

Survey and Monitoring of White Rhino at Phinda

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At the turn of the century, the White Rhinoceros was almost extinct in South Africa, when its numbers were estimated at between ten and twenty individuals. The species disappeared completely from the area now covered by the Kruger National Park in 1896. The first official estimate in 1930 revealed that there were 120 in the Umfolozi Game Reserve and 30 on adjacent ground, but by 1960 an aerial count gave a total of just over 700. Helped by strict and successful conservation measures introduced by the Natal Parks Board, the numbers in Zululand reserves have grown rapidly, and by October 1989 there were over 2000 in the country as a whole. An additional 1240 had been relocated out of South Africa (Skinner & Smithers, 1990). Estimates put the White Rhino population worldwide at approximately 7500, of which 7100 are in South Africa.

Rhino horn and products have been traded and used for over 2000 years. The use of horn for ceremonial dagger handles and for its claimed aphrodisiac and fever reducing properties, has been responsible for the large-scale slaughter and extermination of rhino in many parts of Africa. In 1988, CITES placed the White Rhino on Appendix 1 which prohibits any international trade in the species or its products. Since the end of 1988 - with world pressure against the sale of rhino horn and an increasing number of countries taking stringent action against smuggling of horn - the underworld was gripped by a fever to secure all the contraband it could, and move it out of Africa before a total international clamp-down. With the trade having gone underground, smugglers have sought to open every possible route to get the merchandise. Rhino horn currently fetches prices of up to US\$180 per kilogramme in Yemen, so a very lucrative market still exists today. With South Africa containing more than three quarters of the remaining White Rhino, this country has become a target for corruption, poaching and smuggling of horn.

According to Potgieter (1995), Phinda lies within the so-called 'Gold White Triangle' which extends between Jozini, Mbazwana and Hluhluwe. The triangle is believed to be an international 'window of opportunity' for contraband smugglers and small time crooks who take advantage of the easily available arms from Mozambique and Swaziland to carry out their business. The contraband is flown to a nearby landing strip at Hluhluwe from where it is said to be shipped by boat to Kosi Bay and from there across the border into Mozambique.

According to figures supplied by the Natal Parks Board, 27 White Rhino have been poached from four reserves under their management in the past five years. Three of these reserves are in Northern KwaZulu-Natal. With the concern of an increase of poaching in the 'Gold White Triangle' a survey and intense monitoring of the rhino population at Phinda was undertaken.

Introduction

The aim of the Phinda White Rhino Survey and Monitoring project is, firstly, to establish the exact number on the reserve. Secondly to create an identikit (Figure 1) of each individual, with

photographs of distinguishing characteristics such as horn shape and size, ear notches and crease patterns on the upper lip. Thirdly, to map territories and home ranges which will also enable us to observe any seasonal movements. Currently mapped territories and home ranges of the individuals are not published here for reasons of security. Instead, this report concentrates on one female and her calf that are regularly seen and which have a home range in the centre of the study area (Figure 2).

Study area

Being based at Mountain Lodge, our study area consisted mostly the south of the reserve with regular updates on rhinos in the north from the Forest and Vlei rangers. The vegetation in the southern part of the reserve consists of mixed bushveld or Natal Lowveld Bushveld on black soils on flat terrain and on red soils of the lower hill slopes. Trees are fairly short and grass cover is generally sparse except for the regularly mowed bush-cleared areas.

