissures, pododermatitis and the extent of erosion of the footpads. Toenails in both fore and hind limbs were also inspected for crack marks. Buccal mucous membrane was examined for anaemia and eyes for any evidence of blindness and/or corneal opacity. Mahouts and owners were questioned about the diseases encountered in their elephants in the past.

A standard format was followed for collecting clinical and non-clinical data about every animal (Appendix 1). Animals were treated for wounds, abscesses, oedema, corneal opacity, worms, anaemia etc.

### **3.3 Other activities**

A stall was set up with banners in Hindi and English announcing the health camp to the Mela organizers and elephant owners. Leaflets were circulated highlighting WTI's work for better captive elephant management and welfare.

In November 2004, two new activities were initiated. Emergency relief safeguards were distributed to 55 elephants in order to prevent elephants getting injured in road accidents at night.

### 3.3.1 Micro-chipping

The proposal to implant microchips in all elephants is a Project Elephant initiative taken up in the year 2002. This initiative has been implemented state wise and the Govt. of Bihar took up this task during the Sonpur Mela in November 2004. The Department of Environment and Forests issued notices to elephant owners to declare their elephants in order to issue them valid ownership certificates and implant micro chips in the elephants. The WTI veterinarian assisted the forest department officials in implanting microchips in 28 of the elephants and trained the Patna Zoo vet in the procedure.

November 2004 was also the first time IFAW sent a photographer and a film crew to cover the health camp conducted by WTI at the Mela.

## 4. RESULTS

### 4.1 Disease conditions

Over the last four years, on an average, only 2-5 % of the elephants at the Sonpur Mela were found to be in poor body condition. The owners seem to prefer bringing only healthy elephants to the fair at Sonpur.

The various disease conditions encountered by them during this four year period are listed in Table 1. On an average, 5% of the



**Fig.5:** Checking for prevalence of corneal opacity in elephants



elephants had blindness in one or both eyes. This is probably due to corneal opacity, which develops at a later stage in an elephant's life span due to lack of adequate green fodder, leading to vitamin A deficiency. Corneal opacity has been frequently reported in captive Asian and African elephants (McCullagh KG, Gresham GA. 1969; Jayathangaraj et al 2000; Krishnamoorthy and Wemmer, 2005). It proved to be one of the single most common medical conditions among elephants brought to Sonpur with 17-27% prevalence (Fig. 5). These figures are comparable to the findings of a similar study in Sri Lanka. De Silva et al (1999) reported corneal defects in nearly 26% of 140 captive elephants they examined. They reported evidence of keratitis, corneal ulcers, corneal opacities, and foreign bodies in the eyes. Isolates of bacterial and fungal origin were obtained from the corneal swabs collected by De Silva et al (1999). Long term application of broad spectrum antibacterial and antifungal eye drops could be the line of treatment for this condition especially when detected earlier and opacity has not set in.

An important indicator of husbandry practices followed by an elephant owner and his mahout are the presence of toe nail cracks and over grown toenails in the elephant. Out of ignorance, elephant owners and mahouts



**Fig.6** : Oedema on forelimb



**Fig.7:** Abscesses being drained by WTI veterinarian

do not trim or file the elephants' nails in time and the elephant may crack the toenail if it hits something. On an average one fourth of the elephants examined at Sonpur fair had toenail cracks. Fowler (2001) considered that inadequate exercise and improper substrate as the main reasons for the formation of toenail cracks. (Fig. 8).



**Fig. 8:** Cracked toenails

Elephants are prone to septic wounds and this is common to almost all elephants. Unlike in small animals, any laceration of the elephant's skin gets infected quickly leading to the formation of septic wounds.

The most common skin problem encountered in elephants that come to the Sonpur Mela is cutaneous filariasis/miasis. This condition is usually found in elephants coming from humid areas like the north east. In the 2002 Sonpur Mela almost 50% of the elephants were brought from Assam and there was a high prevalence of cutaneous filariasis (17%) amongst them

#### **4.2 Incidence of musth**

Though elephants in musth are not allowed to participate in the Mela, some animals do come into musth soon after arrival. The Bihar Forest Department is alerted whenever emergencies arise due to unruly elephants. In 2001, one tusker dislocated its left tusk when he came into musth during transit. In 2002, two elephants at the Mela came into musth.

**Table 1:** Prevalence of disease conditions in 2001, 2002, 2003 and 2004

No	Condition	2001 (n=92)	2002 (n=77)	2003 (n=56)	2004 (n=67)
		%	%	%	%
1	Poor body condition	2	3	5	5
2	Blindness - both eyes	4	6.5	5	3
3	Blindness - one eye	4	6.5	4	4
4	Corneal opacity - one/both eyes	17	25	27	26
6	Oedema (localized and generalized)	16	1	5	4
7	Skin abnormalities	8	17	7	4
8	Broken tusk	2	4	3	
9	Foot lesions (fissures and cracks)	16	9	14	60
10	Toe nail cracks	23	36	15	26
11	Wounds and abscesses	19	10	16	19
12	Bed sore wounds	11	9	7	
13	Capped elbows	2	1	4	
14	Anaemic (pale mucous membrane)	35	53	46	32

Also in 2002, one tusker came into musth while he was on his way to the Mela about five kilometers from the Mela grounds. He overturned a truck, killing a woman and injuring five children. The other elephant which came into musth was also a tusker. He was beginning to show signs of aggression, having crushed a plastic chair and was reaching for the tents. Both had to be tranquilized by the forest department staff to bring them under control. No incidence of musth or elephant in pre-musth condition was reported in the years 2003 and 2004.

