

MODERN HOUSING FACILITIES FOR BREEDING OF ELEPHANTS IN SRI VENKATESWARA ZOOLOGICAL PARK, TIRUPATI, ANDHRA PRADESH

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Introduction

The Asian Elephant (*Elephas maximus*) is distributed in four regions in India. First region is southern consisting of Karnataka, Tamil Nadu and Kerala. Second region is Central India consisting of Orissa, Madhya Pradesh, Bihar and West Bengal. Third region is foothills of Himalayas in Uttar Pradesh. Last region is North-eastern region consisting of Assam, Meghalaya, Tripura, Nagaland and Manipur. The Asian Elephant was occurring in Andhra Pradesh in abundance long back. Jean Baptist Travenier, a French traveller who travelled through the forests of Chittoor District in 1652 has recorded the presence of Elephants and their capture by pit method. Thereafter, the increasing biotic pressure on the forests, forced the Elephants to retreat into the deep jungles of Tamil Nadu from Andhra Pradesh. After a gap of about 200 years one Elephant herd consisting of 7 Nos. re-entered into Andhra Pradesh from Tamil Nadu State on 4-3-1984. The Elephants entered in Kuppam Range of Chittoor West Forest Division in Chittoor District. Today there are about 42 Elephants in Chittoor District. The Government of Andhra Pradesh have notified the Elephant area as Koundinya Wildlife Sanctuary with an area of 358 km² in 1990 and took all measures for conservation of Elephants.

Capturing of Wild Elephants

Sometimes, tuskers are coming out of the herd and damaging the crops and killing human beings. In Andhra Pradesh during the last 12 years, 39 people lost their lives and about Rs. 12 lakhs compensation was paid in 2,353 cases of crop damage due to Elephants. About 10,000 acres of Sugarcane, Paddy, Ragi, Coconut, Groundnut and Mango crops were damaged. The Forest Department of Andhra Pradesh has captured 4 Elephants in the last 7 years. One baby tusker was captured when it wandered to the Bay of Bengal beach in Nellore District in 1986. Two tuskers were captured in Tirumala hill forests in 1994. One tusker was captured in Kuppam Range in 1996. All of them were captured by tranquilization method and they were sent to Sri Venkateswara Zoological Park, Tirupati for maintenance.

Breeding Programme of Elephants in the Zoo Park, Tirupati

As all the four Elephants in the Zoo Park are males, one male is exchanged with one female from Nehru Zoological Park, Hyderabad for breeding purpose. It is proposed to bring another female Elephant also at Tirupati from Hyderabad Zoo to keep proper sex ratio for the breeding

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programme. Bringing of more number of Elephants necessitated the Zoo Park to provide housing facilities for the Elephants. Tirupati is a hot place and the mercury touches about 45 °C in the peak summer. The type of natural vegetation in the Zoo Park is a scrub forest with predominance of *Zizyphus xylopyrus*, *Acacia sundra* and *Dolichondron crispera*. The natural vegetation does not provide much shade to the Elephants. Many plant species have been planted in the Zoo to enrich the environment for the last 3 years but they need some more years to grow. Hence the protection of Elephants from the scorching sun necessitated providing shelter to the Elephants.

Housing facilities

Keeping in view the size of the Elephants, 8 m x 6 m compartment is provided for each Elephant. Totally 4 such compartments were constructed. Height of 5.5 m is provided to avoid damage by the Elephants trunk. The pillars were fabricated with iron angles 7.62 cm wide and 8 mm thick. They were fixed to the tower bolts embedded in the cement concrete to a depth of 1 m with base plates. Sloped roof with A.C. sheets is provided for easy drainage of rain water. Flooring is "U" shaped with 2 m central flat area and 1/4 slope on either side for 2 m for easy lying down and convenient bedding of the Elephants. Two hooks in the front side and two hooks in the back were embedded in the cement concrete upto 30 cm depth for tying of opposite legs. The structure faces towards North and runs along East-West direction to minimise the sun effect.

Flooring is raised to 0.45 cm aboveground level to avoid drainage from the surrounding area. Ramp is provided for

each compartment for easy access. As the height of the structure is 5.5 m in the Northern side, 6 m in the Southern side and open in all directions there is good ventilation and free air circulation and the area inside the shed is cool. Slope is provided in the flooring to drain out water into the drainage channel provided at the back.

Bathing facilities

As the Elephants are fond of water and love to spend more time in water, one pond is constructed with 34 m diameter for providing bathing facilities to the Elephants. In the pond the central 10 m area is flat with a depth of 2 m and from the 11 m to 22 m uniform slope is provided. The pond is constructed to give bathing facilities for the Elephants. The flooring is provided with 10 cm thick cement plastering and 20 mm cement plastering over that. This water facility for the Elephants was constructed by the Tirumala Tirupati Devasthanams.

