

Disappointed with the results of his mating, the Maharaja then arranged the pairing of a female offspring of the second litter named 'Radha' with 'Mohan'. Mating of this father-daughter pair resulted in the birth of four white cubs (one male and three females) on 30 October 1958. This was the first birth of white tigers in captivity and afterwards, several white tigers were bred with this pair and their offspring.

One of the female white tigers of the first litter was sold to National Zoological Park, Washington D.C., U.S.A. at the end of 1960. After that the Government of India imposed a ban in 1960 on export of white tigers and made an agreement with the Maharaja of Rewa in 1963 that he could sell a pair of white tigers to Bristol Zoo in England in 1963. Two white tigers (1.1) of the first litter were sent to Delhi Zoo in 1963 and all the three cubs (one normal-coloured female and two white) of the second litter were sent to Alipore Zoological Garden, Calcutta in 1963. All these white tigers and their offsprings are the descendants of the white tiger 'Mohan' and the coloured tigress 'Begum' and they may be referred to as white tigers of Rewa origin.

#### Genetics of Newborn White Tiger Cubs

Reema was born on 19<sup>th</sup> December 1995 to Sukant, a white-coloured male and Durga, a white coloured female. Rupesh, recent father to our cubs was born on 18<sup>th</sup> March 1996 to Debashis, a normal-coloured tiger and Jamuna, a white-coloured female. Both were born in Nandankanan Biological Park, Bhubaneswar. They were brought to Lucknow Zoo on 27<sup>th</sup> November 1997 from Nandankanan Zoo in exchange of six Swamp Deers.

Both the parents are chalky white-coloured felines marked with black stripes, with pink nose and palm pads and icy blue eyes. Rupesh is a little larger than Reema.

The body colour of the cubs is white with icy blue eyes, pink nose and palm pads. Like the parents, their skin is chalky white mixed with light black and black stripes.

Since Reema, the white female tigress is born to homozygous recessive white male and homozygous recessive white female tiger it must be homozygous recessive for the white coat colour genes. On the other hand Rupesh is born to heterozygous normal male and homozygous recessive white female it must be homozygous recessive for white coat colour. Finally when both homozygous recessive for white coat colour parents Rupesh and Reema were mated they produced all white coat colour litter.

## Successful Rearing of Indian Sarus Crane (*Grus antigone antigone*, Linnaeus) in Lucknow Zoo

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On August 10, 2000 an egg of Sarus Crane (*Grus antigone antigone*, Linnaeus) hatched a yellowish coloured chick about the size of an ordinary, newly hatched chicken. The news of this hatching created much interest in the Zoo, the press and general public.

The birth of a Sarus Crane chick in the Lucknow Zoo is significant for several reasons, e.g., i) siblings of Nal and Dhamyanti had not survived in any earlier attempt, ii) there was a notion that no captive born Sarus Crane had survived in any zoo, and iii) declining population of the species in the wild.

Dr. R.L.Singh, Chief Wildlife Warden, Uttar Pradesh and Administrator of the Zoo named this chick "Happy" in order to give it a positive start in life. He congratulated Zoo Veterinarians Sri. Paramjit Singh, Zoo Veterinarians Dr Utkarsh Shukla and Dr. Ashok Kashyap and Keepers Kallu and Nandan Singh with full support for successful rearing.

Lucknow Zoo has had three pairs of Sarus Cranes, one in the Duck Pond closed enclosure; one in the Barasingha open enclosure and another in the Deer Park for more than two and half decades but without a recorded date of their arrival. The oldest keeper of the Zoo claims the parents of the new born chick had been in the Zoo as a pair for more than 27 years, sharing their habitat with Barasingha and Black-necked Storks in a 60x100 m. enclosure.

Sarus cranes are large, tall birds, gray in colour with bare red legs and naked red head and upper neck. The male is larger than the female. According to Zoo Vets and Keepers, this pair of cranes, had laid eggs on many occasions in the last 27 years but they were destroyed by rain or winds, by



Two day old Saras Crane chick at Lucknow Zoo.  
Photo by Utkarsh Shukla

other birds of prey, or eaten by mongoose. On some occasions the mother did not sit on the eggs. On three occasions this pair successfully hatched eggs but survival rate was poor and accidents claimed some chicks.

