

Notes on the Reintroduction of African Elephant and Black Rhino at Kwandwe

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The introduction to Kwandwe of approximately 3 000 head of game, to supplement an existing population of 2000 animals, brought with it some unique challenges and triumphs. Notes on the transportation, boma and release process for Black Rhino and Elephant are given below. The aim is to allow others an insight into the methods employed and to encourage future reintroductions of these species elsewhere in the Eastern Cape. Monitoring of the diet, movements and social interactions of both species are ongoing.

African Elephant

The population is made up of four groups, two breeding units and two pairs of bulls. The total population as of March 2002 is 23 animals.

1. Kruger Herd

This was a group of eight animals caught in the Malelane area of the Kruger National Park (KNP). The group comprises three adult females, four sub-adults and three calves. The South African National Parks (SANParks) Capture Unit caught the herd, which has since produced an additional calf. The animals were introduced in mid-August 2001. The matriarch is fitted with radio collar 148.60.

2. Madikwe Herd

This herd was caught in the Tshukudu area of the Madikwe Game Reserve in the North-West Province. The group is made up of three adult females, three juveniles and three calves. The herd was caught by Specialist Game Services. An additional member has since been born. The matriarch has been fitted with radio collar 148.17. The animals were translocated in October of 2001.

3. Kruger Bulls

These two bulls were caught in the Skukuza area of KNP in September 2001. The one bull is 30-35 years old, while the other is 20-25 years. SANParks Capture Unit caught the bulls. Both are fitted with radio collars 148.08 and 148.71.

4. Letaba Bulls

These bulls were caught in an area adjacent to the KNP in October 2001. They are roughly the same ages as the above mentioned Kruger bulls and were caught by specialist Game Services. Both are fitted with radio collars 148.18 and 148.99.

Transportation

Minor injuries were experienced in transit. An adult male knocked one of his tusks off in transit. The trip from Kruger or Madikwe is a long one, and it is difficult to gauge the amount of Azaperone to give an elephant, as the animal should not lie down. This incident was probably a case of erring on the light side with tranquiliser. Large bulls need to be checked regularly, and on long overnight trips like this, normally in winter, there needs to be a disciplined routine of keeping the animal calm. Stopping and starting is often stimulating for the animals, and it is best to have an experienced driver who can feel the movement of the animals in the truck.

On both occasions of moving breeding groups there were cases of trunk damage. In the case of the KNP elephants, a young animal of roughly three years received quite bad trunk and ear injuries, and another two-year-



old received trunk injuries. In the case of the animals from Madikwe, one two-year-old had trunk injuries. It is suspected that the animals causing the damage are juveniles that are more difficult to tranquilise than the adults. Young calves very seldom need tranquilising, but reaching the juveniles from the roof hatches is difficult and they are seldom injected. It is certainly a recommendation that an experienced vet accompany breeding groups of elephant, because if an animal does require re-immobilisation after receiving pure antagonists such as Naltrexone, the anesthesia does become more risky and difficult to handle.

Our two adult males from the Letaba area were transported together with the two adult males now at Bayete Game Reserve, two bulls in each container. We made certain that the respective bulls were walking in these particular pairs before the capture took place and they traveled very well together. No injuries occurred and, if anything, the animals had a calming effect on each other.

Boma and Release

The bomas were built following the plan stipulated by SANParks. Additions to this included making the cable fence more visible with netting wire and droppers. We also increased the height of the fence from 2m to 3m; this increased the flexibility of the facility so that it can also be used as a predator enclosure in the future. The single other addition was to erect a fence on the inside of the enclosure that has four loose electric strands. This results in elephants coming into contact with the initial electrified fence first. No group of elephants released onto Kwandwe, including adult bulls, broke either fence.

The Kruger Herd left in two groups, the first portion of the group leaving in the evening after the gate was opened. They waited until the next evening for the balance of the group to join them.

