WELFARE STATUS AND CRUELTY METED OUT TO ELEPHANT POORNIMA

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SURENDRA VARMA, DAVID ABRAHAM AND MANOJ OSWAL

Elephants in Captivity: CUPA/ANCF - Occasional Report No. 3

Compassion Unlimited Plus Action

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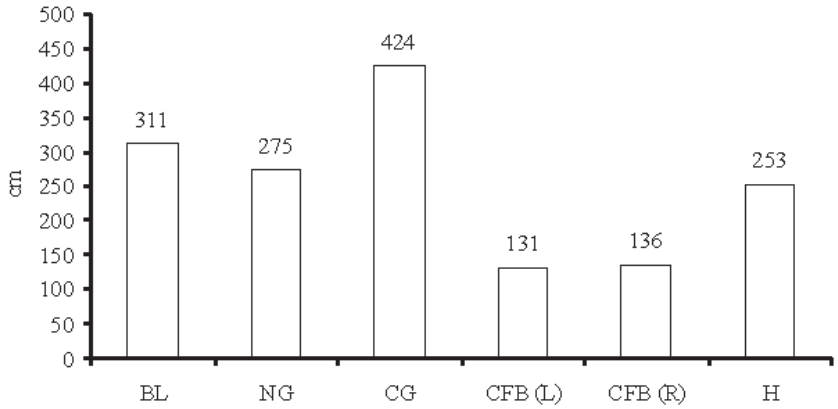
CONTENTS

Profile of Poornima

Name of the elephant	Poornima
Age (in years)	52
Sex	Female
Type of ownership	Private
Tush	Not visible
Origin of animal	Purchased
Current location	Pune
State	Maharashtra
Year of source	2001
Age/height at source	46
Origin	Varanasi
State	Uttar Pradesh
Type of shelter	Open
Type of flooring	Mud/concrete
Source of water	Tap
Interaction with other elephants	Yes
Hours/day	12
Number of elephants	1
Personality	Calm
Number of people killed/injured	4/0
Stereotypic behaviour	No
Type of work	Begging, marriage functions
Hours/day	12
Source of food	Stall-fed/Begging
Type of food	Roti, bread, banana, biscuits, sweetmeat, coconut, cakes and pastries, sugarcane
Occurrence of heat cycles	No
Number of calves born	0
Type of disease reported	No chronic diseases
Availability of veterinary doctor	No
Number of mahouts changed	Not known

BODY MEASUREMENTS



KEY
BL: BODY LENGH, NG: NECK GIRTH, CG: CHEST GIRTH, CFB (L): CIRCUMFERNCE OF FORELEG BASE (L),

CFB ('R): CIRCUMFERNCE OF FORELEG BASE (R), H: SHOULDER HEIGHT

Mahout name	Santosh Pandey
Age	27
Community	Hindu
Mahout's experience (in years)	11
Total experience with this animal (in years)	6
Source of training	Experience
Mahout's father's occupation	Mahout
Mahout's grandfather's occupation	Daily wage earner
Education	12th standard
Salary/year	Rs 36,000
Job status	Provisional
Marital status	Married
Number of children	3
Type of tool used	Stick and ankush
Health status	Good
Insurance	No
Source	NA*
Will his children join this profession	No
*NA: Not applicable.	

Background

External wounds/injuries, a consequence of harsh treatment in captivity, are generally considered while judging an animal's welfare. Cruelty inflicted by improper care and unsuitable husbandry practices can be equally damaging to the animal. This assumes significance when we consider animals such as elephants in captivity which are essentially wild and are not domesticated.

Elephants are known for their long-lasting social relationships in the wild, females forming stable groups which may last across generations (Poole and Moss, 2008). The matriarchal society depends on inter-relations and knowledge provided by older and dominant females. The presence of such relationships helps younger and growing animals to learn foraging routes, food preparation, care of young ones, social hierarchy, etc. (Kurt and Garai, 2007). Impoverished social environments in captive situations have been linked to occurrence of stereotypy, acycling among adult females, rejection of calves by mothers, aberrant behaviours such as auto-mutilation/apathy/aggression (Clubb and Mason, 2002). Social interaction is considered to represent an important source of enrichment for captive animals (Veasey, 2006).

Elephants that are kept on unnatural substrates or made to walk long periods being exposed to the hot sun have severe heat-related problems. Open, unnatural (such as tarred roads) and concrete substrates add to heat-related health concerns, as these surfaces radiate heat. Elephants depend on loss of body heat through their body surface. The surface area-volume ratio is low for these animals (Weissenbock, 2006) making them vulnerable to consistent exposure to high temperatures; some elephants have their vision affected in conjunction with poor nutrition (Kurt and Garai, 2007).

Depending on the temperature and humidity of a given place, elephants drink more than 200 l of water/day (Sukumar, 2000); they need to bathe at least once a day (Shoshani and Eisenberg, 1982). Spraying mud on themselves and wallowing help in thermo-regulation and act as insect repellant (Shoshani and Eisenberg, 1982). Captive situations need to provide these facilities for elephants in their care.

In comparison with other herbivores that feed on similar food, studies show that dry matter digestibility of elephant is lower (Fowler and Mikota, 2006) and free-ranging elephants digest foods to a greater extent than captive elephants. Provision of food with nutrient content suitable for elephants is important. Wild elephants browse and graze on varieties of plants (Sukumar, 2000) using their trunk, legs, tusks or suitable substrates to alter the plants to make them accessible for eating (Kurt and Garai, 2007). The provision of only stall-feed with limited variety/poor-quality foods affects the health of captive animals through poor nutrition and lack of opportunity for expression of species typical behaviour.