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The present chick is the third time this pair of cranes had hatched a chick. Zoo vets and keepers took precautions based on other accidents.

Both parents participated in care of the chick. Safety precautions were put into force immediately with the Black-necked Storks shifted from the Barasingha enclosure, where, previously they had fought with the new chick. A keeper was assigned to watch for predation from other birds and mongoose and general problems.

On 20 August 2000 a male Barasingha in the enclosure suddenly attacked the new born chick. The male crane defended the chick and fighting continued for half an hour before they could be separated. The male bird was injured on the right leg and was treated on site by the Zoo vets but the injury became serious and the bird was shifted to the zoo hospital, where he remained for 5 months. The barasingha was even more seriously injured and was shifted to the zoo hospital where it died on 21 August 2000. During post mortem it was found that the male crane had punctured the trachea of the barasingha which died of respiratory injury.

After this incidence additional caution was taken to protect the adults and chick. Keepers of the neighboring enclosures also kept watch over the new chick and senior zoo staff increased their rounds to the enclosures. This extra caution and safer environment reduced the burden of the parents who quickly taught the chick the habit of collecting food, feeding, resting and protecting itself from enemies. Within a few months the chick attained normal growth.

After nearly two months, the chick started opening its wings, enjoying flight in the open enclosure, and causing much tension to the Zoo administration. On 2nd October 2000 when the Zoo administration was busy in Wildlife Week celebrations, the chick tested its flying skills by flying to the feeding gallery of the deer line and other places. Keepers had a hard time catching her. The adults were very anxious, and moved about the enclosure in a restless manner, making their typical trumpeting calling sounds. Finally the chick undertook an extended flight over a nearby road, dangerously close to electric lines which proved to be too much for the zoo staff. The chick and its mother were summarily moved to the zoo bird line where they were joined by the father upon his release from hospital.

#### Diet

Before the hatching parents were given food comprising of Dhal, Channa, Choukhar, Bajra, Wheat, 200 grams and fish 100 grams. Afterwards the food was supplemented with chopped potatoes, peanuts and mash of boiled eggs. The cranes stopped taking chopped potatoes after sometime but they continued eating boiled egg mash and peanuts apart from above food even today. During rainy season, the chick and parents were given collected earthworms which they relished.

#### Release of captive crane

On 10th August, 2001 when the crane was one year old, it was taken to Parvati Aranga Sanctuary for the wild release. This step was taken based on the wishes of wildlife



Eleven months old Saras Crane chick.  
Photo by B. Prabhakar

conservationists who were contacted via opinion poll. Notable wildlife conservationists campaigned for the bird's release, including Smt. Maneka Gandhi, Honourable Minister of State for Social Justice and Empowerment, GOI, Poorra Josphura of Peoples for the Ethical Treatment of Animals (PETA), Mumbai, Nickey Hewitt of Born Free Foundation, Suma Ramesh of Animal Care trust, Mangalore, S. Dharmananda of Adhatma Sadhana Kendra, New Delhi, Pradeep Kumar Nath of Visaka Society for Prevention of Cruelty to Animals, Vishakapatnam, Annie Mals of The Peaceful Kingdom, California, USA, and Bassam Imam of Quebec, Canada just to name a few. A total of 310 animal lovers responded to the appeal given for an opinion on the release of the captive crane. Out of this number, 255 wildlife enthusiasts favored the release of the bird and 55 animal lovers did not favour the idea. Apart from the poll, zoo received 753 written letters and e-mails from individuals from 20 different countries and 20 Indian cities. In these letters 683 wildlife conservationists favoured release and 70 did not.

Taking advice from Sarus crane experts the chick was separated from the adults at the age of 11 months and 6 days. Mr. K.S. Gopi Sunder, Scientist, Wildlife Institute of India, the bird was tagged with yellow, orange and green bands on both legs on 20th July, 2001 for the identification in the wild. On the same day after it was released in the Parvathi Aranga Sanctuary in Gonda district of Uttar Pradesh it was observed that within one hour she had found a companion.

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