The Madikwe Herd was a completely different group. The release gate was opened after two nights in the boma. From that morning, it took a further nine nights before the elephants left the boma. In discussion with other elephant owners it appears as if the longest recorded period, in a similar scenario prior to this, was four nights. It was initially suspected that one of the calves must have died, then that one had been born. Once it was determined that there were no problems, 30m of the boma fencing was removed. Shortly after doing so, large amounts of Spekboom *Portulacaria afra* were placed at the exit gates and in the sections where the fence had been removed. One evening the elephants were witnessed moving out and feeding on the Spekboom before returning to the enclosure. The electric fence had obviously been turned off at this point, and the elephants were also seen carefully grazing through the initial fence. The herd eventually moved out and have settled down well. It was the second time that some of these animals had been moved in their lives; the first being from Gona-re-zhou National Park in Zimbabwe to Madikwe. Whether prior experience of translocation played a role in their behaviour will remain a discussion point.

The positive aspects of using the boma were that the elephants found cover and security in the vegetation as they walked off the truck. The bulk of the vegetation is large *Acacia karoo*, a species that they were familiar with and could start feeding on. The water point was placed in a clearing for easy monitoring from a distant high point. Each fence was separately electrified and great attention was paid to the corners.

The negative aspects of the enclosure were that the exit gate was possibly a little too well-hidden and perhaps not quite large enough.

Post-Release Notes

The first herd, the Kruger Herd, stayed in close proximity to the bomas for nearly six weeks. During this time they fed mainly on *Cussonia*, *Schotia*, *Ozoroa* and *Acacia* species. The Kruger bulls joined them after they had been situated for two weeks. The elephants spent most of the days in thick valleys, coming out in the late afternoons to feed. They used two small water points during this time. The bulls spent most of their time either with the herd or in close proximity. The herd and the bulls then moved to the southwestern corner of the reserve, where a new calf

was born. This anchored the herd to the area and seemed to be when they spent less and less time on the fencelines, instead moving on to the Botha's River to feed on the now blossoming *Acacia*. The bulls grew in confidence and started moving more and more in the evenings. Prickly Pear *Opuntia ficus-indica* soon became a favourite food, along with *Aloe speciosa*.

The Madikwe Herd followed in September, and after their extended boma period, they moved into the northeastern corner, roughly 20km from the other groups. The herd settled quickly and could be viewed from close quarters within a matter of days. They fed primarily on *Cussonia*, *Acacia* and *Opuntia*.

The arrival of the Letaba bulls changed the movement patterns of the Kruger bulls. They moved away from the Kruger Herd as the Letaba bulls moved in. The Kruger bulls then moved to the Madikwe Herd for a few days. They were joined by both the Kruger Herd and the Letaba bulls. At this stage the Kruger Herd had a calf of roughly one-month old and covered a distance of around 20km to join the Madikwe Herd. For a period of three days all twenty-three elephants lived together, before the Kruger Herd and bulls left to return to the southwestern corner. The movement took place overnight and it appeared that little feeding took place.

Eventually one of the Letaba bulls left to join the Kruger Herd. The Kruger bulls moved further east and one of the Letaba bulls moved from the Madikwe Herd to join them. These three elephant bulls now form the nucleus of our viewing.

Good summer rains have resulted in the elephants grazing on *Panicum* and feeding on the species mentioned above. The advent of the ripening of the exotic Prickly Pears has changed their patterns quite a bit more and they are dedicating a good amount of time to eating the fruit and branches.

Black Rhino

Six Black Rhino of the subspecies *Diceros bicornis minor* were purchased at the KwaZulu-Natal Wildlife Auction in June of 2000. The animals had all been caught at least one month before the auction and were well settled by the auction date. KZN Wildlife would only sell the animals to an accredited bidder who had to purchase all six animals. In order to be accredited, one must have one's property assessed by a registered ecologist. In 2000, of all the properties assessed, Kwandwe was adjudged the most suitable habitat for Black Rhino (unfortunately this distinction does not bring the price of the rhino down!).

KZN Wildlife moved the animals to our bomas in early July 2000. There were considerable human nerves as the animals moved cautiously out of the truck one-by-one and into their respective pens. It's our belief that bulls should not be placed in pens next to each other, so the offloading was juggled to a slight extent, but all went well. The animals were still feeling the effects of the tranquilisers but ate and drank almost immediately.

