

The milk came exclusively from tuberculin-tested and disease-free cattle. It was delivered fresh and chilled at 2–6°C (35–43°F) to the factory where the milk was pasteurised at 72–74°C (162–165°F) for 40 seconds and cooled to 2°C (35°F). During this process the milk was homogenised. The appropriate milk ration was delivered to us daily in one-litre bottles sealed in the dairy and stored in the refrigerator. The required number of bottles was brought up to the correct temperature in good time ready for feeding. After removal of the sealed cap a sterile rubber calf's teat was drawn over the neck of the

bottle and the milk was then fed to the animal. By this simple method the pasteurised milk reached the animal to all intents and purposes germ-free.

The keepers played with the calf twice a day in the paddock and encouraged it to walk. Like the mother the calf had the habit of pressing the rear part of its body against the wall of the den when defaecating. Those parts of the body which were soiled by this were washed and oiled every day.

Its increase in size and weight is very similar to that of the Basle Zoo's young rhino which was reared by its mother (see Table 1).

## Breeding the Great Indian rhinoceros

*Rhinoceros unicornis*

### at Mysore Zoo

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As a result of the resolution of the Indian Board for Wild Life that all the zoos in India should exhibit the Great Indian rhinoceros *Rhinoceros unicornis*, 'Rani,' aged about 18 years, was given to the Mysore Zoo by the Assam Government on 3 July 1956. Efforts to procure a male rhinoceros to give company to Rani were set afoot and on 28 April 1965, 'Kasi,' a male rhinoceros was obtained. Kasi had to remain in his crate for a few days to enable a wound in his front leg to be attended to. During this time the crate was kept very close to Rani's enclosure to enable them to get acquainted.

Rani took it quite happily and began to flirt in front of Kasi's crate. On the 6 May 1965, Rani came into oestrus and lay in front of Kasi's crate with mucus flowing from her vagina. Kasi was also noticed to be on heat, but because of the wound in his leg he was not let out of the crate.

On 21 June 1965, Kasi was released into Rani's enclosure. Instead of being friendly, the two rhinoceroses stood aggressively at a distance making a shrilling noise. At about 1830 hours the same day the male attacked Rani, inflicting severe injuries on her and we therefore separated them.

Two days later, Rani quietly moved into the open enclosure to meet Kasi and timidly stood in one corner facing him. Rani tried to display her subordination to Kasi by frequently going to the pond and eating the faeces of the male. Gradually they came closer and began to eat nearer to each other. They frequently fought with their horns but would draw back without hurting each other.

On 27 July 1965 Rani again came into oestrus and began to follow Kasi around. They both lay down frequently. Since Rani refused food but Kasi took his it could be inferred that Kasi had not yet come into heat.

Rani came into oestrus regularly on 27 August, 29 September, 20 October and 21 November 1965, and 26 January and 17 February 1966, but the male did not come into heat.

On 20 March 1966, Rani again came into oestrus and started moving behind Kasi, lifting her tail. Kasi was also ready this time and mounted Rani. The copulation, in a standing position in the open, was successful and lasted for one hour between 1400 and 1500 hours.

The male came on heat again on 5 May 1966 and tried to mount Rani, but she was not ready. They fought with each other and had to be

separated. They were again brought together on 9 May 1966. Though they appeared ready to fight at first, they became friendly and copulated in a standing position in the open for 45 minutes from 2100 hours. Mating again took place for one hour at 2000 hours on 17 June 1966. Subsequent matings were recorded for 45 minutes from 1245 to 1330 hours on 25 July 1966; for 30 minutes from 1300 to 1330 hours on 14 September 1966 and finally for 45 minutes from 0930 to 1015 hours on 15 October 1966. All the matings were in a standing position and there was always full penetration. They continued to live in the same enclosure but away from each other.

Rani's mammae and abdomen were noticed to be enlarging on 4 May 1967. Her behaviour to her mate changed from 20 October 1967 when she started to drive him away from her. On 2 November 1967 Kasi and Rani again fought with each other and eventually they had to be separated.

On 28 January 1968 Rani behaved aggressively to any person, including the keeper, trying to enter her enclosure. She ate her food at 1600 hours on 13 February 1968 and at 1645 hours went to the shelter and lay down. At 1745 hours Rani gave birth to a male calf. The forelegs of the calf were delivered first at 1730 hours. Complete

delivery took 15 minutes in complete privacy after a gestation period of 486 days. Soon after delivery Rani licked the newborn rhinoceros.

