COMPARISON OF MANAGEMENT SYSTEMS OF CAPTIVE ELEPHANTS IN FOREST CAMPS OF KERALA AND TAMIL NADU

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ABSTRACT

Elephants have been an integral part of Indian culture. Practice of keeping captive elephants in India is 4,000 years old. Kerala is home to 16 per cent of the captive elephant population of India (550 numbers). Tamil Nadu has 140 animals. A common system of management that exists in both the states is the forest camps. This study compared the management practices followed in these two states and lacunae in the systems were identified. Animals in forest camps of Kerala were kept intensively with continuous tethering while the camps of Tamil Nadu maintained animals in an extensive manner.

Keywords: Stereotypic behaviour, kumkis, training, welfare

INTRODUCTION

In India, elephant has been accorded the highest level of protection by listing it under the Schedule I of the Wildlife Protection Act, 1972. By this, any kind of capture, trade or custody of such animals are strictly prohibited. Flouting all this, illegal capture and trade of elephants is very much prevalent in India. The states of Assam and Kerala have the highest number of captive elephants. In Kerala, majority of them are tuskers and they are mainly owned by religious institutions and well-off individuals. Elephant is the state animal of Kerala and even appears on the government of Kerala emblem. Elephants in Kerala are maintained under three different systems viz., forest camps, temples and private ownership. This paper discusses the management practices that is followed in forest camps of Kerala and compares it with the same system followed in Tamil Nadu. The Tamil Nadu forest department runs camps at two strategic locations namely Annamalai & Mudumalai and these camps have achieved national recognition in housing some of the best kumkis (trained elephants) in the country. Several studies on the management practices in forest camps of Tamil Nadu have been conducted (Krishnamurthy, 1998), however such an elaborate study on animals in forest camps of Kerala has not been conducted. Hence this study aimed at filling the lacunae.

MATERIALS AND METHODS

All the forest camps in Kerala and Tamil

Nadu were visited during the same season and the management practices followed were recorded through direct observation, enquiries with the keepers, owners, veterinarians and forest officials. Different aspects of management were assessed extensively so that further improvements in these practices could be suggested. Observations were made over a three day period during which all the routine activities in the facilities were carefully monitored. The camps that were visited were:

1) Abhayaranyam mini zoo, Kaprikkad (Kodanad) in Ernakulam district
2) Konni elephant training centre at Konni in Pathanamthitta district
3) Kapukkadu elephant rehabilitation centre at Kottoor in Thiruvananthapuram district.
4) Muthanga Wildlife Sanctuary in Wayanad district.
5) Anaimalai Tiger reserve, Top-Slip in Coimbatore district (Chinnar and Kozhikamuthi).
6) Mudumalai National Park in the Nilgiris district.

Detailed questionnaire practices that were followed, was used. It included both open and close-ended questions which were completed using inputs from the keepers, veterinarians, managers and owners. Each answer was verified through visual observations of the practices and the condition of the animal. Behavioural responses like stereotypies, aggressiveness, responsiveness to commands and musth behaviour were recorded through direct observation and through interviewing the keepers. Records also served as a source of data.

The elephant being a highly social animal, its well-being certainly requires interaction with conspecifics. Ability to socialise was evaluated by the duration and number of times individuals were able to relate with others.

RESULTS AND DISCUSSION

The management of elephants in the forest camps of the two states was completely different. In Kerala, maintenance was intensive while the system followed in

Table 1. Feeding schedule for seven animals at the camps (Kerala).

Animal	Age (years)	Feeding					Watering	
		Roughage		Concentrate		Special diets	Source	Frequency /Access
		Grazing Duration (Hrs)	Stall feeding quantity (kg)	Quantity (kg)	Frequency			
1	34	NA	170	12	2	NA	W/B	1
2	45	NA	150	12	2	Chyawanprash	W/B	1
3	76	NA	220	14	2	NA	W/B	1
4	20	NA	250	NA	2	NA	W/B	1
5	40	NA	230	15	2	Chyawanprash	R/S	1
6	71	NA	200	15	2	Mineral mix	W/B	1
7	58	8	75	14	2	NA	R/S	Ad-lib

W/B - well/bore; R/S - river/stream

Tamil Nadu was totally extensive with no restraint.

The camps in Kerala followed a feeding practice wherein cut-fodder and tree-leaves were fed to the animals on a daily basis. Such consistent feeding is highly unnatural in case of elephants. Besides, animals were provided a daily concentrate ration that was fixed by the duty veterinarian. Most of the animals were found to refuse the leafy portion of grass.

Only one animal that was maintained at the Muthanga camp had access to water throughout. For all the other animals, water was available only during bath. Ayurvedic preparations like *Chyawanprash* and mineral mixture were being fed to some animals.

In Tamil Nadu, all the animals were maintained on an extensive system and were left to free-range in the adjacent forests. They were brought back to the camps two times a day for the daily bath and concentrate ration. Animals were given a ration which included boiled rice, ragi and horse-gram. Allowance for each animal was fixed by the veterinarian and diets were also supplemented with salt, jaggery and mineral mixture. Most part of a captive animal's welfare is met only if it is capable of performing acts that are similar to their natural behaviours (Olson, 2004).

