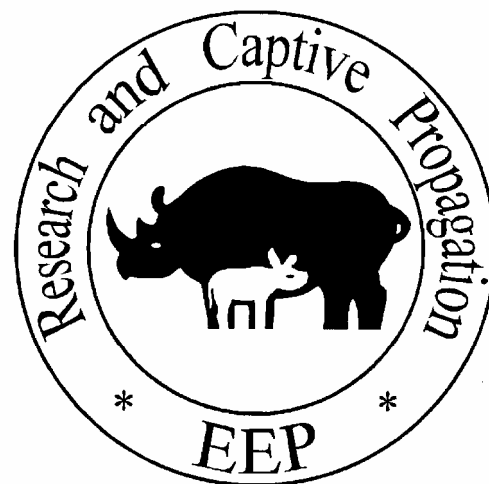


Research Committee Newsletter

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edited by Udo Gansloßer*



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reference for wildlife managers, which is quick, easy and cost effective to use. This type of system would produce essential levels of information on the ground where it is needed, thus monitoring and enabling the maintenance of a healthy environment, and so healthy populations of the species under protection.

The Behaviour of White Rhino at Reserve de Sigean

Isabell Berton, MSc thesis (Contact: via Udo Gansloßer)

Introduction

This survey deals of reproduction of five White Southern rhinoceroses *Ceratotherium simum simum* at the Réserve Africaine de Sigean (France) : two males (7 and 19 years old) and three females (7, 17 and 40 years old). The rhinoceroses live together, their enclosure is about 10 hectares (24,7 acres) and they live outside twenty-four hours a day from May to October.

The aim of this study was to detect thanks to behaviours and hormonal feces analysis the reproductive potential of each animal which had never reproduced in the park yet.

Therefore we have observed from May to the end of July 2005 reproductive, agonistic and non agonistic behaviours and the associations by pairs. At the same time, samples of feces have been collected twice a week for the females (in order to determine cycle and/or luteal activity) and once a week for the males (in order to mesure testicular activity), as well the days of the female heat.

Results

Behaviours

During this survey, we noticed two periods of behavioral change which correspond to heat period of the youngest female : one around May 13th and one around July 19th.

About two days before we saw squirting of the urine of the female and mountings, we pointed out an important increase of agonistic interactions in the group (more particularly between both males) and a general increase in reproductive behaviours (urinary markings by the eldest male for example). Moreover, both males started following the female (espacially the youngest male) everywhere she moved.

When the female seemed to be receptive, both males mounted her. Oftentime, the second male stayed near the couple and disturbed the maiting by agonistic behaviours against the other male and non agonistic behaviours toward the female.

The eldest male made lots of markings and kickings, that's why he is supposed to be the dominant and then, the reproductive male. Although he showed many mountings, it couldn't achieve any penetration, unlike the youngest one. Indeed, the only complete maiting observed was done by the youngest male (yet he showed little mountings) on May.

During periods of heat, the eldest females stayed all the time together and that way we had a group of three rhinoceroses (the youngest female and both males) and a group of two rhinoceroses (the two eldest females).

Hormone Analyses

Females

Hormone female analysis revealed that only the youngest female got cycles. She got oestrous on May 13th and an other one on June 10th (no behaviour could allow us to detect this last oestrous). On July, heat behaviours happened during luteal phase.

Other females never expressed neither cycle nor luteal activity.

Males

The eldest male showed an important testicular activity, unlike the youngest male (probably inhibited by the first one).



Conclusion

During our observations, only one of the three females interested the males at quite regular intervals and had oestrous : the youngest one. Hence, she is the only one that could be pregnant.

However, the eldest male must be fertile but failed complete mating unlike the youngest male. But this last one is still a subadult and is inhibited by the presence of the dominant male. This could explain why he couldn't reproduce at this time. Nevertheless, we could expect him to be performer as soon as he become himself dominant.

Today, the question is : must we isolate the eldest male away off the group in order to let the youngest one become the reproductive male

Handrearing of giraffes at Nuremberg Zoo and a comparison with other experiences

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The aim of this study was to compare the observations on hand-rearing of the giraffe calf Jinga in Nuremberg with observations on hand-rearings all over the world und to try a generalization for future hand-rearings. The population of giraffes in zoological gardens is growing very slowly, so it is necessary to raise every new born calf.

My own observations are compared with the experiences on hand-rearings of twelve other giraffe calves. Focal points were the composition of the replacement milk, the quantity of the given milk, the type of feeding, the moment of first taking solid food, the length of weaning period and the question, whether the calves remain with theirs mothers during the hand-rearing or not.

Due to these comparisons the following generalizations could be made:

- It is very important to feed colostrum in the very first days.
- The quantity of the accepted milk is different. The consumption of 1 liter/day in the first week increases to 14 liters/day in the sixth week.
- Bottle feeding is typical, mostly with suckers for lambs. Habituating the calf to the bottle can be difficult and both keepers and calf need a lot of patience.
- Solid food is first taken between the end of the first week and the seventh month. The calves are weaned at the age of nine to eleven months.
- It has to be decided on an individual basis whether a separation of the calf from the mother is necessary. It is important to say that the risk of miss-imprintings because of the separation of the calf seems to be very small. Probably the weak cow-calf-bond of giraffes is a reason for this fact.