Wild elephants are known to be active for nearly 80% of a day (Eisenberg, 1981)[†]. Captive situations in which an animal is restrained by chaining/enclosed in circumscribed spaces or made to perform unnatural behaviours such as begging for food/money from the public or stand for long durations in one place do not provide for expression of species-specific behaviours. Such situations should provide conditions in which the animal can develop into a normal, socially functioning individual through expression of natural behaviour and activity (Stroud, in press).

Acycling adult females may represent the consequence of exposure to different stressors: poor nutrition (Kurt and Garai, 2007), harsh handling through punishment or isolation (Clubb and Mason, 2002); reproductive tract abnormalities also may contribute to this situation (Clubb and Mason, 2002).

Given the complex social system and associated interaction among all individuals in an elephant herd, it is of immense importance to maintain captive animals in a group. Studies show that elephants subjected to restricted socialising are more prone to aggression towards their keepers than those that are kept as group with unrestrained socialising opportunities (Brockett, 1999)[†].

Our Investigation

The main objective of the investigation was to assess the welfare of the elephant Poornima (female, 52 years) in Pune. It is presently housed at the Rajiv Gandhi Zoological Park following rescue from private owners. Her welfare status under pre-seizure phase was assessed. Welfare status has been measured in terms of a number of ecological, management and veterinary parameters such as the type of shelter provided, area of the shelter, flooring type, provision of food, types of feed provided, provision for interaction among elephants, availability of veterinary care, etc. (see Appendix 1 for parameters used for the survey).

Methods

The animal was observed and observations were recorded for the parameters listed above in an observation sheet. Each parameter was evaluated by a scoring pattern ranging from 0 to 10, with 0 representing bad conditions of welfare and 10 implying satisfactory conditions. The scoring is based on the availability of near-natural conditions for the animal considering its ecological and biological needs.

Each of these parameters has its own importance directly or indirectly in deciding the welfare of the captive animal. For instance, maintaining elephant in cramped shelters (< 1600 ft^2) or in vast enclosures without any natural vegetation is not conducive to their welfare. Any shelter that approximates an elephant's natural conditions as closely as possible is considered ideal for the animal.[\]

Results

Status of shelter

1. No fixed shelter was provided; all kinds of open spaces, under construction sites and open grounds were used for shelter. One common place was an abandoned construction site near Mitra Mandal Square.
2. No protection from the environmental constraints, especially incessant rains which cause severe shivering to the elephant.
3. Similarly, there was no protection during hot summer and cold winter months.
4. The animal was chained from 10 pm to 8 am.
5. There was no provision for daily cleaning or disposal of urine and dung; the elephant was made to live in a dirty environment.

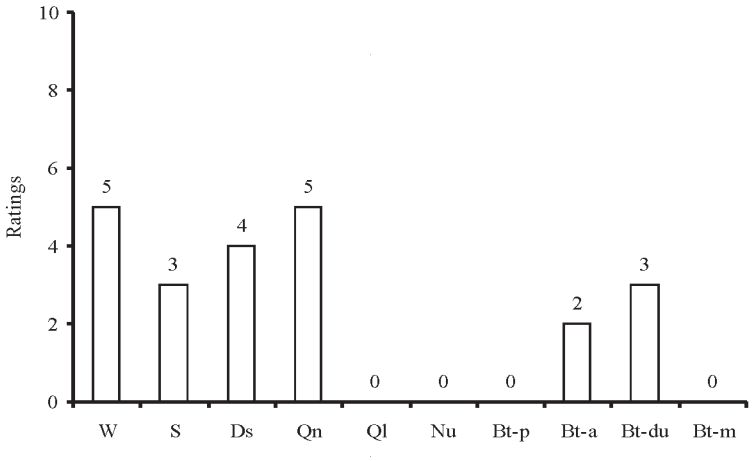
Mean for shelter and associated parameters was only 1.6 (Standard error (SE) = 0.67, N=12); shelter type, size, type of flooring and other types of facilities provided were accorded 0 rating due to their quality.

Access to water

A factor of immense importance for a captive elephant is access to water for both drinking and bathing.

Mean for water and associated parameters was only 2.2 (SE = 0.64, N=10). Score for distance, bathing place, and materials used to bath was 0 (Figure 1). Given the long working hours of the elephant from morning to late night, public water supply being unavailable at that time and there being no water bodies with potable water in the city, there is very little chance for the elephant to drink water enroute.

Poornima has access to water through taps but its availability is restricted and is insufficient to meet its needs. When the animal needs to drink it has to depend on the mahout to turn the tap on to provide water to it.

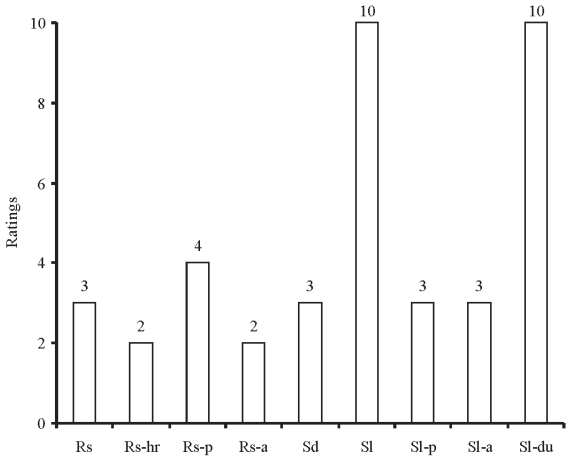


W: Water availability, S: Source of water, Ds: Distance to water source,
Qn: Quantity of water consumed, Ql: Tests for water quality, Nu: Number of times water consumed/day,
Bt-p: Bathing place, Bt-a: Bathing area (size), Bt-du: Bathing duration,
Bt-m: Bathing materials.