#### 4.3 Deworming

All elephants were dewormed at the health camps. At the first health camp very few elephant owners had any knowledge of deworming their

elephants and had not done so before. Over the four year period, the elephant owners have become increasingly aware about deworming their elephants against helminthes. Perhaps, this could be due to the four consecutive health camps held at Sonpur where dewormers were distributed to all elephant owners. Fenbendazole (Panacur: Hoechst pharma) is the antihelmitic used for deworming all the elephants. Depending on the size of the animal, the dose varied from 3,000 mg to 14,000 mg per animal.

It was observed in 2004 at the fourth consecutive camp, that the owners were definitely more aware, of the health needs of the elephants, and were actually requesting the WTI team to deworm their elephants and for prescriptions to continue doing the same in the future (Figure 9).



**Fig. 9:** Deworming dose being administered to elephant at Sonpur

## **5. DISCUSSION**

### **5.1 Source, origin and composition of elephants arriving at the Sonpur Mela**

Elephants usually arrive about three days before 'Kartick Purnima' which is the day of the sacred bath at the confluence of the rivers Ganga and Gandak at Sonpur. There is a significant decline in the number of elephants traded every year. Only 56 elephants came to the Mela in 2003 as compared to 77 in 2002 and 92 in 2001. The reason for the decline in the number of elephants in 2003 was attributed to the restrictions imposed by the Forest Department on the trading of elephants without valid ownership certificates. In 2004, however, the total number of elephants increased marginally by 19% which is primarily due to the incentive of obtaining valid ownership certificates and microchips.

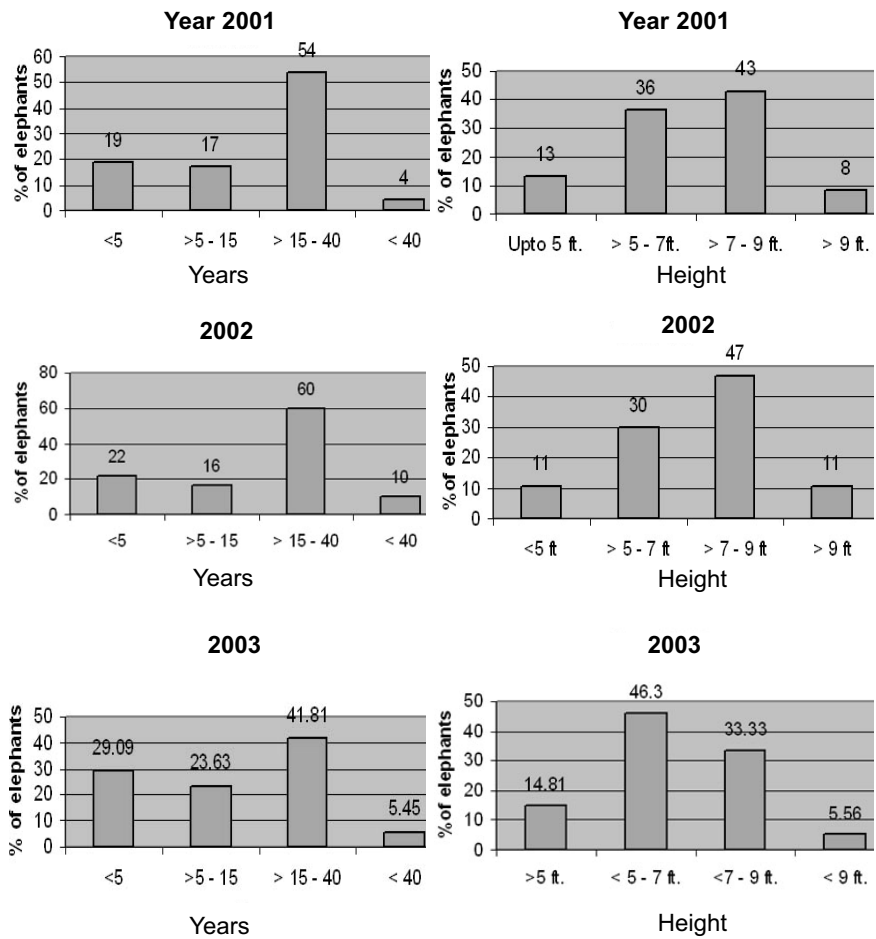
Each year elephants come from the states of Bihar, Uttar Pradesh, Assam, Kerala and Tamil Nadu. However, a majority of the elephants come from within Bihar itself. In 2004, 84% of the elephants were from Bihar and the rest from Uttar Pradesh. Most elephants come from district Deoria in UP, and from the districts of Saran, Gopalganj, Vaishali and Chhapra in Bihar. In all the health camps conducted at Sonpur (except for 2001, for which data is not available) a majority of the elephants were found to be originating