It was our initial intention to keep the animals in the bomas for three to four weeks, allowing them to get used to the Eastern Cape climate as opposed to the sub-tropical KwaZulu-Natal. There had, however, been a delay in getting the transmitters for the horns from the USA, so the boma period was extended. The group was made up of two males and four females. While in the bomas, the rhinos displayed distinctive personalities and were named by Joseph Loteni and Chicken Masila, our boma managers, who took care of them while in the pens:

1. Bayelam (bull)

This bull was estimated through dental structure to be 10-12 years old. His name is a traditional Xhosa name given to the favourite member of a herd of cattle. He was docile in the bomas. He developed a slight upper respiratory tract infection during the latter part of his tenure in the pens which was easily treated with penicillin.

2. Thando (bull)

Thando means 'the loved one'. He would cry at feeding time and loved to be scratched. Black Rhino are well known for tameness in captivity, but they do react suddenly, and while at times they demand love and attention, they can also become suddenly aggressive. Thando was estimated to be 8-10 years old.



3. Romani (cow)

This was the character of the group. She is named after the Red Roman, a solifuge that follows and reacts to movement. Initially she reacted aggressively to everything, even her food being placed in the pen. She had a predator instinct for 'killing' her food first. We settled her down by placing a FM radio on a wire hook just outside her pen. This helped her settle down tremendously as she became used to noise and human activity. Routine is also very important and after a few weeks she would become agitated if her feeding time was just a little late. Romani was considered to be 10-12 years old and possibly pregnant.

4. Zalila (cow)

Zalila was thought to be 8-10 years old. She was in a pen between the two bulls and was the first animal to be released. We thought she was probably coming into oestrus as the bulls were very eager to work at the strong poles of the boma to get to her just a few metres away. This may, however, have been a result of the bulls sensing each other's presence.

5. Thandukhala (cow)

The high pitched sound of a Black Rhino calling can be rather mournful, hence this name, which means, 'The one that loves to cry.' The young females settle down the quickest and become very relaxed, bordering on lovable. Thandukhala was the second animal released and was seen mating with Bayelam shortly thereafter.

6. Ndavele (cow)

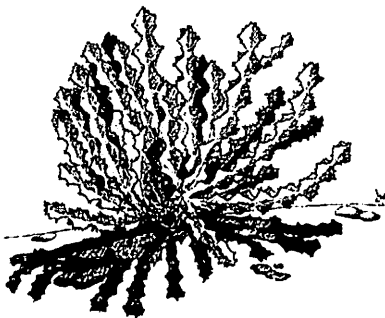
This animal became a firm favourite of all those who worked with her. It was eventually discovered that Joseph Loteni would get into the pen with her to clean her water trough. While not at all recommended, it is, in retrospect, an indication of the strong relationship he built up with her. Joseph would also often hang his legs in the pen, and she would show him the part of her body she would like scratched. Ndavele seemed to particularly love her hump to be scratched.

The Release

The animals were released, in most cases, with a two-day break between them. It is, however, advisable to leave a period of at least four or five days between the two bulls. We have always advocated the supply of two different-sized bulls, so that there is immediate dominance. In our case the two males eventually found each other, and to this day we count ourselves lucky not to have lost one of them. The sites where the two bulls fought were denuded of vegetation. Fortunately there were no serious injuries, but both of their heads were severely bloodied. One has to look for soft skin injuries, such as in the groin area, for these wounds are often deeper than perceived and one would then have to dart the animal to check for injury.

One of the bulls also fought with Thandukhala, injuring her slightly around the anus area. She was later seen mating, so it was probably as a result of her coming into oestrus. Black Rhino are strange in this behaviour, and while we are able to explain the territorial dominance fights between bulls, the males' need to injure and at times kill females is very difficult to explain. It may have to do with animals that do not 'know' each other, but this remains speculative. The balance of the animals settled in well, found water quickly and respected the boundaries of the reserve.

The other aspect, much to the disappointment of the boma managers, is that once the rhino were out of the pen, they became the wonderfully aggressive 'rugby prop forwards' we know them to be. The whistle that two weeks ago would have brought them running for their daily scratch and a treat was now treated with a build-up to a full-blooded charge, ending in a cloud of dust and a vertical thrust of their horn into the sky.



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A sedated young elephant makes a feet-first entrance into Kwandwe as he is hoisted from the relocation van.

