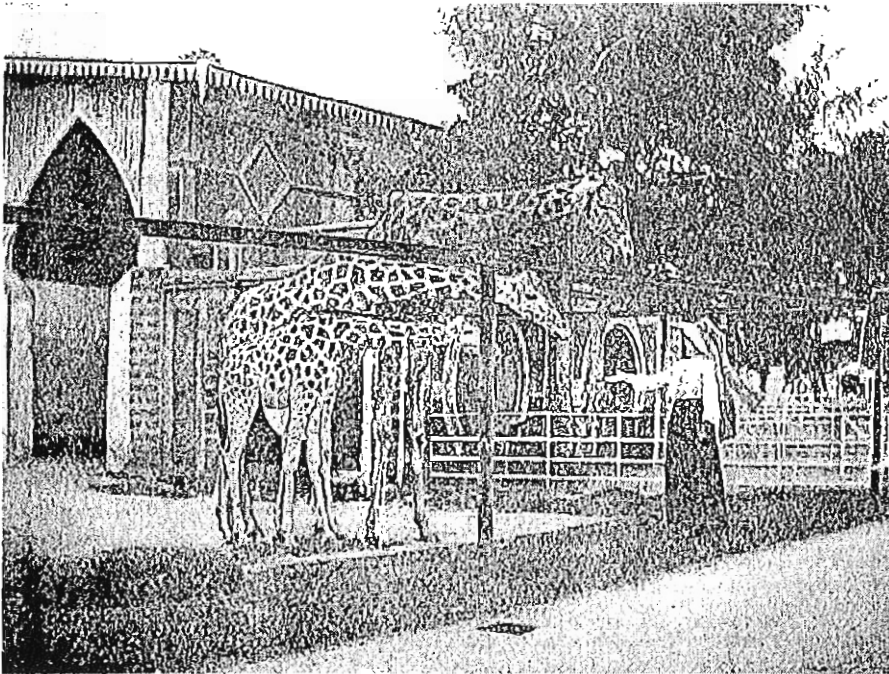


# Hand-rearing of Giraffe Calves at Sri Chamarajendra Zoological Gardens, Mysore

S. S. M.S. Khadri\* and S.C. Valandikar\*\*



Giraffes In Chamarajendra Zoological Gardens many decades ago, when it was still called "The Palace Zoo". Photo courtesy: Mysore Zoo.

## Introduction :

Sri Chamarajendra Zoological Gardens, Mysore was started in the year 1892 by His Highness Sri Chamarajendra Wodeyar. He was a great animal lover and had a passion to collect both Indian and exotic species of wild animals for exhibit at Sri Chamarajendra Zoological Gardens, Mysore.

The Mysore Zoo today also has a very rich collection of wild species. It exhibits about 125 species which includes mammals, birds and reptiles. Altogether there are 1136 individual animals being exhibited in large, beautifully landscaped enclosures.

The Central Zoo Authority of India, a governing body for all the zoos in India has evaluated this zoo as a Large zoo which is equivalent to an A Class zoo. The zoo has beautiful gardens, landscape features and vegetation, enriched animal exhibits, a children's library and audio-visual aids for zoo education.

## Giraffes' habitat :

The tallest mammal on the earth, the Giraffe, belongs to the African continent. They are found in Savanna forests of

South Africa. They are social animals and live in groups. They browse on variety of species of plants and shrubs. The males measure upto 17 feet in height and females around 14 feet. The adult male can weigh upto 800 kilos and females around 600 kilos. They are ruminant animals and hence need bulk food in the form of grass, leaves and tender barks. They do not have a characteristic cry or "voice".

## Giraffe in Mysore Zoo :

Many leading zoos in the world are proud of exhibiting giraffes, as they specially attract children. Sri Chamarajendra Zoological Gardens, Mysore has been exhibiting Giraffes for many decades. The present stock of giraffes were received from the Carl Hagenbeck Zoo of Germany in the year 1987. The male, Henry, and female, Honey, are housed in a large moated enclosure surrounded by trees giving a natural environment for this species.

The male and female started breeding in 1992 and altogether Honey has delivered 6 male calves and 1 female calf. The female giraffe has normal gestation periods of 445 days and experienced no complications during any of her parturitions.