Fig. 1. Camp in Tamil Nadu

Fig. 2. Camp in Kerala

Table 2. Feeding schedule for seven animals at the camps (Tamil Nadu)

Animal	Age (years)	Roughage		Concentrate		Special diets
		Grazing Duration (hrs)	Stall feeding quantity (kg)	Quantity (kg)	Frequency	
1	51	20	NA	30	2	Mineral mix
2	45	20	NA	30	2	Mineral mix
3	34	24 (Musth)	NA	30	2	Mineral mix
4	32	20	NA	30	2	Mineral mix
5	57	20	NA	24	2	Mineral mix
6	46	20	NA	20	2	Mineral mix
7	67	24	NA	20	2	Mineral mix

Camps in both states were located near perennial sources of water like rivers/ streams. Animals in the camps of Tamil Nadu were given a detailed bath twice each day and access to drinking water was continuous as the animals were left free for most part. Bath was reduced to only once in Kerala. It was also observed that few males in Kerala were given bath at the tethering spot (mahouts felt insecure). Drinking water was available only during this period. Although most of the tethering spots had a water tank, it was used to a less extent. Guidelines of the Ministry of Environment, Forest and Climate Change (MoEF, 2008) recommends a daily bath and regular access to potable water for each animal. Mercy (2002) recommended that captive elephants have to be offered 250 litres of water each day.

Housing was not present in case of camps in Tamil Nadu as animals spent most of the time unchained. In case of Kerala, elaborate housing arrangements were made with permanent roof and floors that were paved or lined with concrete. Cheeran (1999), suggested that flooring provided to captive elephants should not be hard and preferably of mud. Most camps adopted hard impervious floorings as it was easy to clean. Quarry dust was also used as flooring in some camps. Access to natural mud/earth was greatly restricted. Except in the camp at Muthanga, most of the other camps maintained animals tethered during the entire period. Waste management was a problem in all the camps. Although the camp at Konni had fixed a practice of making paper out of elephant dung, which did not gain much success. Sizeable feed waste also added to the problem.

Work for elephants in Tamil Nadu included conflict mitigation, weed control and providing safaris to visitors (Varma *et al.,* 2009). Work was occasional and there was proper division of work-load depending on age of animal and season. In Kerala, most of the animals were maintained for public viewing, few were used for safari rides at the camps. Use of animals from camps for festivals and processions has greatly reduced. Few animals housed at the Muthanga have been trained as kumkis, however the state depends on elephants from Tamil Nadu in most cases of conflict mitigation.

Fig. 3. Animals kept intensively (Kerala)

Fig. 4. Animals kept extensively (Tamil Nadu)

Healthcare of animals was given utmost importance in both the states. The camps had the services of a registered veterinarian at all times. Diet for each animal was fixed; regular vaccinations and deworming were done. Routine veterinary records were maintained for each animal. One major

drawback in the extensive systems was the quick spread of parasitic infections among herd members (Vanitha *et al.,* 2011). Frequent faecal sample analysis was performed at the camps. Foot problems were often reported in the camps of Kerala.

Stereotypic behaviours are monotonous, consistent and worthless acts which an animal in captivity performs. These acts have been greatly linked to the poor welfare conditions of captive animals (Mason, 1991). All the bulls that were maintained in camps like Kodanad and Konni exhibited this kind of behaviour. This could be attributed to the low levels of stimulation and poor welfare (continuous tethering) of animals in these camps. This finding was supported by the findings of Jordan (2005) that low levels of stimulation in captive environments can result in boredom and lethargy, outcomes of which were displayed in the form of stereotypic behaviour. Most of the animals in forest camps of Tamil Nadu did not exhibit such kind of behaviour. Only one animal at Mudumalai camp exhibited stereotypic behaviour for a short duration when it was made to wait for the daily ration.

Lack of training was a major shortcoming in camps of Kerala. The camps have a high density of young animals which have good potential to serve the department in various ways. However, it was noticed that none of the animals were being imparted training. The department did not possess the necessary infrastructure or the personnel to train the animals. This finding was in accordance with the findings of Easwaran, (2002). Keeping elephants in captivity without imparting proper training was an erroneous practice on the part of forest department. Although elephants have been tamed over several centuries, most of the elephants in captivity today have been wild-caught or rescued. Without proper training these animals continue to exhibit the wild instincts and will be difficult to handle. Strict training at an early age is afforded to all animals in the forest camps of Tamil Nadu.

Deprivation of individual interests and poor welfare were mainly complained by 90% of the keepers in Kerala. Keeper welfare was indeed an important indication of the animal's welfare (Varma *et al.,* 2010). Most of the keepers in Tamil Nadu were tribals and were traditionally involved in handling elephants.

SUMMARY

Elephants being a highly social species should never be housed in a completely intensive system. Kerala forest department can make provisions to house animals in an extensive system within the camp by confining animals in enclosures lined with elephant-proof trenches. This will provide sufficient opportunities for exercise and to socialise with conspecifics. Younger animals in camps should be accorded training at right age, if they are intended to be kept in camps.

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