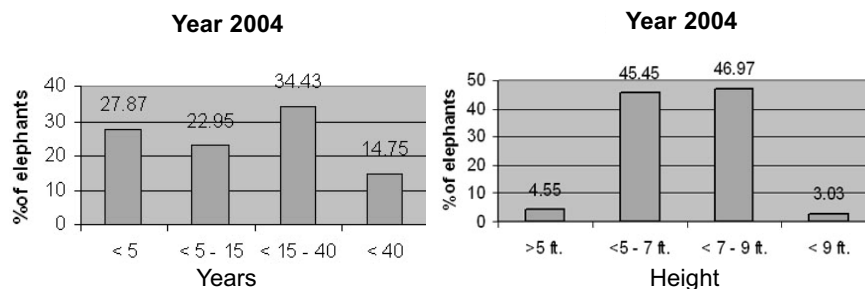


**Fig.10:** Elephant calf tethered with shackles on legs

from Assam. In 2002, 50% of the elephants were of Assamese origin, in 2003, 95% of the elephants were of Assamese origin and in 2004, 91% of the animals were of Assamese origin. This is based on mahaut interviews. However, experience in the north-east indicate that a large percentage of these could be from Arunachal Pradesh as well.

**Fig. 11:** Age class and height of elephants





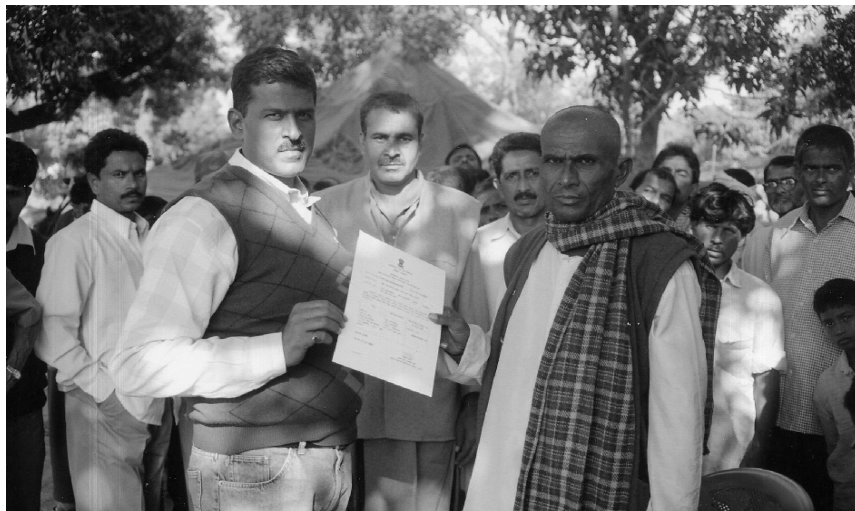
Over the four years that WTI and IFAW have been conducting health camps at Sonpur, it is clearly obvious from the above graphs that the percentage of animals under the age of 5 years has risen from 19% in 2001 to 22% in 2002, to 27% in 2003 and 29% in 2004. This clearly indicates that there is a ready source of younger elephant calves being brought into the existing stock of captive elephants. Whether the source is calves being born in captivity or whether the source is capture from the wild is a matter of debate. However, we do know that captive born elephants are a rarity. As far as adult and sub adults are concerned, a majority of the elephants that are brought to the Sonpur Mela fall in the age class of 15-40 years. The sex ratios for the last four years are shown in Table 2:

Year	Sex ratio (M:F)	Tuskers/Maknas
2001	1:1 (n=92)	42 tuskers and 4 maknas
2002	1:1 (n=77)	25 tusker and 14 maknas
2003	1:1(n=56)	22 tuskers and 6 maknas
2004	2:1(n=55)	36 tuskers and 2 maknas

**Table 2:** Sex ratio of elephants from 2001 to 2004

## **5.2 Individual Identification of Elephants**

As discussed in the methods, each elephant was examined for any distinguishing individual identification marks. This data was analysed for the health camps held in the years 2003 and 2004. In 2003, the WTI team had examined 56 elephants of which distinguishing individual identification marks for 18 elephants were recorded. In 2004, distinguishing individual identification for 32 of the 67 elephants were recorded. Data comparison revealed no overlaps between the elephants that assembled at the mela during these two years. However, elephant owners claim that 29% of the elephants at the 2003 Sonpur mela had also come for the mela in 2002 and 45% of the elephants at the 2004 Sonpur Mela had been brought in 2003. It is evident from this analysis that there is only one way of checking the discrepancy in the information provided by the owners, through the use of an individual identification system.

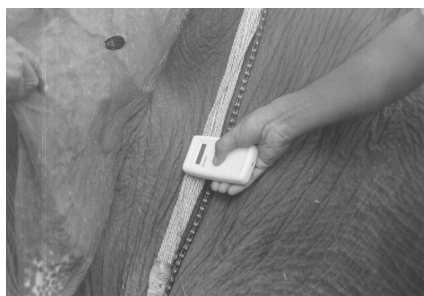


**Fig.12:** Ownership certificate being awarded to elephant owner by Assistant Conservator of Forests, Govt. of Bihar



### 5.3 Micro-chips: an important tool

Records were analysed to arrive at a conclusion as to the number of elephants that had come repeatedly for more than one of the melas. However, this exercise was inconclusive as there was no hard physical evidence to recognise an elephant coming to the Sonpur Mela more than once over the four years. The only parameters that could be used to analyze this were age and height of the animals as the names of the owners and the elephants would change every year. However, the differences in the age and height of each elephant over the years were