## Births :

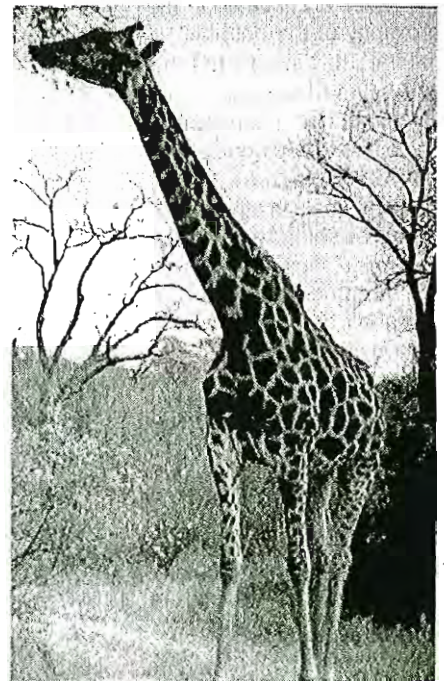
Honey has delivered 7 calves altogether, which are as follows:

1. Male Calf	Born on 24.05.1992
2. Male Calf	Born on 23.10.1993
3. Female Calf	Born on 06.04.1995
4. Male Calf	Born on 06.10.1996
5. Male Calf	Born on 27.08.1998
6. Male Calf	Born on 05.05.2000
7. Male Calf	Born on 07.12.2001

The first three calves survived for one week, 5 months and 21 days respectively. The fourth, fifth, sixth, and seventh male calves survived and were successfully hand-reared.

## Hand rearing of Giraffe calves:

When the female was pregnant for the fourth time, the Zoo authorities took necessary steps to collect information about hand-rearing of giraffes' calves from various leading zoos of the world. The response was encouraging and we were able to receive very important technical guidelines of hand-rearing of



Giraffe in Kruger National Park, South Africa. Photo by Sally Walker.

\*Veterinary Officer, Zoo Hospital

\*\* Assistant Director  
Sri Chamarajendra Zoological Gardens  
Mysore 570 010

Giraffe calves from Los Angeles Zoo, California, USA.

Since her first delivery the female expressed fear towards her newly born calf and never approached it for maternal care. She showed sharp reflexes of fright noticing the movements of the newly born calf. Because of this psychological fear, she did not express normal maternal affection towards her calf.

Attempts were made to tranquilize the mother giraffe to allow the newly born calf to come near, but even under sedation she behaved violently. The female kicked the calf and never allowed it to come close and suckle. The female itself was captive born and bottle fed, having being rejected by her mother. As she lacked exposure and experience, she developed fear towards her own calf.

#### **Hand-rearing preparations:**

Well in advance necessary arrangements of nursing room, exercising yard and staff room were attended. The gestation period is 445 days or roughly 15 months for giraffes. On delivery of the calf sufficient time was given to the mother to study her behaviour. As mentioned above she never showed any maternal care.

#### **Outstanding achievement:**

Based on the guidelines suggested by other zoos, the fourth calf delivered by the female was successfully hand-reared. So having vital information in hand and experience gained, the fifth male calf was also successfully hand-reared. Mysore Zoo may be the first zoo in the country to hand-rear a giraffe calf successfully. Having gotten positive results so far, all arrangements were made for the hand-rearing of the sixth male calf delivered on 5 May 2000 and also the seventh male calf on 7 December 2001.

After parturition, the newly born calf was shifted to the nursing room for disinfection of the umbilical cord. The new-born calf was cleaned with the help of a towel and necessary support was given till he was able stand on his limbs by himself.

#### **Feeding schedule:**

Cows' colostrum was obtained from a cow that had delivered a calf on the same day. The feeding schedule for the first 9 days was as follows:

1. First 72 hours - colostrum 1000 ml - 3 hourly intervals - 8 feedings a day
2. Second 72 hours - 75% of colostrum - 750 ml + 250 ml of whole milk
3. Third 72 hours - 50% of colostrum - 500 ml + 500 ml of whole milk

From the 10<sup>th</sup> day feeding of whole milk was started, the quantity and the frequency remained same during the first month.

In the second month, the calf started taking some quantity of browse, vegetables and concentrates. Sufficient exercise was given to the calf in the exercising yard attached to the nursing room to help in digestion and to maintain good health condition.

The feeding schedule was maintained the same for the whole of the second month. From the third month, the frequency and the quantity of the milk was slowly reduced.

As the calf started taking more roughage, vegetables and concentrates, the quantity of milk fed was correspondingly reduced and finally the calf was weaned after completion of 9 months.

Prophylactic measures like vaccination against foot and mouth disease, deworming and supplementation of vitamins were taken care of.

#### **Hygiene and environment:**

Hand-rearing of Giraffe calves needs close monitoring and observation right from day one. Strict hygiene was maintained in and around the nursing room. Foot baths were provided at the entry point to avoid carrying of infection. Only essential monitoring staff, zoo veterinarians and the concerned keepers were allowed inside the enclosure and the nursing area. Sterilization of all utensils and feeding bottle was done before every feeding. All care was taken to get colostrum or whole milk in a hygienic manner. The keepers were given special clothing to attend to the nursing needs of the calf.

The nursing room was specially prepared with long wall-screen to avoid licking of dust. The ground was covered with clean tarpaulin sheets over straw bed. Bamboo rolling mats were provided in the front and back of the room. Lighting arrangement were also made to nurse the calf during the night hours. Room heaters were used during cold weather conditions.

