

occurred and was followed by another 50 days later, when the female became pregnant. Mating has taken place in May, September and November.

The only signs of oestrus appear to be enlargement of the vulva and receptivity to the male's advances. In every case, only one copulation occurred during each oestrus. Sexual union lasted for over an hour and the male was observed ejaculating about every 10 minutes during copulation. After mating the male ceased to be interested in the female.

The first calf, a male was born in October 1960²³ after a gestation period of 463 days, the second calf, a male, was born in April 1963 after a gestation period of 454 days, and the third calf, also a male, was born in October 1965 after a gestation period of 457 days. The gestation period was calculated from the day of mating to the day of birth. The estimated weights of the newborn calves were between 22 and 34 kg. The first calf was sent to Jacksonville Zoo in Florida, and the second male calf to Duluth Zoo in Minnesota.

Notes on breeding the Black rhinoceros

Diceros bicornis

at Sydney Zoo

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In July 1966 there were one male and six female Black rhinoceroses *Diceros bicornis*, at Sydney Zoo. Two and probably three of the females were pregnant at this time. In recent years six Black rhinos (one male and five females) have been bred at Sydney Zoo, including one second generation birth in captivity.

Oestrus seems to last several days, with an approximately 18-day oestrous cycle. When the female shows interest in the male she is put with him and remains with him until mating activity has ceased. When the female is in oestrus, the male calls to her, making sounds like a deep sigh. Preliminary play is very rough and very often they cut each other with their horns. However, despite this fighting they are in fact less aggressive than

when the female is not in oestrus. This may go on for hours before mating.

Copulation lasts 15 to 40 minutes, or more. Occasionally it is shorter than 15 minutes. After copulation the marks of the bull's front feet on the female's back can be clearly seen. They are much quieter after copulation.

During pregnancy some females sometimes become very aggressive with the male. In four cases the gestation period was just over 17 months. In one case it was 15 months, but the female may have already been pregnant when copulation was observed.

One female suckling a calf became pregnant three months after giving birth. Unfortunately she aborted three months later.