BLACK RHINO ON PRIVATE LAND - THE EXPERIENCE OF LAPALALA WILDERNESS, SOUTH AFRICA

The small black rhino population at Lapalala Wilderness provides a case study for the effectiveness of private sanctuaries

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Between 1990 and 1992, 10 black rhinos (four bulls and six cows) were re-established in the Lapalala Wilderness, a 250 km^2 privately-owned property in the Waterberg mountain range in Northern Transvaal Province, South Africa.

The reserve can be visualised as a large plateau, with a mean altitude of 1100 m AMSL, dissected by many drainage valleys. The main drainage rivers are the Lephalala (Sotho for "barrier") and the Kgokong which flow during all but a few months of the year. The Lephalala river wanders for 55 km through the reserve.

The vegetation of the reserve falls into two of the veld types described as mixed bushveld and sour bushveld[1]. The reserve has an average rainfall of between 450 and 500 mm per annum. Prior to the black rhino introduction, an area of *ca* 10 000 ha was designated as a breeding sanctuary for roan antelope and white rhino. The sanctuary is totally enclosed with an 18-strand game-proof fence which is not electrified.

During 1990, the Natal Parks Board announced that five black rhino, two bulls and three cows, would be sold at their auction in June of that year, the first breeding herd of black rhino ever to go onto private land in South Africa. Eight reserves applied for classification and all eight were approved by the Natal Parks Board. In the case of Lapalala, the assessment was based on data collected over the previous nine years, which included a one-day evaluation by A Marchant and P Hitchins on behalf of the Natal Parks Board.

At the 1990 auction, Dale Parker, owner of Lapalala Wilderness, successfully bid in excess of R2 million, making him the first private individual to own black rhino. The animals were translocated to Lapalala holding pens, which had taken two months to construct, towards the end of August and were kept there until after the summer rains which did not fall before the end of November that year. Re-establishing black rhino at Lapalala Wilderness was due to a number of reasons. Firstly, the black rhino has been absent from the Waterberg mountains for at least 150 years. In the original mission statement of Lapalala Wilderness which was established in 1981 was the conservation of rare and endangered species. The writer had for the past seven years been making approaches to the Natal Parks Board to be considered as custodians of the black rhino for it was not believed that they would be in fact made available by auction or for sale to private landowners. In the case of the owner, it was the personal gratification of being involved in the conservation of a highly endangered species.

The release from the holding pens into the sanctuary was not entirely successful due to the loss of one female whose cause of death has never been established. The carcase was discovered when it was far too late to make any positive assessment of the cause of death. This was mainly due to inexperience on the part of the game scouts at the time and mistaken reports by one senior member of staff who wrongly recorded seeing this animal up to a week before her body was found, and the extremely dense nature of the vegetation. The remaining four rhinos settled in extremely well.

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At the Natal Parks Board's 1992 auction, Dale Parker once again successfully bid R2,3 million to acquire a further five black rhinos - three cows and two bulls. These five rhino were translocated to Lapalala within two weeks; this time there was no eight-week delay for boma construction and no difficulties were experienced in the release which took place over a period of one week some 15 days after arrival. Precautions were taken and the tips of the horns were cut. However, no serious confrontations took place initially, perhaps because the five new animals were about the same age as the rhinos already resident. Despite the fact that 1992 was the worst drought in more than a decade, all nine rhino coped extremely well. The fears we had had concerning the first introduction seemed to have been unfounded.

POST RELEASE MANAGEMENT

Two questions remained unanswered, however. How would all nine black rhinos settle in the 10000ha and what was the realistic carrying capacity for the area?

There are at present six game scouts who patrol the sanctuary daily in pairs, checking fence-lines and water points, recording all sightings of general game and monitoring every individual rhino located. All information has to be corroborated by the second game scout and all sightings are recorded by Ms Glynis Brown every single morning and then transferred onto a computer. Monitoring is carried out seven days a week.

The diversity of plants in the Waterberg is considerable and, since 1990, an ongoing programme has been in place to identify plants eaten by the rhino. A number of species that are well utilised are corkbush *(Mundulea sericea)*, tamboti *(Spirostachys africana)*, mountain karree *(Rhus leptodictya)*, spineless monkey orange *(Strychnos madagascariensis)* and hornpod tree *(Diplorhynchus condylocarpon)*.

HOME RANGES

The two bulls introduced in 1990 routinely overlapped in their movements. However, the last two introduced are very definitely in separate zones with the larger bull by and large occupying the eastern area and the young bull the western sector. The dominant bull of the 1990 introduction does not tolerate either of bulls introduced later. The females, with the exception of one that moves around very closely with the 1992 bull, have no difficulty in overlapping each other's areas. While it is early to make firm predictions, there are indications that the sanctuary has reached its carrying capacity for mature bulls. In my opinion, it would be ill-advised to introduce any further bulls.

GENERAL DISCUSSION

To address the question of availability of food plants to support a number in excess of the present population, we have established a detailed plant collection to identify what the rhino are eating. Beyond the 10 000 ha already set aside, there is a possibility of further enlargement of the sanctuary by 1800 ha at the end of 1994 and eventually an additional 4000 ha. The Iwaba Estate in Zimbabwe, which is approximately the same size as the current Lapalala rhino sanctuary, offers an interesting comparison. An initial four mature bulls were introduced over a four-year period (1986-1989), and a total of 25 rhino were translocated to the Estate. Every bull introduced was killed outright by the resident four. Iwaba also experienced the loss of a number of introduced pregnant females. Nevertheless, 11 calves have been born since 1989 and the present population is 19. The Department of National Parks & Wildlife Management, Zimbabwe, has since translocated four rhinos out of the sanctuary.

RECOMMENDATIONS

In the case of Lapalala Wilderness, I consider by and large that any potential problems that might have occurred were avoided by all the rhino introduced being roughly in the same age group and by the size of the sanctuary - meaning little competition in terms of food and the availability of good water. Even so, there are gaps in our understanding. A very strong case exists for a much more thorough assessment of future private sanctuaries before any black rhino relocations take place. Furthermore, I believe that a far more detailed habitat assessment should take place and whilst it has been suggested that it would have been preferable to introduce all 10 rhino together, our experience has proved that providing the area is large enough and the bulls are of a comparable age, introductions at different periods should not be too problematic as long as 50% of the estimated carrying capacity is not exceeded. Further considerations should be the commitment on the part of the landowners, and, in terms of security, distance from large populations of humans and international borders.

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REFERENCE

1. Acocks J.P.H. 1975. Veld types of South Africa (2nd ed.). *Botanical Survey of South Africa Memoir* No. 40. Government Printer, Pretoria.