Figure 1: Rating for water and associated parameters.

Rest and sleep

The elephant has provision for rest and sleep. Rest and associated parameters were given a mean rating of 3 (SE = 0.4, N=5). Except for sleep area and size, all other parameters related to sleep get a value of 10 (Figure 2); mean rating was 6.5 (SE = 2.0, N=4).



Rs: Rest availability
Rs-hr: Resting hours/day
Rs-p: Resting place
Rs-a: Resting area (size)
Sd: Shade availability
Sl: Sleep availability
Sl-p: Sleeping place
Sl-a: Sleeping area (size)
Sl-du: Sleep duration

Figure 2: Rating for rest and sleep-related parameters.

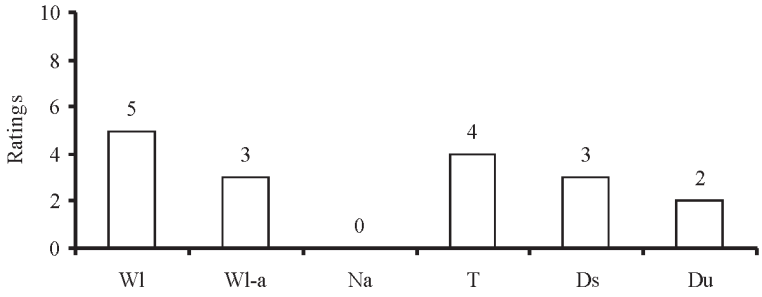
Opportunity to sleep was given a rating of 10 as also for the duration of sleep. As the sleeping area had earthen flooring, this parameter was given a rating of 10.

Physical activity

Physical activity also reflects on the status of a captive animal's condition. Too much or too little activity leads to deterioration of health. However, the elephant was made to walk on unsuitable, hard, tarred roads and in the midst of heavy traffic throughout (Figures 3a and b). This feature was given a score of 0; overall mean rating was only 2.8 (SE = 0.70, N=6) considering all the above-mentioned aspects (Figure 4).

Figure 3a: Nature of terrain for walks.

Figure 3b: Walking amidst heavy vehicular traffic.



Wl: Opportunity for walk, Wl-a: Walking area (size),
Na: Nature of terrain, T: Time of walking,
Ds: Distance covered, Du: Duration of walk.

Figure 4: Rating for walk-related parameters.

Interaction

Elephants are social animals and the lack of social interaction among them may cause stress to them. Poornima and another elephant were kept together, giving an opportunity for interaction between them. This parameter was given a rating of 10. However, interaction was allowed at night only when they were not working; this feature is given a score of 2. The amount of interaction between the animals was minimal and was restricted due to chaining. While begging on the streets, both animals (Figure 5a and b) could interact, but this may be restricted by the constant workload.

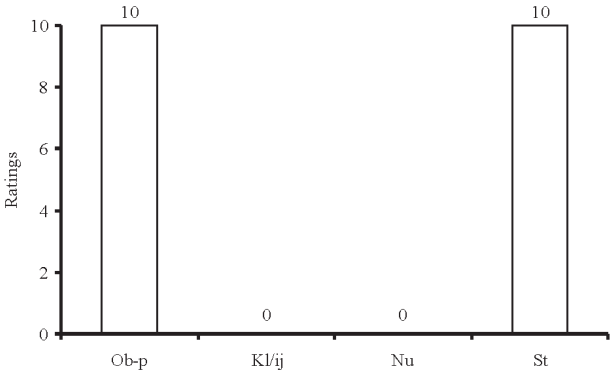
Figure 5a and b Unnatural work conditions amidst people and vehicles with animals controlled by the mahout.

Behaviour

The behaviour that an elephant exhibits indicates the ease with which its keepers can handle the animal. Poornima is reported to be quiet, in general, and is described as reliable. This feature is given a rating of 10. However, 'quietness' of an animal might reflect being conditioned to be calm. There are reports of Poornima having killed a number of people; our observation showed her aggressive nature when another mahout tried to control her in the absence of her own mahout.

Stereotypy

"A behavioural feature used as a standard in evaluating captive animals is the occurrence of stereotypy which is the repeated invariant occurrence of behaviour(s), expressed by captive animals that are not functionally appropriate in the context of available environmental stimuli." Poornima was given a rating of 10 (Figure 6) as she had not been observed showing signs of stereotypy.



Ob-p: Observed personality Kl/ij: Incidence of killing/injuring
Nu: Number of killing/injuring incidents St: Stereotypic behaviour

Figure 6: Rating for personality and stereotypic behaviour.

Nature of work

Work is a defining feature of a captive elephant, as this determines the nature and degree of restriction imposed on its natural behaviour. Poornima was given a rating of 0 for the type of work she was made to perform, i.e., begging from the public for money as well as for food and made to carry people repeatedly for rides throughout the day (Figure 7a and b).

Figure 7a and b: Seeking donation of money from passers by.

This is the cause of stress for the animal as:

a) This is not natural to an elephant's behavioural repertoire

b) This activity involves training, which may involve punishment

c) There are chances of the animal being overworked by greedy mahouts

It could be assumed that on an average if the elephant gets Rs.5 (1 US$ = Rs. 43.75) per begging action, a day's collection would be about Rs 3000 to 4000, the elephant needs to raise her trunk (Figure 8a and b) to pass the money to his mahout at least 800 times a day.