**Fig.13:** Reader used to read bar code



**Fig.14:** Chips, applicator and reader



**Fig. 15:** Microchip being implanted in an elephant's ear

too erratic to form any conclusion. We could only conclude based on personal observations over the four years that one elephant named Babulal, a male tusker came for all four melas. In 2001 he was owned by Munna Singh, in 2002 by Jeetendra Singh and in 2003 and 2004 he was owned by Vishwanath Rai. This shows that individual identification is difficult. While more detailed record keeping is possible using identification methods used in the wild, this is time consuming. Microchipping is recommended by Project Elephant and is a fool-proof method. This clearly indicates an urgent need for micro chipping all elephants in captivity in order to keep track of any illegal sale, purchase and movement of captive elephants across the country as well as any addition to the existing stock.

## **6. RECOMMENDATIONS**

Many of the elephant owners were aware of wounds or injuries that their elephant was suffering from and made it a point to bring it to the notice of WTI and seek advice and treatment. However, there is still no sign of any interest in the welfare of the animals, which the following observations bear testimony to

- a) The elephants are harassed by Mela crowds.
- b) Elephants are still tied with four legs outstretched, for the entire duration of the mela, even at night (not sparing even calves). (The WTI team personally went to the Mela site after 10 pm to observe whether the ropes used to tie the elephants were loosened at all to allow them to lie down or relax). It was seen that this was not followed.

Each year, suggestions are made by WTI to the elephant owners regarding the health, management and physical restraint of their elephants at the Mela and crowd control at the Mela site.

This report recommends that the Bihar Forest Department should enforce the following:

**Better crowd control in the area where elephants are exhibited:** Currently, vendors and elephant stalls are interspersed with no control over the crowd. Ideally, the vendors could be lined up on one side of the grounds and the elephants on the other. This should be strictly enforced by the Forest Department, the mela administration and the local police as the grounds are owned by different landlords who have their own vested interests.

**Veterinary team to control musth elephants:** A team headed by a qualified veterinarian should be deputed to take charge of any untoward incidents that may arise out of elephants running amok. Currently, only a veterinary attendant is deputed and the vet is called in from Patna Zoo only in case of an emergency. Since Patna is more than an hour's drive from Sonpur, the situation can get serious by the time he reaches the Sonpur fair grounds.

**Welfare of elephants:** Baby elephants should ideally be let loose in a paddock. If this is impractical, they should be loosely shackled with only one limb tied. All elephants must be loosely shackled at night to allow them to sleep and rest. When questioned about the method of tying elephants, all owners had the crowds to blame and indeed, crowd control at the mela should be given top priority. Even though the captive elephants brought to Sonpur are the main attraction of the mela, elephant owners bring the elephants for display to elephant owners from across India. It would be ideal to cordon off the area where the

elephants are tethered from the rest of the mela grounds. This has to be done in consultation with all concerned parties i.e. the elephant owners as well as the landlords who own the various pieces of land that are let out to. This arrangement then has to be strictly enforced by the forest department.

**Appendix 1 Elephants examined at Sonpur Mela 2001**

S. No.	Owner's name	Elephant name	Sex	Height (feet)
1	Munna Singh	Mohan	Male (T)	8' 6"
2		Bahadur	Male (ST)	7
3		Babu Lal	Male (T)	(30-35 yrs)
4		Moti Mala	Female	7
5		Babu Lal	Male (T)	7' 9"
6	Kanhaiya Singh	Phool Mala	Female	7' 6"
7		Kusum Mala	Female	7
8		Taravarti	Female	(30 yrs)
9		Lakhi Mala	Female	6' 2"
10	Brajinder Singh	Raju	Male (T)	5
11		Jung Bahadur	Male (T)	7' 2"
12		Bhanmati	Female	7
13		Rani	Female	4' 9"
14		Moti (b/o Bhanmati)	Male	4' 8"
15		Bijli Prasad	Male (ST)	9' 2"
16	Jaganath Singh	Lakshmi	Female	6' 3"
17	Chethi Singh	Chanchal	Male	5
18	Jwala Prasad	Moti Prasad	Male (T)	8
19	Nand Kishor Yadav	Moti	Male (CT)	8' 6"
20	Kishori Sethi	Moti	Male (T)	8
21		Moti	Male (T)	5' 5"
22		Kokila	Female (F)	5
23		Raju	Female	7' 9"
24	Ram Lakhan Verma	Sher Bahadur	Male (T)	9' 8"
25		Ganesh	Male (T)	5' 2"
26		Lakshmi	Female	5' 5"
27	Shiv Kumar Das	Ram Kali	Male (T)	8' 2"
28	Rajinder Pandey	Lakshmi	Female	(15 yrs)
29		Manohar	Male (T)	7' 9"
30	Samnarayan Singh	Hemraj	Male (T)	8

