

A chip on the shoulder and one in each horn

by Hanne Lindemann and Hans Hansen

Like a gigantic dragonfly the helicopter is buzzing over the bushes below the hill. We can see the rhino running as the chopper forces him into unfamiliar territory. He looks almost drunk as he crosses the road and disappears in some dense vegetation, only to emerge a moment later heading straight in our direction. Just before reaching us, he decides to lie down peacefully in the middle of the road.

Quickly our small team gathers around him. While his respiration and temperature are watched carefully, blood samples are taken, horns measured and ears notched. Finally a hole is drilled in each horn and a microchip injected. Fifteen minutes later he is back on his feet, disappearing into the bush snorting, but no worse for the experience.

Problems with youngsters

1991 was the third round of the Black Rhino monitoring project in Pilanesberg. As usual it was carried out during the winter months, August and September, because at this time visibility is at its best due to a minimum of leaves on the trees.

We had learned in previous years that each rhino has its own physical characteristics, such as horn shape, scars or natural tears in the ears. Some have a kink in the tail. But all these characteristics can change or are difficult to see. Ear-notches can tear and change, but they are still the most reliable way of marking, and interfere the least with the rhino's natural appearance. Nobody wants to see wild animals with big yellow ear-tags or tattoos on their backs.

It is necessary to mark as it is recognised that individual identification provides the most accurate



basis for population-census. With only a few thousand Black Rhino left in the world, it is paramount to know what one has, before one can do anything to improve the situation. Recognising this, the Bophuthatswana National Parks Board has spent a great deal of money on identifying and photographing every Black Rhino in Pilanesberg.

Experience shows that it is difficult to identify young rhino as they all look alike with no scars, torn ears or characteristic horn shape. Alas, when a calf leaves its mother and wanders off into a new area identity can easily be confused.

It is important to keep track of a young animal that is on the point of leaving its mother. Therefore, it was decided to ear-notch the individuals that were not easily identifiable. For this purpose a special marking programme conducted by the veterinarian Dr Robert Keffer was incorporated into the project.

High-tech conservation

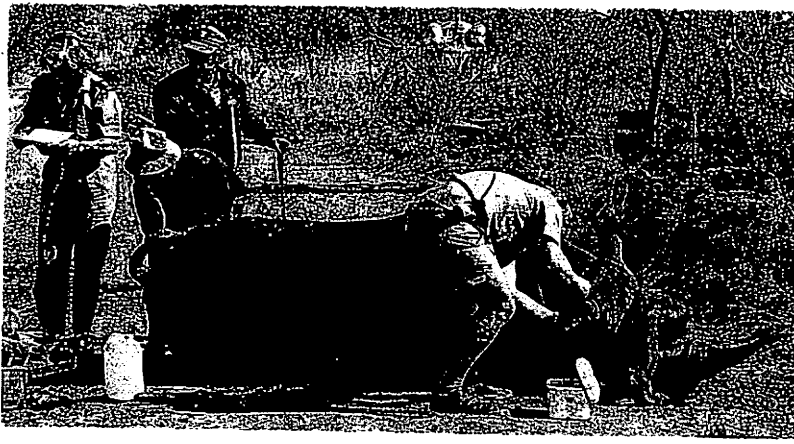
In 1992 the Black Rhino in Pilanesberg entered the computer age. For the first time microchips were implanted into wild rhino, one in each horn and one under the skin. The chip, a passive transponder (needs no battery), is only 2 mm by

10 mm and is delivered in a needle, ready to inject. It is activated by an electromagnetic reader, and transmits a 10 digit code, which is stored in the reader for later comparison.

If a dead rhino is not found immediately, the first to go are the ears, as they are often chewed off by hyenas. This is the main drawback when using ear-notching but now with a microchip under the skin identification is no problem. The chip is encapsulated to prevent infection, and will not move around in the body once it is injected.

It would be extremely difficult to remove the chip, as it would need complicated micro-surgery. If the horns have been removed by poachers, they can still be identified when found. However, the chip will move as the horn grows, and eventually disappear. The chips are inexpensive, but it is a costly exercise to dart and drug a rhino, and not without risk for the animal, so it was decided to put microchips only into animals that were being darted anyway for the ear-notching purpose.