In the city the elephant was observed to be stationed at Mitra Mandal Square and mahout had most of his business in Koregaon Park. The park was about 9 km by the shortest route from the shelter and the animal had to travel 18 km just to go to work and return to the shelter daily. It had also been observed to make two to three trips a day from the square at ICICI bank till Kalyani Nagar, thus covering another 12 km by foot.

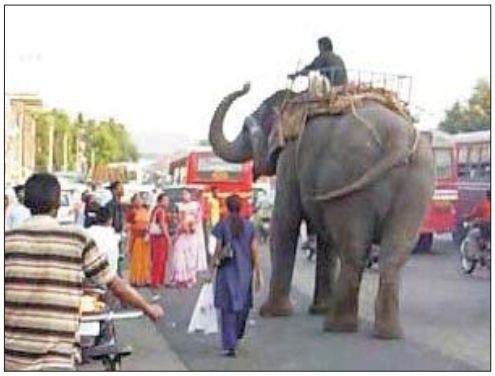
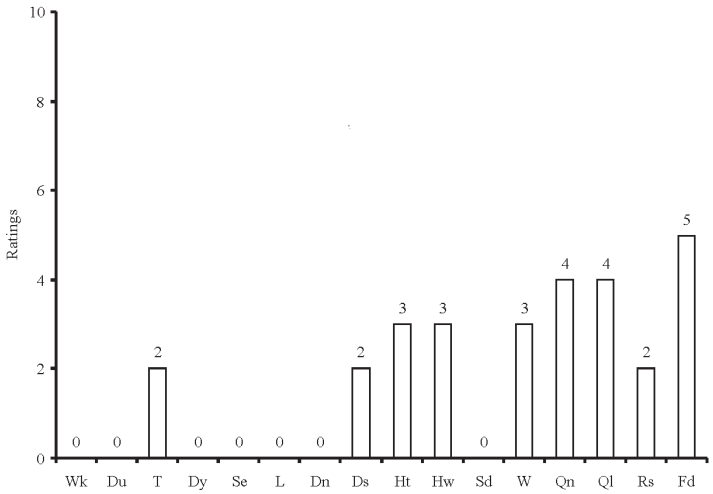


Figure 8a and b: Elephant performing for public: seeking money and blessing

Mean for work-related parameter, assessed for 16 features, was only 1.75 (SE = 0.45, N=16). There was no provision of shade or rest for the elephant during working hours; hence, this feature also was given a score of 0 (Figure 8).



Wk: Work type	Du: Duration of work	T: Working days/month
Se: Seasonality	L: Location and distance from public	Dn: Seeking donations
Ds: Distance covered	Ht: Howdah type	Hw: Howdah weight
Sd: Shade availability	W: Water availability during work	Qn: Quantity of water
Ql: Quality of water	Rs: Rest availability during work	Fd: Food availability

Figure 8: Rating for work-related parameters.

Food and type

Elephants not allowed to free range will not be able to forage for themselves. This reflects on their health as the range of vegetation available to free-ranging animals cannot be matched under stall-fed conditions. The elephant is given a score of 3.3 (SE = 1.2, N=6) for the method of food provision (Figure 9).

Food provided to Poornima could be brought under three distinct categories: food given before work, while working or resting, and after work.

There are contradictory reports about the status of food given before she is exposed to her daily routine.

The first part of the work is between 8 am and 2 pm. While working, her sources and types of food are as follows:

Work Session 1

- Scavenging from vegetable market and restaurants for leftover food, mainly fruits and vegetables that have been disposed off as being unfit for consumption and cutovers like peels, shells and unusable portions of fruits and vegetables. This constitutes about 2030 kg.

- Food from devotees while begging: Roti (traditional Indian bread, cooked from wheat), bread, banana, biscuits, sweetmeats (commonly laddoo, jalebi, barfi), coconut, cakes and pastries. These would roughly total 5 kg.

The mahout provides food during his lunch break; the items provided are:

- Sugarcane: approx. 5070 kg
- Cut fodder, consisting mainly of tree leaves of approx. 510 kg

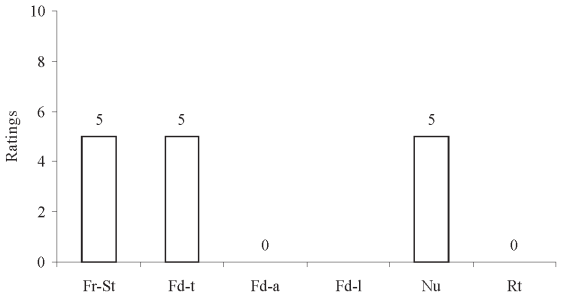
Work Session 2

- Food from devotees: Roti, bread, banana, biscuits, sweetmeats-commonly laddoo, jalebi, coconut barfi, cakes and pastries roughly totalling 57 kg. The activities are blessing, collecting money and eating food.

Quality of food

- There is no control over food quality or any analysis of it; the effort is to spend the least amount of money on food and yet keep the animal alive enough to be able to keep working. Scavenged food consists of bulk of the food, except for sugarcane and some grass fed by the mahout.
- The sugarcane provided is of average quality. This has very little juice in it and is sold separately as 'elephant sugarcane' in the Mahatma Phule market from where it is bought.
- The quality of food from scavenging is very poor and is more a filler than of any nutritional value.
- Food provided by devotees is of good quality and of liking to human beings but it is more a strain on the elephant's body than a source of nutrition, the exceptions being bananas, sugarcane and fruits. Unfortunately, this kind of food barely makes up for 5% of the animal's diet.