S. No.	Owner's name	Elephant name	Sex	Height (feet)
31	Shatrughan Mishra	Savitra	Female	5' 6"
32		Munni	Female	4' 9"
33		Bhola	Male (T)	4' 9"
34	Kedar singh	Raju	Female	6' 6"
35	Birender Kumar Singh	Bhola	Male (T)	8' 6"
36	Vijay Pratap Singh	Pakhili	Female (LM)	6' 6"
37		Suraj (c/o Pakhili)	Male	3' 6"
38	Munna Singh	Jai Prakash	Male (T)	8' 6"
39		Champa	Female	8' 6"
40		Moti	Male (M)	9' 6"
41		Parvati	Female	7
42	Vidyarti Tiwari	Vijay Bahadur	Male (M)	8' 3"
43	Jitender Kumar Mishra	Shanti	Female	8' 6"
44	Sanjay Singh	Raja babu	Male (T)	7' 6"
45	Uday Narayan Yadav	Chanchal Kumari	Female	6' 8"
46	Rameshwar Singh	Pinki	Female	5' 2"
47	Uditrai Mantri	Mala	Female	7' 2"
48	Ganesh Singh	Basanti	Female	6' 6"
49	Gurup Singh	Sher Bhahadur	Male (T)	8' 2"
50	Raja Singh	Sher Bhahadur	Male (T)	8' 6"
51	Rajendra Singh	Moti (white eye)	Male (T)	8' 6"
52		Jati Singh	Male (T)	(8 yrs)
53	Lal Babu Singh	Jai Bhahadur	Male (T)	6' 6"
54	Sandeep Singh	Bhola	Male (T)	6' 7"
55	Vidyavanshi Rai	Bijli	Male (T)	9' 5"
56	Mohi Choudhury	Dil Bahadur	Male (T)	5' 4"
57	Chedhi Singh	Chanchal	Female	5' 3"
58		Bunty	Female	7' 2"
59		Shanti	Female	7' 6"
60	Anirudh Singh	Sundari	Female	7' 2"

S. No.	Owner's name	Elephant name	Sex	Height
61	Mahendra Pratap Singh	Roopkali	Female	7' 9"
62	Birbansi Rai	Kokila	Female	6' 5"
63	Brijender Kumar	Kumar	Female	4' 10"
64		Jaimala	Female	6' 6"
65	Vishwanath Rai	Champa	Female	8' 9"
66	Brij Nandan Singh	Champa	Female	8' 9"
67	Durbeshna	Sena Babu	Male (T)	6
68	Baker Prasad	Chanchal	Female	7' 6"
69	Yakub Ali	Lakshmi	Female	7
70		Champa	Female	7' 2"
71	Ashok Kumar	Hem Prabha	Female	5' 9"
72		Kadimbini	Female	4' 6"
73	Janter Prasad	Bhola	Male (T)	9
74	Shatandai Singh	Bhola	Male (T)	7' 9"
75	Vaikuth Choudury	Lakhi	Female	5' 5"
76	Umakanth Tripathi	Lakhi	Female	(35-40 yrs)
77	Vijay Kishori	Rani	Female	5' 4"
78	Chandrika Rai	Lal Bahadur	Male (T)	8' 2"
79	Raj Kishor Bhagat	Jungsowlee	Female (LM)	7' 7"
80		Mohan	Male	4' 3"
81	Parmeshwar Dara Singh	Lal Bahadur	Male (T)	9' 3"
82	Kapil Dev Prasad	Bhola	Male (T)	9' 4"
83	Jung Bahadur Singh	Bijay	Male (T)	(30 yrs)
84	Abdurrab	Lal Babu	Male (M)	9' 2"
85	Raj Kumar Rai	Champa	Female	5' 9"
86	Vigyan Swaroop	Moti Prasad	Male (T)	7' 6"
87	Ranjit Jaiswal	Gulabi	Female	6' 2"
88	Ramekrial Bhagat	Phoolmati	Female	7' 7"
89	Ganesh Prarak Sheti	Mohan	Male (M)	5' 9"
90	Dinesh Prasad	Jeevmati	Female	7
91	Gunder Takur	Moti	Male (T)	9' 3"
92	Ramshankar Choudury	Motigaj	Male (T)	(40-50 yrs)

**Appendix 2: Elephants examined at Sonpur Mela 2002**

S. No.	Owner's name	Elephant name	Sex	Height (feet)
1	Jwala Prasad Singh	Rani Mukherji	Female	5'4"
2	Ram chandra Babu	Basanti	Female	7'
3	Ashok Rai	Basanti	Female	5'4"
4		Guru Prasad	Male (T)	7'5"
5	Vijay Singh	Lakshmi	Female	5'10"
6		Rang Mala	Female	7'4"
7	Rameshwar Singh	Chanchal	Female	4'8"
8	Badri Prasad	Rani	Female	6'9"
9	Sonemati	Kumari	Female	5'4"
10	Krishna Bihari	Manju	Female	7'2"
11	Rajendar Singh	Dhaunmati	Female	7'4"
12	Purshottam Tiwari	Chanchal	Female	8'3"
13		Rani	Female	7'5"
14	Sri Raja Singh	Lakshmi	Female	5'10"
15	Chandrika Singh	Lal Bahadur	Male (T)	8'5"
16	Rakesh Singh	Vijay Bahadur	Male (T)	
17	P.K.Pandey	Jatra Singh	Male (T)	7'8"
18	Lakshmi Rai	Beti	Female	4'3"
19		Yahashi	Female	5'8"
20	Lohi Chowdhary	Lakshmi	Female	8'2"
21	Lob Singh	Anar Kali	Female	8'1"
22	Raj Dev Singh	Moti	Male (T)	8'1"
23	Subhash Rai	Champa	Female	8'
24	Suresh Pathak	Bijli	Male (T)	9'2"
25		Chanchal Rani	Female	6'7"
26	Bindwasini Rai	Lukhi Rani	Female	6'9"
27	Raghunath Rai	Sundar Kali	Female	7'6"
28	Raj Narayan Singh	Manohar Prasad	Male (T)	8'
29	Shyam Narayan	Himraj	Male (T)	8'7"
30	Ganesh Singh	Basanti	Female	6'9"



