

Lactating elephant feeds a day-old orphaned calf

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In the early morning of 14 October 2002, a day-old female elephant calf was brought to the Elephant Orphanage at Pinnawala, Sri Lanka by the officers of the Department of Wildlife Conservation. The Director of the National Zoological Gardens named the calf Tikiri (Sinhala for 'little one'). As the baby was very thirsty on arrival, it was given normal saline and 4% Dextrose to drink. At 0630 h, the calf was examined by the veterinary staff and found to be alert, active and highly excited. On examination, a wounded and oedematous umbilicus, bruises over the vulva area and on the lower lip, as well as minor injuries all over the body were observed. All wounds were found to be infected and were cleaned and dressed with surgical spirit and povidone iodine solution. Moreover, negasunt powder mixed with margosa oil was applied to the vagina in order to prevent maggot infestation. To control bacterial infection, intra muscular injections of Strepto-penicillin forte (Penicillin+Streptomycin combination) were administered for five consecutive days. It was decided that Lactogen Formula II milk powder with a dilution of 3 scoops per 200 ml of boiled water was to be given to the calf at every one and half hour interval. Tikiri gulped her first meal in a couple of seconds via a rubber feeding tube as she was extremely hungry, but her second meal given by the same method was rejected. Therefore an infusion wire was fixed to the bottle that allowed the calf to suckle the free end of the tube and it proved successful. Greater efforts were required to administer further meals to the calf. She was reluctant to feed even though the method of presentation was changed, and preferred normal saline to milk. The following morning, the calf was observed to pass watery stools but remained alert and had a good appetite. The body temperature had increased to 98°F and rehydration fluid (known locally as Jeevani) was fed with milk. Diarrhoea was not observed again that day with the calf retaining a normal appetite. On the third day, yellowish watery stools were noticed, therefore 1/3 of a 3-care bolus (Halquinol bolus) was administered orally 3 times a day for 5 days.

Due to Tikiri's intense loneliness, it was decided that a tame female elephant called Noni should be brought in to care for the calf. Noni is a very gentle female known to look after calves very well. She welcomed Tikiri warmly with gentle caressing with her trunk. The calf was pleased with her new 'mama' and was soon comfortable enough to suckle Noni's dry breast. This behaviour encouraged us to introduce a lactating female to the calf. Thus Komali was selected given her great maternal instincts and the fact that she is known to

allow other calves at the Elephant Orphanage to suckle from her. Komali has a history of nursing and adopting her grandson when her daughter refused to feed her infant calf. Even though she was a good mother, there was a risk of introduction since Tikiri was a stranger. Finally Komali was introduced to Tikiri, with all the precautions to remove the calf as quickly as possible should an emergency arise. Fortunately, this attempt proved very successful and Komali began to nurse the hungry orphan.

Komali was kept in the shed with Tikiri starting from day four, while her grandson Migara was sent out with the herd. Two and one-half year old Migara was being bottle-fed in order to meet his nutritional requirements. In addition to Komali's milk, Tikiri was fed with Lactogen Formula II, ten scoops of it in 500 ml of boiled water at two-hour intervals. The calf was more active, alert and developed a good appetite and passed solid faeces. Komali cared for Tikiri as if she was her own calf, but Migara's cries in the field would alarm her, causing her to try and escape, and in the process push Tikiri out of the way. For this reason, it was necessary to keep Migara quiet and so every attempt was made to feed him on time. Due to the risk of Tikiri getting hit by Komali, extreme vigilance was exercised while supervising the pair, whenever Migara was away in the field. Komali adopted Tikiri in this way during the first two weeks, which are the most critical period of life as far as hand-reared elephant calves are concerned.

Feeding orphaned calves in the early stages their lives is the most challenging task for managers of elephants in captivity. The calves can very easily suffer from diarrhoea once they are introduced to powdered milk, even when it is half-cream. Sometimes the diarrhoea may be due to bacterial, protozoal or fungal infections. Stressful conditions such as separation from the mother, the herd or the habitat, or even transport, starvation and dehydration can lead to diarrhoea. There can also be nutritional factors such as lactose intolerance or simple indigestion due to the high fat content of the artificial feed causing diarrhoea. The condition is exacerbated should the calf fails to get colostrum from its mother within the first five days following birth.

Introducing a nursing cow elephant to care for orphaned calves turned out to be the best solution given the circumstances. Such a management treatment reduces the stress suffered by the rescued calf, and provides an opportunity for it to receive the best milk and care from the foster mother, who knows what to do better than even the best mahout assigned to its care. Nevertheless, the constant attention and vigilance of the mahout is essential, given that the lactating cow is not the real mother of the calf.

