SOCIAL BEHAVIOUR OF SOUTHERN WHITE RHINOCEROS (*CERATOTHERIUM SIMUM SIMUM*) IN FENCED RESERVES IN SOUTH AFRICA

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In southern Africa, an increasing number of white rhinos are kept in fenced reserves and farms. The populations are often small and the sex and age compositions are skewed. Experiences in the past have shown that these small populations do not breed very successfully. One of the reasons might be the high density of animals or the high density of animals of the same sex or age classes leading to an increase in aggression, especially when they are aggregating at feeding, drinking or resting places. It is important to monitor the social behaviour of animals in order to make sound management decisions. We studied the social behaviour of two white rhino populations living of different in the private reserve (Limpopo Province, n = 13) and in the Lichtenburg biodiversity conservation centre (North West Province, n = 8). The research was carried out from May to August 2008. Behavioural observations were conducted in the morning and late afternoon, when the rhinos were expected to be most active. The observation points were located at waterholes and winter feeding places (private reserve) and at favourite grazing and resting area of rhinos (Lichtenburg reserve). The groups of rhinos consisted of 1 bull, 5 cows, 3 subadults and 4 juveniles (private reserve) and of 1 bull, 5 cows, 1 subadult and 1 juvenile (Lichtenburg reserve). The behaviour of the rhinos was monitored using focal animal sampling. During the observations, the cohesive and agonistic (defensive and aggressive) behaviour was recorded.

Time spent in cohesive behaviour differed across the sex-age classes (private reserve: p = 0.001, Lichtenburg reserve: p < 0.0001). Direct contacts by head or horn were seldom observed between the animals. No cohesive behaviour was directed from the cows towards the bulls. The reactions of the recipients to the defensive behaviour during intergroup encounters in private reserve differed across the sex-age classes (p < 0.0001). The agonistic interactions between the rhinos under competitive conditions at feeding places in the private reserve were much more frequent than between the animals in Lichtenburg reserve; mainly when directed from a cow towards a bull or towards another cow. It is therefore very important to locate a sufficient number of feeding places at the reserves and to assure their good dispersion so that the rhinos are not aggregating in some parts of reserves. An increased aggression in rhinos when meeting in these areas might decrease their reproductive success.

WHITE RHINOCEROS PROJECT SUMMERY

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The mother and infant behaviour patterns within the first 24hours of the birth, in captive White Rhinoceros are poorly documented. Its importance for successful breeding of this species could reveal new guidelines for improvement of the species captive breeding programs. Breeding programs of the White Rhinoceros in the Zoos and wildlife parks around the world have shown highest success rate for wild born females.

In Knuthenborg Park and safari in Denmark a wild born female called Bertha gave birth to a calf in February 2008. The event was recorded on camera over a 10-12hour period after the birth. Unfortunately this calf was killed by the mother within this recorded timeframe.

The aim of the current study is to clarify the behaviour patterns between mother and infant in regards to frequency of each behaviour category, distance between them, orientation to each other, which box zone are most frequently used and the maintenance of proximity. If similar recordings are available these patterns will be compared to other females and their offspring of White