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<b>S. No.</b>	<b>Owner's name</b>	<b>Elephant name</b>	<b>Sex</b>	<b>Height (feet)</b>
31	Dhruv Singh	Sher Bahadur	Male (T)	8'8"
32	Rajinder Singh	Jai Singh	Male	5'4"
33		Raja Dil Bahar	Male	5'
34		Raj Kumar	Male	6'7"
35	Mohammed Shahbudin	Pankhi	Male	4'8 "
36	Chandeshwari Prasad Singh	Shobha	Female	7'4"
37	Raj Kishore Chaurasia	Ramu	Male	5'3"
38		Shamu	Male	5'1"
39	Ganga Singh	Raja Babu	Male (T)	8'
40	Tulsi Ram Yadav	Chanchal	Female	8'
41	Rasai Rai	Bhola	Male (T)	7'9
42	Devendar Pandey	Lukhi Prasad	Male (T)	7'6"
43		Phool Mati	Female	7'8"
44	Shri Sath Narayan	Bhola	Male (T)	8'5"
45	Dr. Sanjay Kumar Singh	Lukhi Mala	Female	7'7
46		Jay Datta	Male (M)	5'11"
47			Male (T)	5'10"
48	Satyendra Kumar	Champa	Female	8'6"
49		Mohan	Male	4'7"
50	Dev Kumar	Chanchal	Female	7'7"
51	Bhupendra Kumar Singh	Raj	Male (T)	6 '4 "
52	Bhupendra Kumar Singh	Sri Devi	Female	5'
53	Nar Singh Rai	Mohan Prasad	Male (M)	4'
54	Punder Thakur	Mangal Prasad	Male (T)	8'10"
55		Moti Prasad	Male (T)	9'1"
56	Vinod Rai yadav	Nandu Kali	Female	7'9"
57	Abdul Rab	Bhola	Male (T)	9'1"
58	Jang Bahadur Singh	Babu-Kancha	Male (T)	8'
59	Ranjit Jaiswal	Chanchali	Female	7'3"
60	Jeetendra Singh	Babu Lal	Male (T)	7'5"

S. No.	Owner's name	Elephant name	Sex	Height (feet)
61	Raghuvndra Singh	Upsingh	Male	4'7
62	Bhuvaneshwar Pandey	Mohan	Male (M)	6'5"
63	Om Prakash Jaiswal	Sher Bahadur	Male (ST)	9'
64	Keshav Prasad Misra	Bahadur	Male (M)	7'3"
65	Shambu Singh	Moti	Male (M)	9'4"
66	Kishori Lal Jaiswal	Raju	Female	8'1"
67		Bijli	Male (T)	9'1
68	Chandar Kumar Singh	Vijay	Male (T)	9'3"
69	Parshuram Singh	Bijli	Male (T)	9'3
70	Ram Lakhan Varma	Sunder kali	Female	6'8"
71		Raj Kali	Female	8'4
72		Ganga Prasad	Male (M)	7'8
73		Bijli	Male (T)	
74	Manoj Kumar	Moti	Male	5'3
75	Shambhu Tiwari	Phoolmati	Female	8'
76	Rajendar Pandey	Shobha Mati	Female	7'5"
77	Jagan Prasad Singh	Kanchi	Female	7'6"

**Appendix 3: Elephants examined at Sonpur Mela 2003**

S. No.	Owner's name	Elephant name	Sex	Height (feet)
1	Satendra Kumar Singh	Aimon	Male (T)	7'2"
2	Jang Bahadur Singh	Kancha	Male (T)	8'
3	Babu Sewak Rai	Gulab Kali	Female (P)	7'1"
4	Sheik Abdur Rab	Lal Bahadur	Male (M)	8'10"
5	Pundev Thakur	Mangal Prasad	Male (T)	9'2"
6	Sasi Kumar Singh	Savitri	Female	6'2"
7	Annu Sukla	Guru Prasad	Male (T)	7'
8	Ramdev Babu	Gulabi	Female	8'
9	Lohi Choudhury	Phooljhari	Female	5'5"
10	Praveen Kumar	Harmuni	Female	7'5"
11	Viswanath Rai	Babulal	Male (T)	7'3"
12	Chandrama Singh	Rani Parvali	Female	5'9"
13	Rajkumar Rai	Champa	Female	6'2"
14	Shyam Nandan Singh	Mohan	Male (T)	6'2"
15	Kirt Narayan	Chanchal	Female	4'9"
16	Prakash Pandit	Jai Bahadur	Male (T)	8'6"
17	Dhirendra Kurmar Dhuru	Bulbuli	Female	5'1"
18	Harchander Singh	Gulab Kali	Female	7'6"
19	Jitendra Kumar Mishra	Santi	Female	7'8"
20	Keso Mishra	Radhika	Female	(25 years)
21	Kishor Lal Jaiswal	Bijli Prasad	Male (T)	9'
22		Chanchal	Female	7'
23		Myna	Female	5'1"
24		Rama	Female	6'10"
25		Rukmina	Female	6'4"
26	Krishna Bihari Varma	Manju	Female	6'6"
27		Jaimala	Female (L)	6'11"
28		Pokhiraj	Male	4'4"
39	Mohan Kumar	Jaimati	Female (L)	7'3"
30		Deoraj	Male	4"