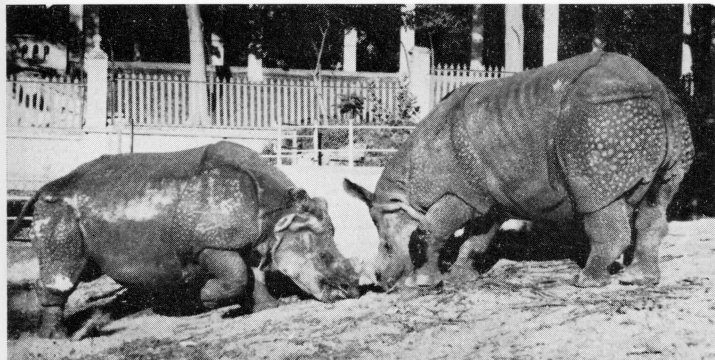
The calf was the size of a half grown pig, brownish in colour and the skin was wrinkled as in adults. Hair could be seen on the margin of the ears and tip of the tail. His toes, which were whitish at birth, began turning black after one hour. The place which the horn would develop was marked by a white patch. The calf began to struggle to stand up 30 minutes after birth and succeeded during the next 30 minutes. He was seen to be walking steadily to his mother at 1900 hours the same day, and to be searching for the mammae. He was able to locate the teats at 1945 hours and suckled with a zingling noise. The calf suckled three times between 2030 and 2200 hours, and for five minutes each time.

Mother and calf came out of the shelter at about 1700 hours on 14 February 1968 and attempts by the male rhino to get at the calf were thwarted by the mother. The next day the calf was seen to be running and playing round his mother at about 1500 hours. She was teaching him how to charge and how to defend himself.

Suckling from 16 February 1968 to 18 February 1968 was observed as follows:

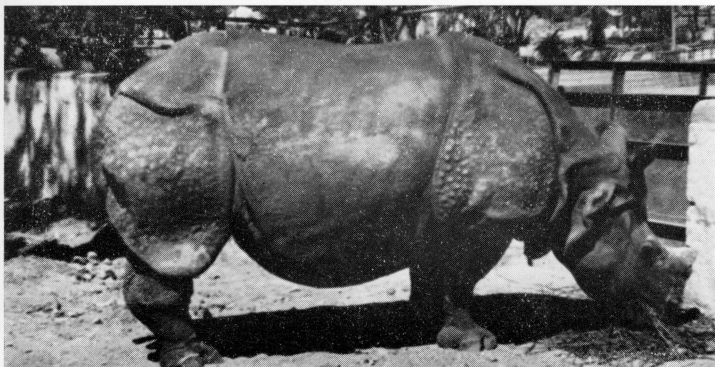
16 FEBRUARY	17 FEBRUARY	18 FEBRUARY
0800 hours for 5 minutes	0800 hours for 5 minutes	0630 hours for 10 minutes
0930 hours for 5 minutes	0830 hours for 6 minutes	0800 hours for 6 minutes
1000 hours for 5 minutes	0900 hours for 5 minutes	1000 hours for 4 minutes
	1200 hours for 6 minutes	1030 hours for 8 minutes
	1300 hours for 5 minutes	1545 hours for 2 minutes
	1400 hours for 5 minutes	1730 hours for 4 minutes
	1745 hours for 5 minutes	

The horn appeared on 21 February 1968.

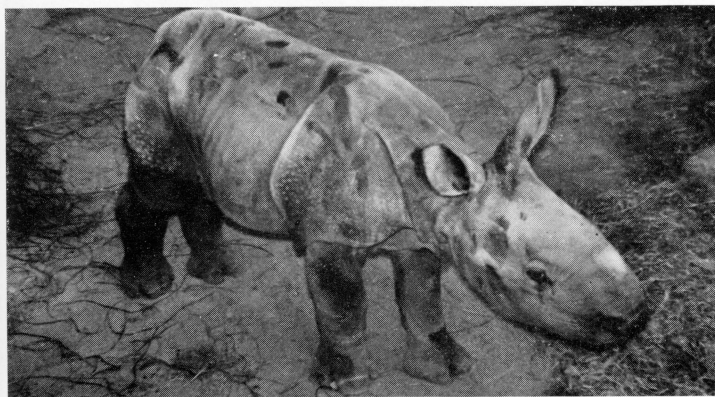


42-45. A Great Indian rhinoceros *Rhinoceros unicornis* was born on 13 February 1968 at Mysore Zoo and has been successfully reared by its mother (see page 101). Mating was not uneventful as the parents fought when they were first introduced (42). However, copulation took place in May, June, July, September and October 1966 and the gestation period is thought to have been 486 days. Photograph 43 shows the female at full term. Delivery was completed in 15 minutes and the baby was able to stand an hour later (44). Two hours after birth he located the mother's teats and began to suckle (45).  
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