Figure 1: Example of Phinda White Rhino Identikit

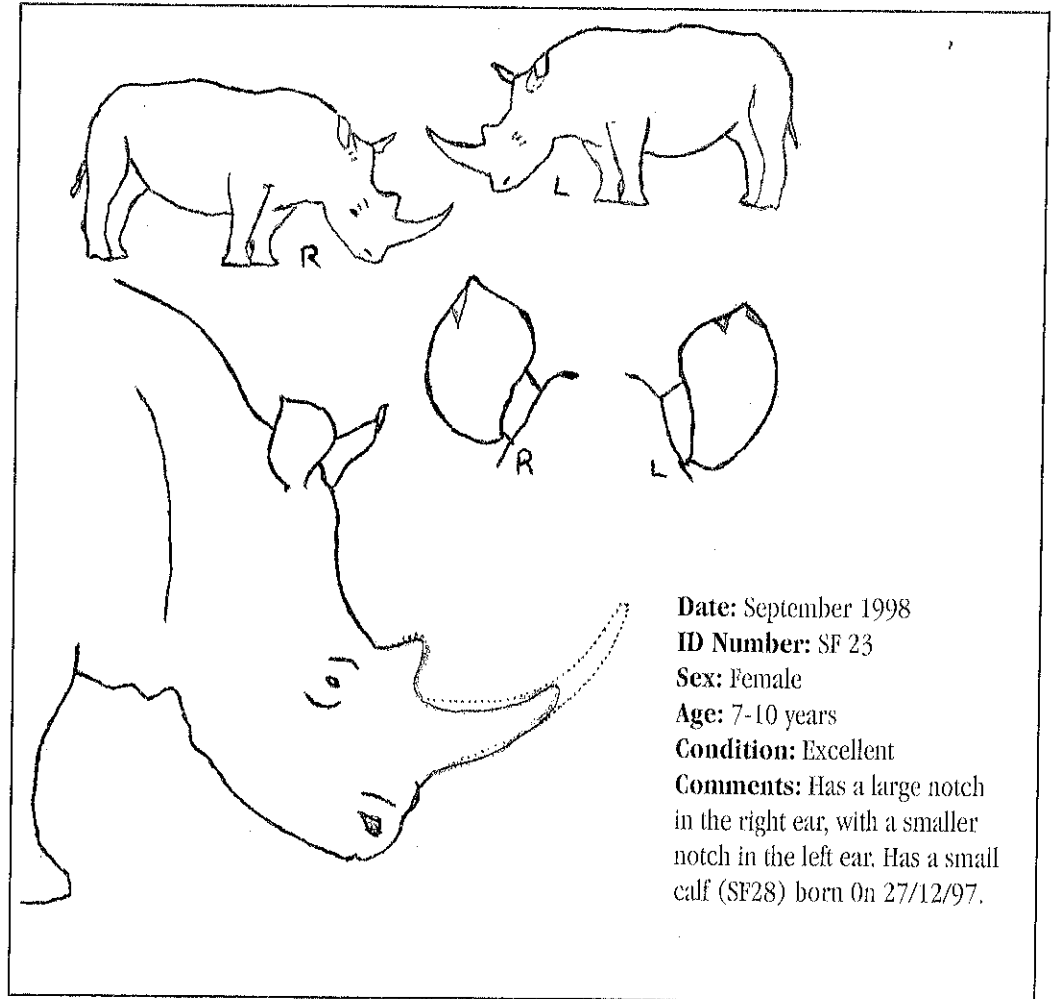
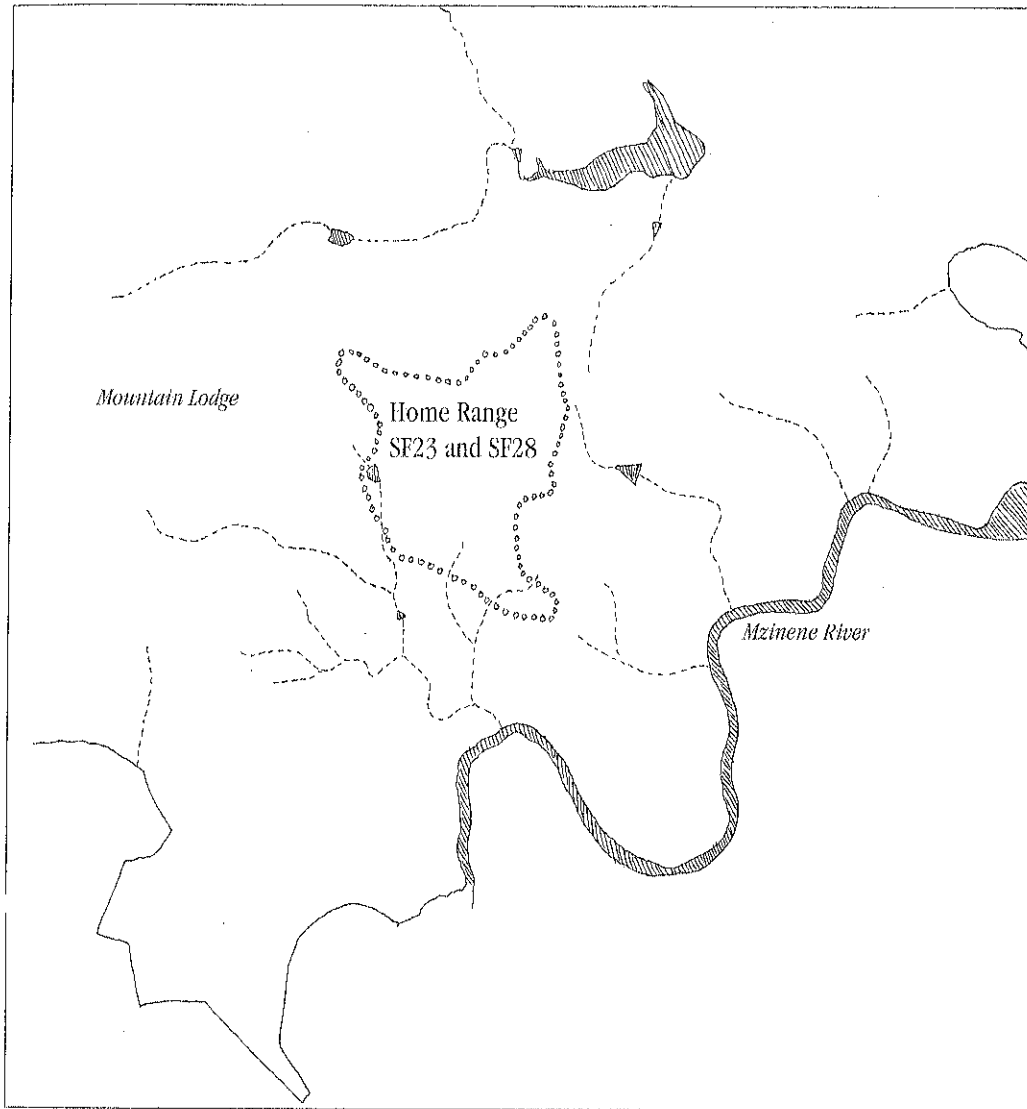