S. No.	Owner's name	Elephant name	Sex	Height
31	Manoj Kumar Singh	Moti	Female	5'4"
32	Hit Narayan Singh	Chanchal	Female	4'4"
33	Rajaram Singh	Bijli Prasad	Male (T)	9'
34	Rameswar Singh	Lakshmi	Female	7'2"
35		Lal Bahadur	Female	7'8"
36	Ashok Rai	Raju	Male (T)	6'4"
37	Rajendra Singh	Cheni Mai	Female	6'10"
38	Jai Kumar Singh	Faguni	Female	(18 years)
39	Ram Iqbal Bhagat	Naragaj	Male (M)	7'1"
40	Ganesh Prasad Shah	Pawan Kali	Female (L)	9'2"
41		Ram Kali	Female	4'7"
42	Bijay Singh	Moti	Male (M)	5'4"
43	Surendar	Lal Bahadur	Male (T)	9'4"
44	Ajit Kumar Singh	Babulal	Male (T)	4'11"
45	Sailendra Kumar	Gaman Raja	Male (T)	6'9"
46	Bikrama Yadav	Bhola	Male (T)	8'8"
47	Munna Prasad	Tinku Singh	Male (P)	6'
48	Panchi Lal Rai	Mohan Prasad	Male (T)	4'8"
49	Chandeswari Prasad	Manik	Male (T)	5'3"
50	Sudama Prasad Singh	Dhanmati	Female	5'8"
51	Devsri Rai	Mohan	Male (M)	5'6"
52		Raju	Male (T)	6'4"
53	Baikunth Choudhury	Sri Devi	Female	5'6"
54	Munna Upadhyay	Dil Bahadur	Male (T)	6'4"
55	Shivbadan Yadav	Motilal	Male (T)	7'3"
56	Ashok Kumar	Ganesh	Male (T)	4'11"

## Appendix 4: Elephants examined at Sonpur Mela 2004

Sl No.	Owner Name	Elephant Name	Age (yrs)	Height	Sex	Chip No.
1	Krishna Chandra Prasad Singh	Chanda	2.5	4' 10"	F	00064DDD3D
2	Mukesh Kumar Dwivedi	Phool Dutt (T)	5	5' 7"	M	961001000004640
3	Mohd. Akhtar	Lakshmi	20-25	6' 9"	F	00064DOEFF1
4	Mohd. Azasul Haq	Bahadur (T)	7	5' 10"	M	
5	?	Phoolmati	30	7' 10"	F	
6	Vijay singh	Moti Prasad (T)	4.5	6'	M	00064DDDCD
7	Jwala Babu	Anarkali	40	7' 8"	F	
8	Vishwamitra	Basanti	8	5' 8"	F	
9	Vijay Kumar singh	Munnu	5	5' 9"	F	00064E6EOF
10	Subhash Rai	Lakshmi	35	7' 6"	F	
11	Krishna Seth	Jaimati	40	7' 11"	F	
12	Krishna Seth	Jai mala	30	7' 7"	F	
13	Rameshwar Singh	Gabbar	1.5	4' 9"	M	
14	Jay Bahadur Singh	Bhoju	4.5	5' 9"	M	
15	Punder Thakur	Manyal Prasad (T)	40	8' 10"	M	
16	Braj Kishore Singh	Bhola (T)	35	8' 1"	M	
17	Peeku Babu	Harihar Prasad (M)	20	7' 6"		
18	Vishwanath Rai	Babu Lal (T)	25	8'	M	
19	Rajinder Bidhai	Ganesh Prasad	3	5' 9"	M	
20	Chandeshwari Prasad Singh	Bijli Prasad (T)	4	5' 10"	M	00064E6EOF
21	Badu Vikarma Singh	Bhai (T)	50	8' 6"	M	
22	Badu Vikarma Singh	Ramu (T)	40	8' 5"	M	
23	Chandrama Singh Chauhan	Rani Parvathi	5.5	6'	F	
24	Raghuvendra Singh	Dhanbahadur (T)	5	5' 8"	M	
25	Vijay Kumar Misra	Gabbar Singh (T)	4.5	5' 10"	M	
26	Muletan Singh	Bhan	20	7' 2"	F	
27	Keshav Mishra	Pawan Kali	55	9'	F	
28	Rameshwar Singh	Lal Bahadur (M)	45	8' 10"	M	
29	Jai Kumar Singh	Devraj	5	5' 2"	M	
30	Ashok Rai	Manik (T)	8	6' 4"	M	