Kwandwe Rangers keep the skin of this sedated Elephant hydrated while he recovers from sedation and transport.



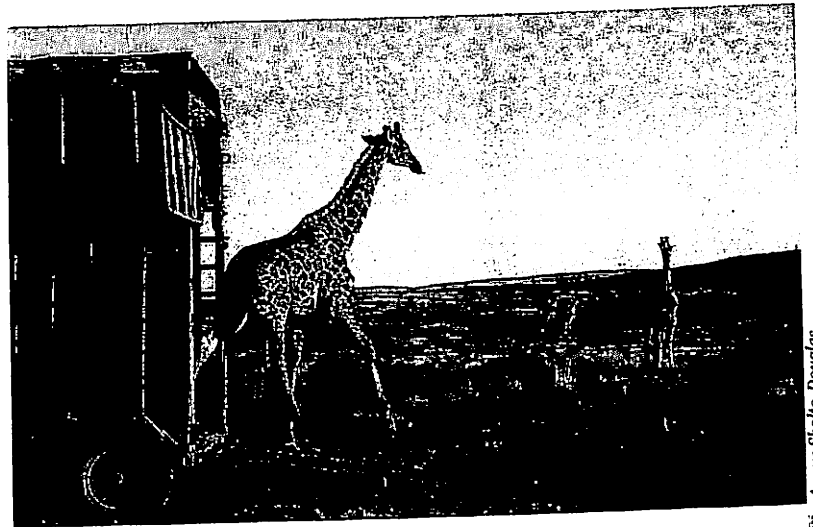
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Veterinary personnel keep watch over sedated lions during relocation.



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These two Giraffe cows make a basty exit from the transport vehicle, having fully recovered from the effects of the tranquilisers.



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The Food

In the bomas it was important to introduce the animals to the browse of the Sub-tropical Thicket or Valley Bushveld that characterises much of Kandwe's habitat. The animals were first fed species or sub-species of plants that they would have eaten before, plants such as *Acacia karroo*, *Maytenus*, *Carissa*, and *Schotia*. In time they also began to feed off some of the other species such as *Euphorbia* and to a lesser extent *Portulacaria*.

We found that once an animal had developed a taste for *Euphorbia*, it was hooked! In the bomas, the rhinos received 'sandwiches,' with *Euphorbia* at the bottom, then *Euclea*, then *Schotia*, then *Pappea capensis*, then the whole lot was covered with lucerne. The rhinos would respond by moving all the food with their horns, eating the *Euphorbia* first, then the lucerne and then the other species in mixed order. In the field, they mix their diets considerably, eating very little of the well known Spekboom *Portulacaria*, but favouring *Euphorbia* *bothae*.

The People

It is extraordinary that Carl DeSantis, the owner of Kwandwe Private Game Reserve, has had the foresight to purchase Black Rhino and reintroduce them to the Great Fish River Valley. These animals occurred here in great numbers historically. It is a place where Black Rhino have the shortest inter-calving period in Africa, where fly lesions disappear and where, above all, they thrive. We had little idea of the tourism potential for these animals, and they were bought on a conservation basis to be here as a nucleus for future generations to admire and study.

Dr. Pete Morkel's knowledge of Black Rhino was inspirational, but mostly it is his passion for the conservation of these beasts that has led to him being a world-renowned expert and adviser on the species. Pete is now employed by the Frankfurt Zoological Society in the Ngorongoro Crater where he is carrying out further research on Black Rhino. Brad Fyke is our neighbour, and a conservator of one of the most important populations of Black Rhino outside of KwaZulu-Natal and the Kruger National Park. His experience and knowledge of these animals is legendary, and no one should introduce Black Rhino without consulting Brad on the logistics and practicalities of housing the species.

Thanks to the staff at Kwandwe who chopped browse for two-and-a-half months. Chicken Masila and Joseph Loteni, sometimes spent all night speaking to a rhino and made sure they had enough of everything, especially love and attention. Thanks also to the rhino that allowed us to manipulate them, move them, crate them, and still have that wonderful disposition of passion ... long may you prosper! At the time of writing there are considered to be just over two thousand Black Rhino left in the world. Historically, the Great Fish River Valley alone, probably housed more than that.