The Black Rhino project is tied in with the annual game count, to obtain optimum use of the expensive helicopter. Every morning after the count we met with the vet and



For once the rhino decided to lie down in the middle of the road. Our small team at work.



Two small ear-notches reveal the identity of Dongalina as she reveals her new calf to us in the helicopter.

the counting team in the park. Had Black Rhino been spotted during the count, one of us would return with the pilot to identify the animals: otherwise time would be spent searching for clean animals, i.e. rhino with no ear-notches. All the animals that were found were photographed, but as the main object was to mark the rhino that were not easily identifiable, once an animal had been photographed no more time was spent on that individual.

Only the vet and the pilot were on board during darting. More weight would reduce the manoeuvrability of the helicopter. When the darted rhino went down the vet would stay with it, while the pilot fetched us. If the terrain was accessible, we would drive in with the two assisting game scouts.

The success of the whole darting operation was mainly due to Dr Keffen's experience and understanding for rhino. His competent handling and concern for the rhino was a pleasure to watch and very inspiring. At no stage was any rhino in danger. Each of us had specific tasks to do, and everything was done with a minimum of fuss. As we did not have to move the rhino very few people were involved, which again made the whole operation more simple.

Only once were we close to getting into trouble. One female, Bahati, had fallen in a gully and had difficulty in getting up after the antidote. "We might have to help her" was Bob's worried comment. The idea of helping an angry half-drugged rhino that was bashing its head all over the place was not very

attractive, seen from a safe position in a tree. Luckily Bahati (which in Swahili means luck) got up before we could decide what to do, and ran off snorting and puffing so typically for a Black Rhino.

Rhinos full of tricks

In all, thirteen Black Rhino were darted of which twelve (five males and seven females) were ear-notched. All had transponders put in. One female was darted by mistake. During the search a well-known male was spotted, so the helicopter turns around while the vet loads his gun and shoots ... a female. In spite of the mistake we were so happy to see this female, as she had not been spotted for two years. We had been particularly worried about her as she previously had been observed daily by tourists and was one of the few Black Rhino that did not resist cars. But as George, our assistant Sergeant, often says "Rhinos are full of tricks".

Pilanesberg has 34 Black Rhino. Of these 31 were identified and photographed during the 1991 project. No new animals were found, indicating that all the Black Rhino in the Park are now identified. Four calves were born between August 1990 and August 1991 (unfortunately at least three of them are males), and two adult males have died.

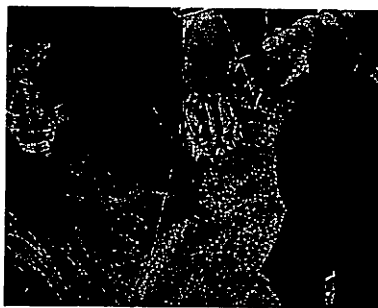
As the project continues we obtain more exact information on valuable breeding data. One female that had a calf in late 1988 or early in 1989 calved again around June 1991, which gives a calving interval of 2,5 years. A very good performance for a Black Rhino!

Hunting Black Rhino?

Right from the beginning in 1981/83 the sex ratio was in favour of males with eleven males and eight females being introduced. In addition three males and two

females were introduced in 1989. The sex ratio is slowly changing as several males have been killed (all three males from 1989 were killed by resident males) and some of the old individuals are now dying, so today the sex ratio is even. However, one cannot help speculating that it might be advisable to hunt one or two old bulls that are past their prime, and not seen with females at all.

It is a very controversial issue to promote the hunting of Black Rhino, and the idea could be misused, if it turns out to be as profitable as suggested. But the situation in Pilanesberg is special. All the animals were introduced, and the sex ratio was biased from the beginning. Now all the rhino are known and identifiable. One or two old males will probably die anyway in the near future, so why not gain funds, which could benefit the Black Rhino in the future? However, to justify such a decision it is important that



A hole is drilled before injection of the chip.



Injection of the micro-chip.

the revenue gained from the exercise goes directly back into Black Rhino conservation.

Acknowledgements

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