SI No	Owner Name	Elephant Name	Age	Height	Sex	Chip No.
31	Jashweer Singh Jadav	Babita	6	6'1"	F	
32	S.D.Singh	Tara	20	7'10"	F	
33	Panchilal Rai	Mohan Prasad (T)	3	5'3"	M	00064DEF13
34	Uday Narain Rai alias Bhora Rai	Raja Babu (T)	15	7'2"	M	
35	Raja Ram Singh	Biju Prasad (T)	60	9'2"	M	00064DA641
36	Mundirka Rai	Jatra Singh (T)			M	
37	Raminder Prasad Singh	Jai Bahadur (T)	40	8'8"	M	
38	Dr. Shivbodhan Yadav	Moti (T)	25	7'11"	M	
39	Rajdhani Singh	Pratap (T)	10	6'11"	M	
40	Adhiya Pandey	Mohan	7	6'8"	M	
41	Shyam Naragan Singh	Madanlal (T)	20	7'3"	M	
42	Vishwanath Singh	Bijli (T)	45	8'6"	M	
43	Kishori Jaiswal	?	15	7'	F	
44	Kishori Lal Kaiswal	Rani	20	7'5"	F	
45	Amar Shukla	Guru Prasad (T)	25-30	7'10"	M	
46	Satnam Prasad	Bhola (T)	40	8'9"	M	
47	Sanjay Kumar Singh	Prithvi Raj (T)	40	8'6"	M	00064E738F
48	Ram Babu Prasad	Mohan (T)	4	5'11"	M	00064EO83D
49	Kapil Dev Prasad	Bhola (T)	45	8'9"	M	00064DFO83D
50	Ramakant Thakur	Mangal Prasad (T)	45	8'9"	M	00064DEF13
51	Munna Babu	Tinku (T)	7	6'5"	M	
52	Ram Ekwat Bhasat	Mohan (T)	15	7'8"	M	00064DD976
53	Bekun Choudhury	Golapi	1.5	5'1"	F	
54	Shashi Kumar Singh	Savitri	8	6'8"	F	
55	Sri Darvesi Rai	Mohan (T)	10	6'7"	M	
56	Ramadhan singh	Mohan (T)	2	5'1"	M	
57	Naik Prasad Gupta	Bhanti	8	6'2"	F	
58	Sunder Prasad Singh	Lal Bahadur (T)	50	9'3"	M	00064DED84
59	Dina Nath Singh	Hira Kali	40	7'11"	F	00064DFC05
60	Dhirandar Singh	Lakshmi	45	8'12"	F	00064DBCOE

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<b>SI No.</b>	<b>Owner Name</b>	<b>Elephant Name</b>	<b>Age</b>	<b>Height</b>	<b>Sex</b>	<b>Chip No.</b>
61	Raj Dev Rai	Dhanmati	7	6'2"	F	00064EOB5A
62	Vidyarthi Tiwari	Kanchi	30	7'4"	F	
63	Manoj Kumar Singh	Moti Prasad (T)	5	6'6"	M	
64	Ram Naresh Singh	Ganga Prasad (T)	50	8'6"	M	00064DE187
65	Virendar Rai	Raju (T)	10	6'4"	M	
66	Chandra Prakash Singh	Manik (M)	3	5'1"	M	
67	Abhimanyu Kumar Singh	Dhanbar (T)	2	4'8"	M	961001000005114

**REFERENCES:**

De Silva, K, De Silva, M. and Gunatilake. 1999. Bacterial and fungal pathogens isolated from corneal ulcerations in domesticated elephants (*Elephas maximus maximus*) in Sri Lanka. *Veterinary Ophthalmology*. 2(3):191–192

Fowler, M.E. 2001. Elephant foot care: Concluding remarks. *Elephant's Foot*. Eds: Csuti, B, Sargent, E.L. and Bechert, US. Iowa State University Press, Ames: 147-149

Jayathangaraj, M.G., Thirunavukkarasu, P.S., Vasu, P. and John, M.C. 2000. Corneal opacity in a captive elephant. *Indian Veterinary Medical Journal*. 24(1): 81-82.

Krishnamurthy, V and Wemmer, C. 2005. Veterinary care of Asian timber elephants in India: Historical accounts and current observations. *Zoo Biology*. 14(2): 123 - 133

McCullagh KG and Gresham GA. 1969. Eye lesions in the African elephant (*Loxodonta africana*). *Research in Veterinary Science*. 10(6):587-589.

Wemmer, C; Krishnamurthy V; Shrestha, S; Hayek, L.A; Myo Thant and Nanjappa, KA. 2006 *Zoo Biology* 25:187-200. Research Article : Assessment of Body Condition in Assian Elephants (*Elephas maximus*).



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Elephants remain a special attraction at Asia's largest cattle fair that happens at Sonpur in the Eastern Indian state of Bihar each year during November and December. A health camp for captive elephants has been organised by the Wildlife Trust of India and the International Fund of Animal Welfare each year since 2001, where elephants are examined and treated and their owners are educated and made aware about the welfare of their animals. This publication reports on the four health camps for captive elephants held at Sonpur from the years 2001 to 2004.



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