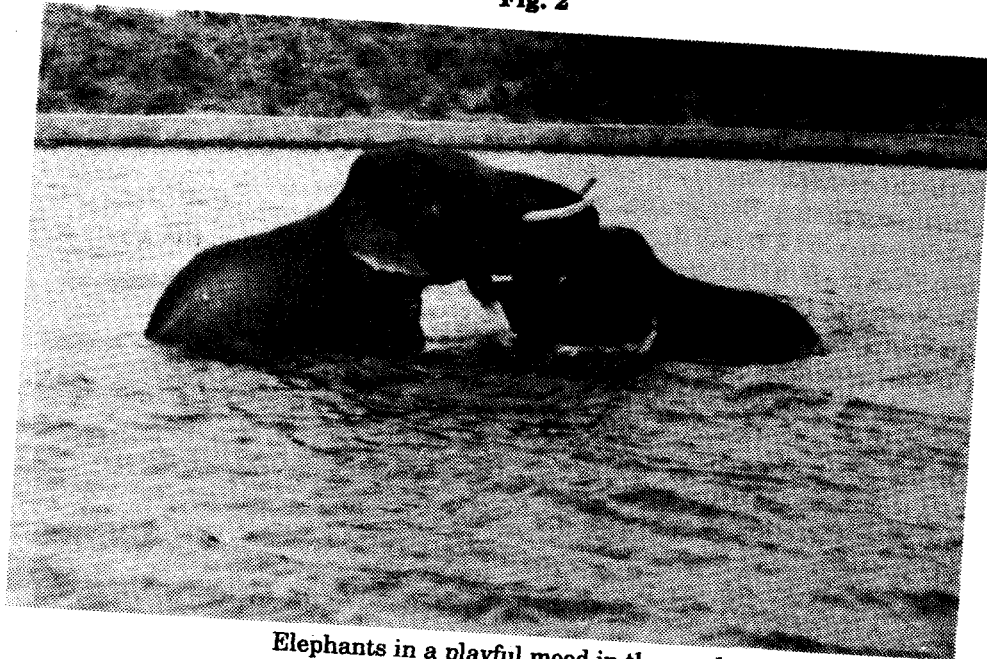
A 5.08 cm G.I. pipe line is provided to draw water from a nearby bore well. 30 cm dia. RCC hume pipes were used as outlets to drain out the used water from the Pond. The Elephants will be given a shower bath before taking them into the water pond to avoid contamination of the water pond. 30 cm high wall is provided at the rim of the pond to avoid entry of rain water from the surrounding area.