The food is deficient in minerals and vitamins. A wild elephant feeds on more than 80 to 90 species of vegetation to meet its nutritional requirement (Sukumar, 2006) and the current diet is totally devoid of essential minerals.

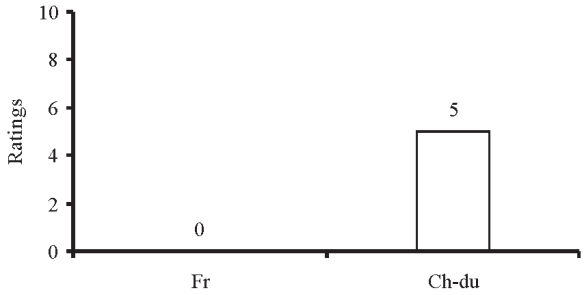


Fr-St: Free-ranging/stall-fed, Fd-t: Food types,
Fd-a: Feeding area (size), Fd-l: Feeding location,
Nu: Number of food items, Rt: Usage of ration chart.

Figure 9: Rating for food-related parameters.

Chaining

The animal is chained between 10 pm and 8 am. The chain, approximately 3 m in length, is put around the elephant's feet and has a spike in the rim. A conspicuous feature of the captive elephant is the use of chains. Poornima has been given a rating of 0 for the Parameter duration of chaining,. The rating for chain type is also 0 (Figure 10). Overall rating for chaining-related parameter is 2.5 (SE = 1.76, N=2).



Fr: Free-ranging/chained, Ch-du: Duration of chaining.

Figure 10: Rating for free ranging and chaining-related parameters.

Reproductive status

The elephant is given a rating of 0 as it has never been reported to be cycling nor has it been allowed to mate. All the seven parameters in this section receive 0 values. This could be also an indication that the animal is exploited for work without providing any opportunity for expression of a species typical behaviour; the food (type and quantity) it consumes could also contribute towards this status.

Injury/disease

A direct way of assessing an animal's health status is to check its disease profile or occurrence of injuries. Seventy per cent of the parameters assessed score 0 values, and only one parameter, i.e., oiling frequency, receives a value of 10. Mean rating for this section is only 1.5 (SE = 1.08, N=10). Scars of old wounds by ankush (Figure 11) are visible on the forehead, back, and on both sides of the forelegs above the elbow joints. Vertical cracks are visible on foreleg nails (Figure 12a, b and c).

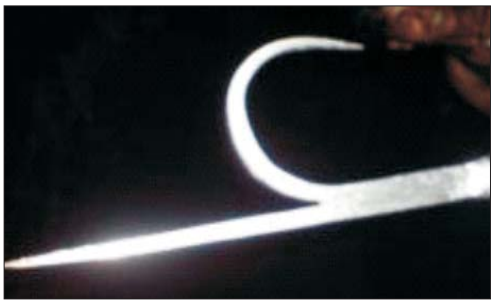


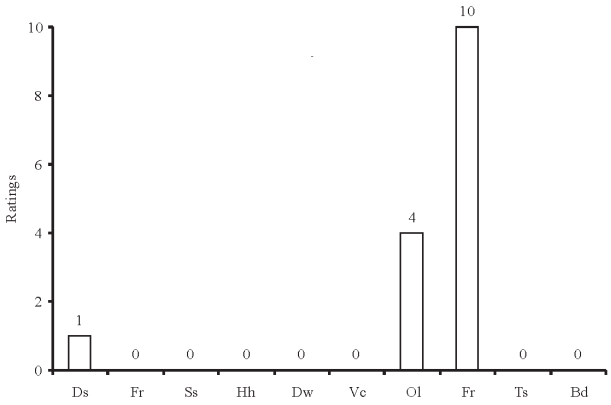
Figure 11: Ankush, the tool used by mahout to control the elephant.

Figure 12 a Scars on forehead.

Figure 12b: Injury scars on foreleg.

Figure 12c: Fore-foot of the elephant.

The elephant has recurring stomach-related problems. This feature is given a rating of 0 (Figure 13). It shows signs of harsh handling. This parameter is given a rating of 0.



Ds: Occurrence of disease/injury
Fr: Frequency of occurrence
Ss: Season of occurrence
Hh: Harsh handling signs
Dw: De-worming status
Vc: Vaccination status
Ol: Oiling status
Fr: Frequency of oiling
Ts: Tests of blood/urine/dung samples
Bd: Body measurements taken

Figure 13: Rating for disease-related parameters

Veterinary facility

A significant feature is the absence of a veterinary doctor or facility. This parameter is given a rating of 0 for Poornima.

Medical treatment

1. There is no doctor for routine check-up.
2. Records of the elephant do not show any access to veterinary services of any kind.
3. It may be subjected to quack treatment, which can cause more damage than cure its ailments.

Facilities provided

Fifteen parameters related to the section were considered, and a mean value of 3.07 (SE = 1.1, N=15) was arrived at.

Summary of rating for Poornima

A total of 107 parameters were rated and the overall mean rating was only 2.1 (S.E. = 0.27, N = 107).

Rating between 0 and 5 indicates poor conditions. Overall, 83% of the parameters (Figure 14) were given a rating below 5.