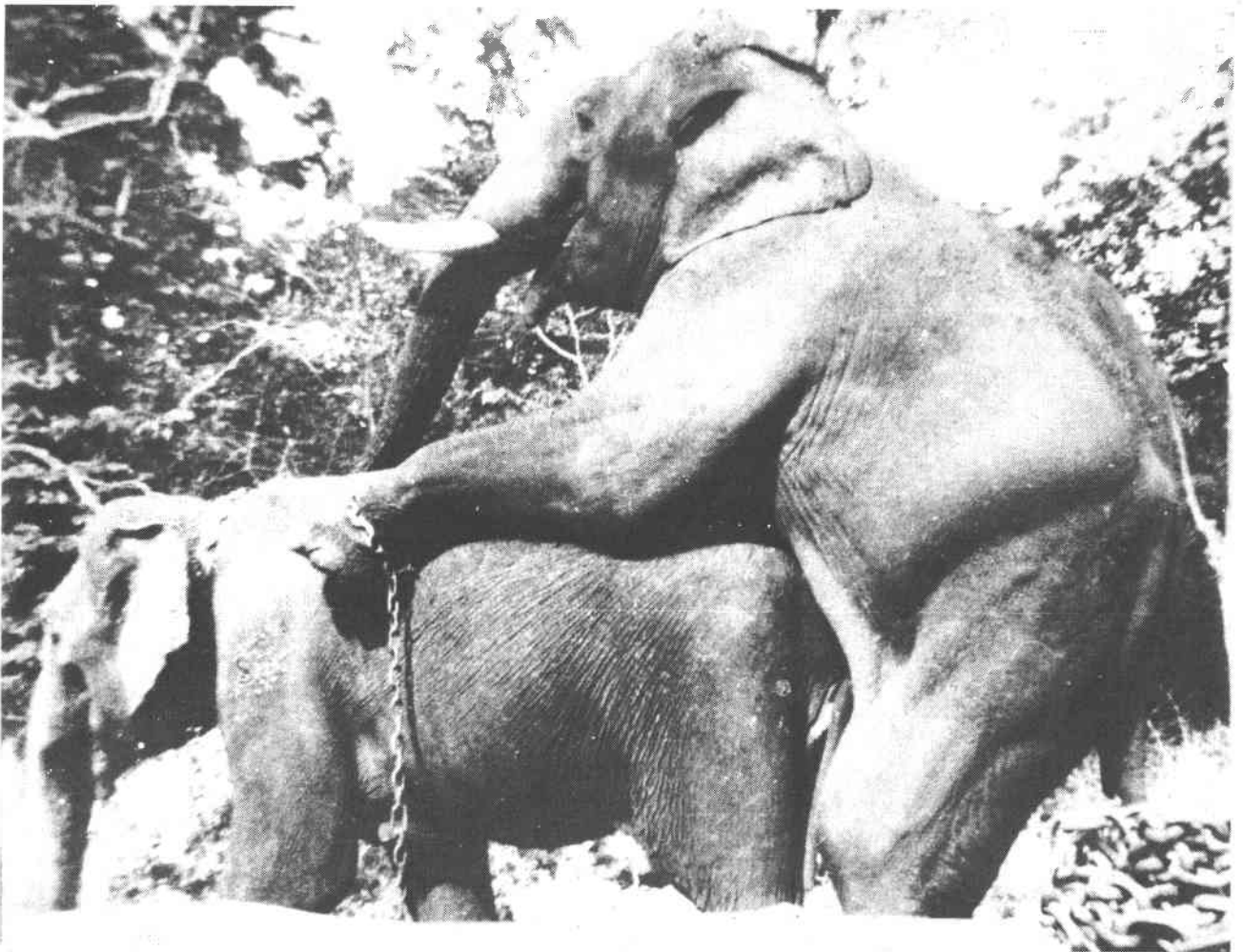
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Tikiri was given powdered milk, according to the following schedule:

age in days	milk powder	boiled water	feeding interval
1-2	3 scoops	200 ml	1.5 h
3-5	10 scoops	500 ml	2.0 h
5-10	15 scoops	1000 ml	2.0 h
10-30	20 scoops	2000 ml	2.0 h
31-60	30 scoops	3000 ml	2.0 h
61-90	40 scoops	4000 ml	2.0 h
90+	400 g	5000 ml	5 meals/day

After 3 months, the calf would learn to eat soft grass.



Elephants mating in captivity in Sri Lanka