Facilities for night attendants were made available in the keepers' room. Zoo veterinarians supervised the entire nursing care.

#### **Observation and documentation:**

All the observations, feeding schedule, health condition, supplementations of vitamins and all other prophylactic measures adopted were well documented. Urine output and passing of stools in the form of pellets was measured and its weight was taken. This documentation indirectly helped to assess the health condition of the calf.

The Giraffe nursing room had access to telephone and wireless to communicate with the zoo doctors and the director. The messages were collected and suggestions were passed immediately to attend the situation.

On satisfactory completion of 9 months of nursing period, the calf were weaned. By this time, it was able to support its system entirely by browsing and consuming the concentrates being provided. The calf was still kept under observation and prophylactic measures like vaccination, deworming and supplementation of vitamins were given.

#### **Behavioural pattern of the adults:**

It was very interesting to study the behavioural pattern of the adult Giraffes, especially after parturition. The female was very social and compatible with the male. There was no history of infighting between them. Both male and female had good understanding with their grown up calves Chamarajendra 41/2 years and Krishnaraja 2 1/2 years. The male was very loving and affectionate to the newly born calf, and went near the new-born calf and licked it but the female was frightened of her newly born calf.

#### Team acknowledgements:

The zoo authorities took up the challenge to nurse the young one of the female Giraffe. Mysore Zoo acknowledges due regards to Los Angeles Zoo, California, USA for sharing their experiences and providing technical guidelines for the hand-rearing of giraffe calves. The attempt to hand-rear both the calves (fourth & fifth) and the recent seventh one born on 07.12.2001 were successful. It gives great satisfaction to all team members who assisted and nurtured the desire to successfully hand-rear the Giraffe calf. Special thanks must go to the keepers Shri. Nanjundappa Govindappa, Shri. Mahadevappa and Senior Assistant Uday Kumar and Dr. Gopal Rao who shared the responsibility round the clock during the crucial period of first 3 months of hand-rearing. They took all pains to monitor the whole operation from day one. It is their

rapport with the keepers and sense of understanding that they enjoy with the teammates that gave a fruitful result. The Director of the Zoo Shri. N. Rajasekhar played a vital role in mobilizing all the requirements necessary for a successful hand-rearing operation. The whole team enjoyed his confidence, which aided in this success. Gaining more strength with the knowledge and experience we are attempting to hand-rear the seventh male Giraffe calf born on 7.12.2001. The current Executive Director, Shri. Kumar Pushkar, took much interest and trouble to hand-rear the seventh male Giraffe calf. Thanks are due to him for his encouragement and care of the Giraffe calf and personal interest in hand-rearing it successfully.

### DEATH OF CHIMPANZEES IN LUCKNOW ZOO \*

The tragic death of two chimpanzees in a span of one month in Lucknow Zoo has shocked and saddened Lucknow residents, administrators, media and wildlifers with equal force. Chimpanzees, Cheena and Sunny, were the most loveable and friendly animals of the Lucknow Zoo for the last twelve years.

Cheena, a female chimpanzee died on the 2nd of February, 2002 at 2.40 pm. The post-mortem of the animal revealed that the death was due to bursting of tuberculosis pustules. The tuberculosis poison was found in the entire body of the animal. Before death the chimp never showed any external symptom of tuberculosis. She was born on 15th August, 1985 in Australia and brought to the zoo on 3rd October, 1999 from Nehru Zoological Gardens, Hyderabad.

Apparently reacting to the sudden death of his partner, Sunny, the male chimpanzee started avoiding food, and became very weak. In the meantime the death of Cheena suggested to the administration for testing of Sunny for tuberculosis. On finding him positive for tuberculosis, the doctors immediately started to medicate the animal. Initially he showed a positive response to the drugs, but from February 20th, 2002 onwards he became severely ill. Again the zoo administration ordered other tests including HIV, which was found negative. On 27th February the animal took food at the normal time but by evening he suddenly became sick, so the doctors shifted him to the hospital for intensive care and treatment. Though the doctors attended the animal throughout the night, Sunny breathed his last at 5.15 am on 28th February 2002, which shocked the entire zoo family.

Sunny was born in December, 1987 in Kanpur Zoo and was brought to this zoo when he was three months old on 3rd February, 1988. Since then Sunny was the darling of the keepers, administration and visitors. Both Cheena and Sunny lived in the same enclosure till they died.

The death of two chimpanzees by tuberculosis has once again reinforced the importance of screening of the zoo keepers and inmates for diseases and their separation and treatment and for the modernization of zoo hospitals. The Central Zoo Authority has suggested such measures to save the wild animals dying from diseases. Now the Lucknow zoo is left with no Chimpanzees.

\*Submitted by B. Prabhakar, IFS, Former Director, Lucknow Zoological Gardens, Lucknow, U.P.