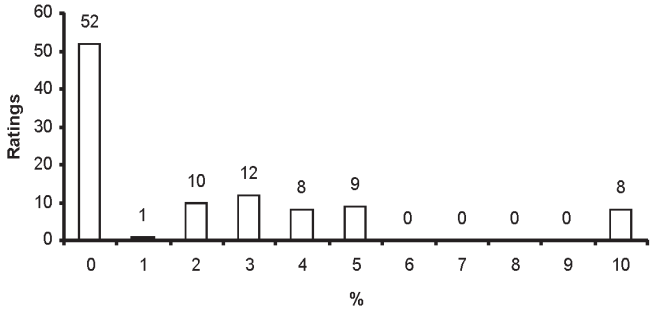


Figure 14: Overall rating pattern for elephant Poornima.

Current status of Poornima

On June 6, 2007, two elephants including Poornima were found begging on the streets of Pune. On complaint from an NGO, the forest department of Pune seized the animals and sent them to the space available in Peshwe Park Zoo. After two weeks, these elephants were moved to the Rajiv Gandhi Zoological Park under the care of the Rajiv Gandhi Animal Rescue Centre in Pune. The elephants are still in the custody of the Zoo since 2007. The Rajiv Gandhi Animal Rescue Centre and the Rajiv Gandhi Zoological Park are jointly looking after them.

Laboratory tests: After two months post-seizure, samples of blood (Figure 15a and b), urine and dung were collected and sent for laboratory analysis. All parameters of routine haematology, urinalysis and dung analysis were done. Serum biochemistry parameters were also analysed and compared with the normal range values specified for Asian elephants to assess various organ functions. Results of all laboratory tests indicate that all the body functions are normal. Reports of all laboratory tests are listed in this report.


Figure 15 a & b: Blood being drawn for biochemical tests.

Inference:

In general, the elephant is maintained in a good management regime (see Table 1 for pre- and post-seizure status) at the Rajiv Gandhi Zoological Park and this is evident from all the laboratory test results**. Two months of care is reflected on the animal's health (see Appendices 2 and 3).** Elephant Poornima is estimated to be past 50 years of age. It is strongly advised that the animal is given rest and not put to work like begging on busy city streets, which is an exerting exercise.

Routine Health Check-up Under The Supervision Of A Veterinarian Is Advised. This can be achieved only by keeping the animal in a facility that does not expose the animal to unnatural conditions like high ambient temperature, inaccessibility to water, no bath, low quality and quantity of food, and stress of continuous work from morning to evening.

Table 1: Pre- and post-seizure status of elephant Poornima

Sl no.	Parameters	Pre-seizure	Post-seizure
1.	Shelter type	No fixed place, construction sites, open grounds, at times under single Tree	Forested (plantation, bamboo and mixed forest species)
2	Water availability	Tap or water provided by hotels or public	Tank and reservoir
3	Bath	Once or twice (a day) for a maximum of 2 minutes	Two times a day, each lasting 1 to 2 hours
4	Rest	One hour/day	No work
5	Sleep	Yes, but no fixed place	Yes, forested area
6	Work	8 am–9 pm, 20–25 km/day. Begging, blessing, standing in marriage function (4–5 h)	No work

7	Food	Vegetables and fruit waste, low-quality sugarcane, banana, biscuits, etc.	Sugarcane, potato, groundnut, Bengal gram (soaked), jaggery, cut grass
8	Tool type	Primarily ankush	Stick
9	Interaction	Yes, with other begging elephants	Yet to be exposed to other animals
10	Veterinary doctor/ care availability	No	Yes

Conclusion

Pre-seizure Poornima faced cruelty; specific biological needs of the animal were not met. Our investigation on the past and present status of the elephant Poornima reveals that the animal was maintained in the most unnatural situations, least suited for its well-being. However, the clinical tests show that the elephant is apparently in good physical condition and the physiological results also do not indicate major deviation suggesting any disease condition. The apparent good condition of the animal is a reflection of the good and improved management regime followed at the care centre. This is to underline the fact that the animal we examined is a really good specimen from the biological perspective (body height and other measurement of the animal) and needs to be protected and cared for in the best possible way.

Acknowledgements

The report evolved based on a request received from the Animal Board India to carry out the welfare assessment of Poornima by people for animal (PFA- Pune). Special thanks are also due to Dhiraj Jain and Suvija Jaybhay, who provided critical data and information of the animal. S. R. Sujata provided support in data processing; Suparna Baksi-Ganguly and Shiela Rao of Compassion Unlimited Plus Action (CUPA) provided critical inputs. Sreenivasa Rao and Susanto Sen provided editorial support.

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†: Original not seen.

Appendix 1: Parameters used and their rating

1	2	3	4	5	6	7
Type of shelter	Size (inclusive of other elephants)	Size (where the animal is kept)	Hours spent/day within the total area	Chained or not	Type of flooring/ Concrete/ earthen	Type of flooring/ Night/day
0	0	0	5	5	0	0

8	9	10	11	12	13	14
If closed enclosure type	Duration (animal kept in closed enclosure-during night or day	Type of facilities provided	Hygiene-Number of times cleaned / day or week	Materials used for cleaning	Shade availability (yes/no)	Type of Shade
0	5	0	3	2	2	3

15	16	17	18	19	20
Area of the shade type	Quality of the shade	Perennial source of running water (yes/no)	Source	Distance	Quantity of water per day
0	2	0	3	4	5

21	22	23	24	25	26	27
Water quality tests	Bathing / number of times	Bathing place	Bathing area (size)	Duration	Materials used for bath	Rest availability
0	0	0	2	3	0	3