Figure 2: Home Range of White Rhino SF23 and SF28 (calf)



Methods

All rhinos at Phinda (including calves) have been given an ID number and name to assist field staff and rangers in identifying individuals. A rhino slide show was held to obtain photographs and to discuss the numbers on the reserve. Otherwise the authors have taken photographs with most observations done on game drives. An album has been created which contains a minimum of three photographs of each individual, as well as its known or estimated age, associations and any history. A rhino report card is also included with hand drawn details of specific features (Figure 1). All observations are plotted onto a map with a GPS.

Results

The SF (South Female) 23 is a relaxed animal aged between 7 and 10 years. She has a female calf (SF 28) that was born around 27/12/97. Since the survey began she has been the most sedentary of the adult females that we have observed. We account this to her calf's young age, good grazing and the fact that her range encompasses a number of extensive clearings which were mowed during the past dry season. Furthermore, three perennial water holes exist within her range and these afford easy observation. We believe this to be her first calf. Knowing the exact age of this calf has enabled us to observe its growth and development. Age estimation of rhino is always difficult especially once the calf has left the mother. The presence and easy identification of this individual allows us to chart its development and compare it with other rhinos.

SF23's range as outlined on the map is 134.4 ha. But we expect it to be somewhat larger in reality, as the observations upon which it is based were made exclusively in clearings where she was easily spotted. The dense bush and drainage lines around the clearing are utilised by this rhino as is evident from the many middens and well used paths. On numerous occasions we have located the two, together with others, utilising common rest places during the heat of the day. She shares parts of her range with four other females and their calves of varying ages.

On a number of occasions we have observed this female interacting with other rhinos. The majority of these encounters involve threats or aggressive behaviour shown towards other females with calves and the advances of the territorial bull.

Discussion

The project was slow to start off with, as photographs of the majority of the rhino had to be retaken and we are still in the process of doing this. Only a few of the rangers are presently familiar with the identification of the rhinos so apart from our own observations, little information is obtained from others. Completed observation forms that did not specify the individual in question were unreliable. Through this survey and monitoring project, it is hoped that the data on White Rhino will facilitate selection by management on the translocation of individuals. Once all individuals have been identified and their distribution known within the reserve, greater protection can be given to those closest to main roads and surrounding communities.

References

- Skinner, J.D & Smithers, R.H.N. 1990. *The Mammals of the Southern African Subregion*. University of Pretoria, Pretoria.
- Potgieter, De W. 1995. *Contraband*. Queillerie Publishers, South Africa.