Drinking water facilities

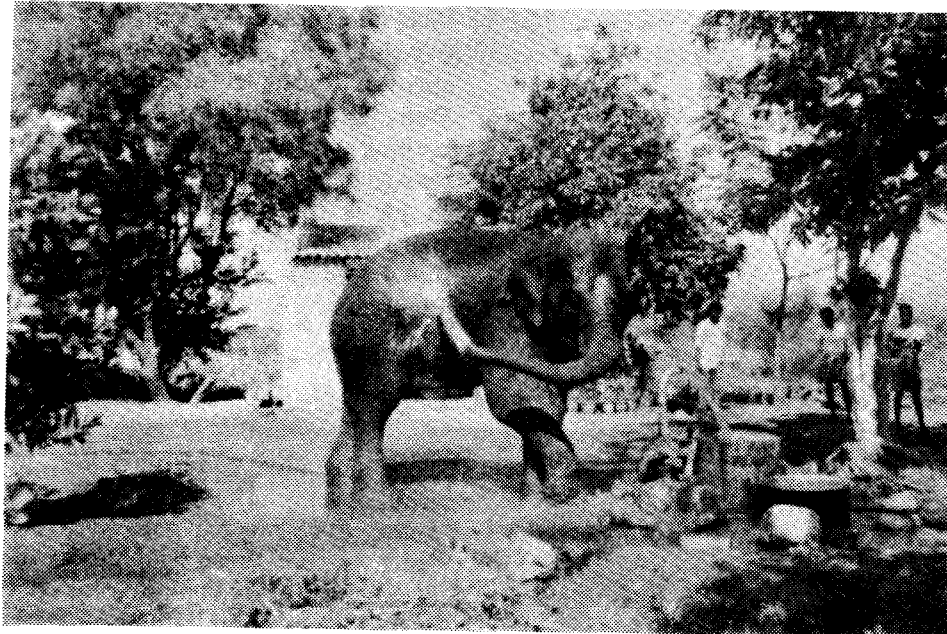
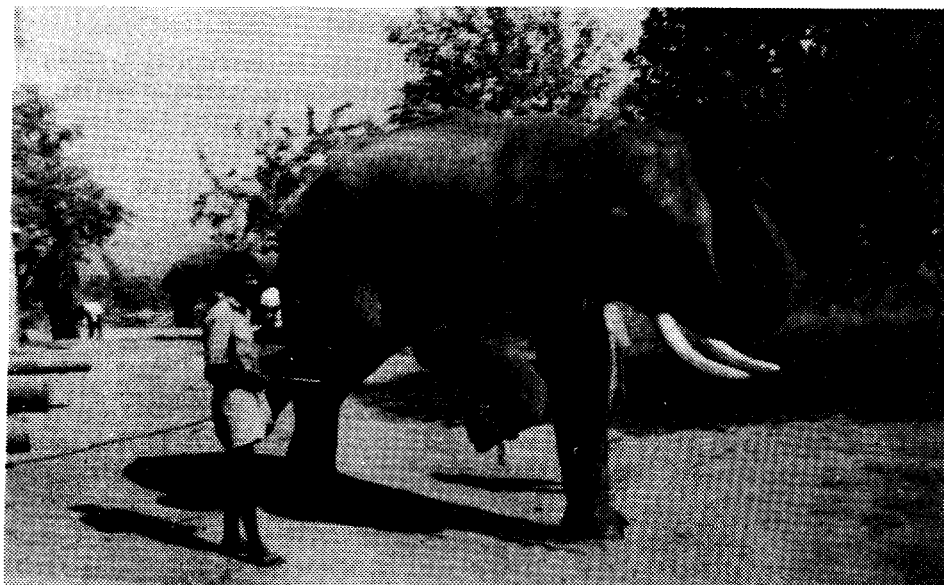
One water tub in cylindrical shape with a diameter of 2 m and 1 m height is constructed to provide drinking water facilities to the Elephants. Pipe line is also extended to the drinking water tub and to all the 4 compartments in the shed for cleaning the flooring and Elephants.

Fig. 1

An overall view of the Elephant housing facilities with the Elephant pond behind

Fig. 2

Elephants in a playful mood in the pond

Fig. 3**Female Elephant enjoying her bath by spraying water with her trunk****Fig. 4****Elephant being taught to obey a command**

Diet schedule of Elephants

Ragi flour of 5 kg, 1 kg horse gram, 150 gm jaggery, 75 gm of salt is given in the form of balls to Elephant both in the forenoon and afternoon. 2 kg Beet root or Carrot is given daily to each Elephant. In addition, 150 kg of grass fodder is supplied at the shed for each Elephant daily. They are taken within the Zoo area in the morning and evening for browsing on the forest vegetation.

Prophylactic measures

Daily, all the compartments of the shed are cleaned and the dung and the left over fodder material will be removed. They are washed thoroughly with bleaching powder and phenol alternatively. Neem oil is applied to the tusks and nails of the Elephants to avoid insect attacks. Castor oil is applied daily on fore head to minimise sun effect

and on legs to lessen the abrasion effect of chain. Deworming is given with 'Albendazol' (500 ml) once in 3 months to screen the parasitic diseases. Bleaching powder is sprayed around the shed once in a month. Dung and other dirt will be removed from bathing pond daily and water will be changed once in fifteen days. One retired veterinary doctor is engaged on part time basis (as there is no sanctioned post of veterinary doctor) to look after the health of the Elephants.

Conclusion

As all ideal conditions were provided in all aspects like housing, bathing, drinking water, diet, medical check-up etc., it is expected that these Elephants will breed successfully in Sri Venkateswara Zoological Park, Tirupati and help in conservation of this endangered species.

SUMMARY

The paper deals with the breeding of Asian Elephant (*Elephas maximus*) in Sri Venkateswara Zoological Park, Tirupati. The facilities provided to them like housing, bathing, drinking water, diet schedule and prophylactic measures are reported.

श्री वेंकटेश्वर प्राणि उद्यान, तिरुपति, आन्ध्र प्रदेश में हाथियों का प्रजनन

करने के लिए आधुनिक आवास सुविधाएं

एस०वी० कुमार व पी०एस० राघववैया

सारांश

इस अभिपत्र में श्री वेंकटेश्वर प्राणि उद्यान, तिरुपति में एशियाई हाथी (*एलिफस मैक्सिमस*) का प्रजनन कराने पर उपचार किया गया है। इसमें उनको दी गई रहने, नहाने, पानी पीने, भोजन तालिका और निरोधी उपायों की सुविधाओं का वर्णन दिया गया है।