28	29	30	31	32	33	34
Resting (h/day)	Type of resting place	Resting area (size)	Shade Aviailbility/ type of shade	Sleep (Yes/no)	Place of sleep	Area of sleep (size)
2	4	0	3	10	3	3

35	36	37	38	39	40
Duration of sleep	Walk	Area of walking (Size)	Time of walking	Nature of terrain	Area/distance covered for walking
10	5	3	4	2	3

41	42	43	44
Hours/day during walking	Free ranging/chained	Chaining duration	Observed personality
2	0	5	10

45	46	47	48	49	50	51
People killed or injured	Number	Stereotypic behaviour	Work type	Work duration	Time of work	Number of working days/month
0	0	10	0	0	2	0

52	53	54	55	56	57	58
Seasonality In working	Location and distance from the camp	Seeking donations (yes/no)	Maximum distance covered with weight	Type of howdah	Weight of the howdah	Shade availability during work
0	0	0	2	3	3	0

59	60	61	62	63	64	65
Water availability during work	Quantity	Quality	Rest during work	Food during work	Food provision	Area of feeding
3	4	4	2	5	5	2

66	67	68	69
Usage of ration chart	Food types	No. of food items	Reproductive status of female (Cycling/Non-cycling/Unknown)
0	5	5	0

70	71	72	73
Exposed to males (yes/no)	Bred (yes/no)	How often exposed to male(s)	Any observation of mating (yes/no)
0	0	0	0

74	75	76	77	78	79	80
Source of mating (wild/captive male)	Number of Calves born	Disease occurrence	Frequency	Season	Harsh handling	De-worming
0	0	1	0	0	0	0

81	82	83	84	85	86
Vaccination	Oiling (yes/no)	Times	Blood/Urine/ Dung sample	Frequency of body measurements	Availability of doctors (yes/no)
0	4	10	0	0	0

87	88	89	90	91	92
Qualification	Experience with elephant (Yes/no)	Years of experience	Other animals	Visit	Availability of Vet. Assistant (yes/no)
0	0	0	0	0	0

93	94	95	96
Qualification	Type of record-keeping	Facilities provided to elephant (Vet. Care)	Staff quarters
0	0	0	5

97	98	99	100	101	102	103
Status	Cooking shed	Cooking vessels	Food prepatation hall	Provision shed	Chain status	Rope status
4	0	4	0	0	10	10

104	105	106	107	108
Howdah	Mahout number	Maintenance of service/clinical/ other records (yes/no)	Record-keeping type	Input type
0	10	0	0	0

APPENDIX 2: Body condition index

Asian Elephant Body Condition Index

(Developed by Dr. V. Krishnamurthy, Dr. C. Wemmer and John Lenhardt)

Date	:	August 25, 2007
Elephant's name/ID	:	POORNIMA
Sex	:	Female
Age	:	~52 years (estimate)
Location	:	Rajiv Gandhi Zoological Park, Pune

NOTE: Body condition is most easily assessed in direct overhead sunlight. Use parameters 16 to assess wild elephants and all (19) to assess domestic elephants where palpitation of body parts is possible.

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1. HEAD: TEMPORAL DEPRESSION (view from several angles)

_____ Full and convex when viewed from behind, frontal ridge vaguely outlined at best (2 points)

____**1**_____ Slightly to moderately concave, frontal ridge defined (1 point)

_____ Deeply concave, frontal ridge forms a crater like rim around the temporal ression (0 points)

_____ *Number of points*

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2. SCAPULA (SHOULDER BLADE) (view from all sides)

____**2**_____ Spinous process not visible, or slightly visible when the legs are in certain tions (2 points)

_____ Spinous process visible as a vertical ridge with a concavity between the ridge and the posterior edge of the scapula (1 point)

_____ Spinous process pronounced and the blade line with armorial process pronounced as a knot (0 points)

_____ *Number of points*

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3. THORACIC REGION (view from all sides)

____**2**_____ Ribs not visible, barrel smooth (2 points)

_____ Some ribs visible, but the extent and demarcation are not pronounced (1 point)

_____ Many ribs, strongly demarcated (even behind the scapula) with pronounced intercostal depressions (0 points)

_____ *Number of points*

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4. FLANK AREA (IMMEDIATELY IN FRONT OF PELVIS) (view from side and behind)

____**1**_____ No depression visible, flank bulges outward in front of the pelvis (1 point)

_____ Depression visible as a sunken area immediately in front of the pelvis (0 points)

_____ *Number of points*

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5. LUMBAR VERTEBRAE (BEHIND THE RIBS AND IN FRONT OF PELVIS) (view from behind: an elevated vantage point may be necessary)

____2_____ Not visible, lower back smooth and rounded (2 points)
_____ Visible as ridges; skin slopes away from the top of the ridge; height of the vertebrae does not exceed width (1 point)
_____ Visible as a knife blade; sides of the spinal ridge are parallel and height exceeds width (0 points)
_____ *Number of points*

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6. PELVIC BONE (EXTERNAL ANGLE OF ILIUM) AND RUMP (view from several angles)

____2_____ Not visible (or slightly visible); rump region between ilium and caudal vertebrae filled with tissue and not forming a depres sed zone (2 points)
_____ Visible but not pronounced; the rump is slightly depressed and the zone between ilium and caudal vertebrae (1 point)
_____ Visible as a jutting bone; rump is a pronounced sunken zone between the ilium and the caudal vertebrae (0 points)
_____ *Number of points*

Conduct the next three tactile assessments only when the elephant is under direct control of the mahout.

