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Abstract: 1966 the first cheetah was born in Italy and one of the very few ever to be born in captivity at all. The tame female cheetah "Beauty", owned by Mr. Spinelli, gave birth to her only cup "Nick". The course of the birth is described in all details. At the age of six months he still tried to suckle from the female.

Successful breeding of a cheetah

Acinonyx jubatus

in a private zoo

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On 13 January 1966 a male cheetah cub *Acinonyx jubatus* was born in a private collection of animals belonging to Mr L. Spinelli outside Rome. It was the first cheetah to be born in Italy and one of the very few ever to be born in captivity at all. Moreover, it was the first recorded instance of a cheetah born in captivity being successfully reared by its mother.

The female cheetah, 'Beauty', was about 13 months old when she arrived from Mogadiscio, Somalia. Thus she was about three years eight

months old when she gave birth. She has always been with Mr Spinelli since her arrival in Italy and she is very tame and extremely attached to her owner. She is taken for walks on a lead and always follows him freely. Her tameness and affection increased after the birth of her cub.

The cheetah's cage is on a hill, facing the sea about 15 km away. The cheetah thus has the opportunity of ranging freely with its eyes on the country for miles, as cheetahs often do. This helps prevent the boredom which is so frequent

in captive cheetahs. In addition to the cage, there is a long enclosure, about 50 m long and 3 m wide, specially built for the cheetahs to take exercise in. They are also often allowed to play and run freely in the garden.

The female originally had a mate, 'Kim', who arrived from Africa at the same time. Unfortunately he died in January 1965. The corpse was left in the cage for two days so that the female could become accustomed to her mate's death.

Oestrus has been regularly observed in the female. During oestrus she becomes friendlier and more playful with people, she rolls continually and rubs her back against the floor; when scratched she arches her back downwards like a cat, there is a slight swelling of the vulva and it becomes visible (normally it is hidden in the fur), the vulva is damp with a viscous moisture and there is a slight vaginal discharge (a few drops of blood are noticed each day in the cage). There is no change in vocalisation, nor any apparent increase in urination. After the birth of the cub the female came into oestrus again about $3\frac{1}{2}$ months later. From then onwards the oestrous period lasted about 15 days, and the inter-oestrous period about 7-10 days (these figures are only approximate).

After the death of the female's mate, 'Kim', two male cheetahs were borrowed from the Rome Zoo, with the kind co-operation of the director, Professor Ermanno Bronzini. They had been in the zoo since 1959, together with a female which later died. At the time of arrival in Rome they were estimated to be $2\frac{1}{2}$ -3 years old; thus they were about nine years old at the time of mating. They have always lived at Rome Zoo, in a large outdoor enclosure, surrounded by trees in a quiet part of the zoo. They were occasionally taken out for walks on a lead. While the female was alive they were often seen playing together, but mating was never observed and it is thought unlikely to have occurred.

Both males were introduced to 'Beauty' on 25 September 1965. At first the female seemed frightened and whenever they approached her she fled and stood in a defensive position. After a few days they settled down with each other and started to play together. Unfortunately, copulation was not observed. Many scuffles were noticed, often with all three cheetahs on top of each other. The three cheetahs were left together for 25 days.

About three months after the presumed date of mating it was noticed that the female's teats had started to wax, were pink and were beginning to peel. The morning before the birth she regurgitated her food and on the morning of the birth she refused to eat. Her faeces were loose. She was very agitated and only quietened down when Mr Spinelli entered the cage. She then tried to sit on his lap.

Observation during the birth period was from 2000 hours on 12 January until about 0430 hours on 13 January. Throughout this time Mr Spinelli remained with Beauty, her head in his lap.

The birth process lasted about two hours (from the first strong labour contractions to the discharge of the young). The last three contractions took place one every minute. During the last 10 minutes the female hid her head during each contraction in Mr Spinelli's armpit; and when each contraction ended she purred. Suddenly, at 0430 hours, she turned her head towards her back; the foetal sac had appeared. After about 30-40 seconds, Mr Spinelli pulled it out with his hands as the expulsive contractions appeared to have ceased. The placenta was discharged immediately afterwards and was eaten by the female.

Only one young was born. It was a male and was named 'Nick'. The mother started to lick it immediately. It was not breathing very well, and possibly the massage from her tongue had the effect of artificial respiration. Anyway, after about 10 minutes the cub started to move.

The umbilical cord was very large: about the thickness of a man's little finger. It dried up and fell off three days after the birth.

The cub weighed about 300 g at birth and measured about 25 cm from the tip of the nose to the root of the tail. It was very slim, with long thin legs. It looked more like a miniature adult cheetah than a cub.

At 2100 hours on the day of the birth the cub had still not suckled. It was therefore given a nursing bottle filled with a very light non-aerated mineral water widely used for human babies in Italy (Sangemini) mixed with Nestlé's skimmed milk (Eledon) in the proportion of 1 : 100 g water, together with the yolk of an egg. The cub took 15 g of this mixture once every hour for three hours. It gained strength and the following evening was fed from its mother for the first time. Mr Spinelli had prepared the female cheetah's

teats for suckling, first by sucking them in his mouth, then by sucking at them with a rubber hose ending in a suction cap. (A breast pump could not be used because of the hair round the teats.) There was hardly any physiological loss of weight following the birth: after the first feed the weight increased regularly. On the 7th day it weighed 620 g, and on the 16th day 1,050 g.

The cub vocalised soon after birth when it started to breathe regularly, but then it stopped as it weakened. It defaecated for the first time two days after the birth. The faeces were dark, solid and cigar-shaped, and did not change in spite of changes in diet. It crawled soon after the birth, stood up unsteadily at the age of one week. It started to walk 12-13 days after birth, but often fell down. Its eyes did not open until four days after the birth.

On the second day after birth the cub appeared to have a fit. It was given one drop of Vitamin K (in the form of a preparation used for newborn human babies) and in two hours it had recovered completely. Afterwards, whenever the female saw the cub very soundly asleep, she gently shook it awake. Eleven days after the cub's birth the female suffered from gastro-enteritis. The diarrhoea interrupted her milk supply. This was restored in 20 hours by giving her three tablets of Lactal R (Piam, Genoa) in the morning, two in the evening, and one the following morning. However,

the diarrhoea continued and as strong antibiotics could not be used in case they further affected the milk supply, she was given very light doses of Gabroral Complex (Farmitalia, Milan): three tablespoons every six hours, together with 25 drops of Idroplurivit (Menarini, Florence), a multivitamin preparation for new-born human babies. She was also given weak tea with saccharin two or three times daily. She recovered completely in 1½ months.

At the age of 18 days the cub started to eat donkey meat regurgitated by the female. (Cheetahs are very greedy and usually take very large mouthfuls of food and they sometimes regurgitate part of what they have eaten.) At the age of four months the cub regularly ate meat and chicken heads, though occasionally he still suckled from his mother, sometimes regurgitating the milk. At the age of six months he still tried to suckle from the female (her teats would still produce a little moisture when squeezed).

Throughout the period of birth and rearing of the cub the female remained very friendly with Mr Spinelli who could enter her cage at all times and pick up the cub. During the first two days after the birth she spat when Mrs Spinelli entered the cage, though after two days Mrs Spinelli was also accepted. Other visitors were only admitted after two weeks, and then only one at a time.