7. AXILLARY FAT (IMMEDIATELY BEHIND JOINT OF HUMERUS AND SCAPULA)

_____2____ Skin contains a thick handful of fat, can be easily seized (2 points)
_____ Skin contains some fat (1 point)
_____ Skin thin, little tissue palpable underneath (0 points)
_____ *Number of points*

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8. BRISKET FAT (BETWEEN FORELEGS AND BASE OF NECK)

_____2____ Sternum well padded with muscle and fat, bone neither visible nor palpable
_____ Sternum not visible but palpable (1 points)
_____ Sternum both visible and palpable (0 points)
_____ *Number of points*

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9. TAIL

_____1___ Fat and muscular, not bony feeling (1 point)
_____ Thin and bony feels stringy and individual joints palpable (0 points)

_____15___ Total number of points

(0-5 = emaciated condition; 6-10 = average condition; 11+ fat or very good condition)

APPENDIX 3: Laboratory Report

Elephant (patient) name : Poornima
Referred by : Dr. David Abraham
Age : ~52 years
Date of examination : August 25, 2007
Laboratory reference number : 171/2645 (P.H. Medical Centre, Pune)

Investigation	Result	Unit	Normal Range - Elephants
Haemoglobin level	H 21*	g/dl	
Red Blood Cell Count	5.62	millions/cu-m	
Packed Cell volume	H 63.4*	%	
MCV	H 112.81	cu-microns	
MCH	H 37.37	Pg	
MCHC	33.12	%	
RDW	H 17.0*		
Platelet Count	155	x 10^3/micro l	
WBC Count	6000	per cu-mm	
Differential Count			
Neutrophils	H 81*	%	
Lymphocytes	L 17*	%	
Eosinophils	00	%	
Monocytes	02	%	
Basophils	00	%	
RBC Morphology	Normocytic monochromic		
WBC	Normal		
Erythocyte Sedimentation Rate	H 94*	mm/h	
Blood Sugar Fasting	83	mg/dl	
Cholesterol	L 65*	mg/dl	
S. Triglycerides	47	mg/dl	
HDL Cholesterol	L 29*	mg/dl	
VLDL Cholesterol	9.40	mg/dl	
LDL Cholesterol	26.60	mg/dl	
TC/HDLC Ratio	2.24		
LDL/HDLC Ratio	L 0.92*		
Blood Urea	25	mg/dl	
Blood Urea Nitrogen	11.68	mg/dl	
S. Calcium	9.6	mg/dl	
S. Bilirubin (Total)	0.3	mg/dl	
S. Bilirubin (Direct)	0.1	mg/dl	
S. Bilirubin (Indirect)	0.20	mg/dl	
S.G.O.T.	20	U/L	
Serum creatinine	H1.7	mg/dl	
T3 (Tri-iodothyronine)	1.79	ng/ml	
T4	7.4	mcg/dl	
TSH	<0.011	uIU/ml	

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Compassion Unlimited Plus Action (CUPA) is a non-profit public charitable trust registered in 1991 that works for the welfare of all animals. Since 1994, CUPA has worked in close collaboration with government departments and agencies on various projects. CUPA's mission is to protect animals from abuse and violence and do what may be required to alleviate their suffering at the hands of humans. CUPA does not differentiate between pet, stray or wild animals, since all often require assistance and relief from cruelty, neglect and harm. The organisation's objective has been to design services and facilities which are employed fully in the realisation of these goals.

Asian Nature Conservation Foundation (ANCF) is a non-profit public charitable trust set up to meet the need for an informed decision-making framework to stem the rapidly declining natural landscape and biological diversity of India and other countries of tropical Asia. The Foundation undertakes activities independently and in coordination with government agencies, research institutions, conservation NGOs and individuals from India and abroad, in all matters relating to conservation of natural resources and biodiversity, endangered flora and fauna, wildlife habitats and environment including forests and wetlands. It participates and disseminates the information gathered, knowledge acquired and inferences made at professional, academic and public fora.

People for Animals (**PFA)** is India's largest animal welfare organisation with a nationwide network of 26 hospitals, 165 units and 0.25 million members, it works to rescue and rehabilitate sick and needy animals. PFA set up and run shelters, ambulance services, sterilisation programmes, treatment camps and disaster rescue missions for animals. PFA also conducts education programmes in schools, and fights cases in courts. **PFA-Pune** runs the most active animal helpline on animal law enforcement. It does about three to four rescues every day and has many pending criminal cases against animal abuses and rescued about 300 varieties of animals across Maharastra.

World Society for Protection of Animals (WSPA) With consultative status at the United Nations and the Council of Europe, WSPA is the world's largest alliance of animal welfare societies, forming a network with 910 member organisations in 153 countries. WSPA brings together people and organisations throughout the world to challenge global animal welfare issues. It has 13 offices and thousands of supporters worldwide.

Photo credits: Figures 3a, b, 5a, b 7a, b 8a, B Page 29 and back cover PFA-pune Figure 15 a & b : Surendra Varma all other Photographes : David Abraham.



This report assesses the welfare of the elephant Poornima in Pune. The elephant is presently housed at the Rajiv Gandhi Zoological Park following her rescue from a private owner. Her welfare status under pre-seizure phase has been measured in terms of a number of ecological, management and veterinary parameters such as the type of shelter provided, area of the shelter, flooring type available, provision of food, types of feed provided, provision for interaction among elephants, availability of veterinary care, etc.

Compassion Unlimited Plus Action

ANCF
ASIAN NATURE CONSERVATION FOUNDATION

People For Animals

WSPA
World Society for the Protection of Animals