
Book Reviews

RHINOS AS GAME ANIMALS: PROCEEDINGS OF A SYMPOSIUM ON RHINOS AS GAME RANCH ANIMALS

Edited by J van Heerden and BL Penzhorn

Rhinos as Game Animals is an interesting and useful compilation of the papers presented at a symposium held at Onderstepoort, Republic of South Africa in 1994. The version reviewed here was reprinted in 1997, but there is no information on whether or not there has been any earlier versions or that there has been any attempt to update the contents since the symposium. If it is the case that this latest version is the first and only compilation of the symposium in print, some of the information may be dated, as it is three years after the actual symposium.

However, this compilation of 34 papers and a bibliographic list, available in soft cover, has a wealth of information both for the rhino specialist and the non-specialist who may just want to learn more about rhino ecology and 'husbandry'. The papers in the compilation cover a wide range of white and black rhino ecology, conservation and management as well as diseases and veterinary care. The wide coverage of topics means there is something for everyone.

The quality of the papers is variable. There are a few useful and carefully written papers, while many others could have benefited from closer editorial attention. The bibliography on African rhinos by du Toit et al., at the back of the compilation, does not only present a very

comprehensive reference list on rhinos but also offers an analysis of the literature in a tabular form. This is a gem. Anybody already in the 'rhino business' or planning to embark on any aspect of rhino research should be grateful to these authors for providing such a comprehensive list. This welcome analysis makes the targeting of areas needing more attention much easier.

Upon examination of this compilation of 'papers' which vary in style and quality, it is not easy to see the role of the editors. First, the format of this 242-page proceeding is very unusual. The page immediately after the title page has a table of contents that starts by listing the author (s) of the respective papers that is neither alphabetical nor logical. Secondly, there is no introduction or preface by the editors to explain the collection of papers neither to the reader nor to indicate how the compilation may be best used. Thirdly, in view of the diversity of topics covered, it would have been most useful to organise the papers into chapters which had groupings of similar papers by topic, eg. ecology, conservation and management, diseases and veterinary care etc., and with brief introductions to each chapter/section. Such an approach would have certainly have added value to the whole product. These editorial shortcomings notwithstanding, the compilation constitutes an important contribution to the growing literature on African rhinos.

Reviewed by Teye Teferi Programme Officer for Species, Africa & Madagascar Programme, WWF

RHINO RANCHING

by JG Du Toit

As Clive Walker correctly states in his introduction, much of the future of the rhinoceros in Africa will depend upon private landowners. As the human populations of Africa increase, more revenue is being channeled in the direction of education, housing and medical assistance and less in the direction of natural resource conservation, thus making it increasingly difficult for the official conservation bodies to look after

wildlife. Most prospective rhino owners are wealthy businessmen who know very little or nothing about rhino behaviour or requirements. I have seen many mistakes made, often with disastrous consequences, out of sheer ignorance and because the correct procedures and channels were not followed. It is thus high time that a manual like this has made its appearance. There are many experts in the various fields of rhino

conservation, but this is the first attempt to bring together the most important aspects of each field in a practical manner, which is understandable to the layperson.

The introduction, containing the 'Ten Commandments of Rhino Ranching', lets the prospective rhino owner know what he is getting himself in for. It also advises him of potential pitfalls and how best to avoid them. On the subject of minimum herd size, while I agree fully with the author regarding breeding bulls, if one does have only one breeding bull and for whatever reason it is not performing, another option would be to take dung from a bull from another ranch and spread it on the property. This usually has a most rapid effect as evidenced by very visible and increased signs of territory marking behaviour and may just lead to the desired results. As far as conflict with other animals is concerned, it cannot be emphasized enough that introducing young animals, mates and even females, into areas where there are already established adult populations, can have disastrous consequences.

The second chapter asks the question 'Why rhino ranching?'. From a tourism point of view, there is no doubt that the preservation of this particular species on a game reserve is a huge attraction, because they become very tame and usually guarantee close up viewing opportunities, and therefore allowing exciting and memorable sightings. Trophy hunting is very controversial, but whether one likes it or not, it has contributed to puffing a substantial financial value to the rhino - the more valuable something becomes, the more one will do to conserve it.

Chapter 3 (Habitat requirements), Chapter 4 (Social behaviour) and Chapter 5 (Reproduction) provides essential background information together with the important practical implications for the rhino rancher. The information contained herein allows the prospective buyer to plan his introduction properly from the start.

Chapter 6, dealing with 'Management', mentions 'Ear tags under 'Identification Techniques'. This is definitely only a temporary measure, not only for the reasons mentioned in the text but also because they can become the ears can become infected when kept for an extended period of time. Eartagging is certainly by far the best means of field identification and is a procedure which should be carried out on every rhino. When doing this it is also essential to insert microchips. One must be careful, however, not to drill too deep or too close to the base of the horn where one might penetrate the sinuses, bearing in mind that the horn rests on a bony prominence. The practical implications mentioned in

this chapter are important from a genetic and reproductive point of view, which is replacing breeding bulls every four to six years, purchasing bulls and cows from different sources and acquiring at least two breeding bulls if possible.

Chapter 7 deals with the capture of the white rhino. Here the introduction is all-important as it emphasises the need for specialised expertise and equipment before the operation can even be considered. As far as the drug dosages are concerned, I have a problem with the recommended azaperone levels. They are not too high from a safety point of view, but should an animal go down in an inaccessible position, thus necessitating it to be walked out to the capture crate, it will be very difficult to get it onto its feet using the recommended doses of nalorphine (especially at the end of winter when the animal's condition is down). One would also have to use higher doses of nalorphine, thus running the risk of reviving the animal too much and causing it to become uncontrollable once it is on its feet. I would recommend 40 to 60mg azaperone for an adult bull, 40mg for an adult cow, 15 to 20mg for a subadult and 5 to 8mg for a juvenile. Nalorphine can also be administered if the animal goes down very quickly or if the venous pressure behind the ears is low, in order to elevate the level of an aesthesia if the respiration is slow and/or shallow, Dopram should also be administered. The recommended walking dose of 30mg nalorphine applies to an adult animal — and even this can vary substantially from 20mg up to 70mg in some cases. As a precautionary method, start with a low dose. Anti-inflammatory compounds such as Finadyne are not recommended routinely, because if a problem does develop it is usually because the journey is too long or that the animal is not tranquilised adequately. One must remember that the white rhino is usually very groggy for at least six to eight hours after being revived and loaded. The precautions in this chapter are extremely important. Paralysis of the hind limb, which the author refers to, is usually unilateral and often permanent, so it is best not to let the rhino lie on the same hind limb for longer than 25 minutes. If the capture process is going to take longer than this, for whatever reason, it is best to roll the animal from one hind limb to the other. This is especially important in heavy, adult animals. As far as the use of hyoscine is concerned, I would discourage its use completely. I would also never recommend releasing animals straight into the bush post capture - even a boma trained rhino may go straight through the boundary fence of its new home. It is better to release the animal into a holding boma, even if it is only for a couple of days, in order to allow the animal to settle down. The smaller the ranch, the more important

this becomes. The last precaution mentions capturing a rhino in poor condition. It is not always easy to judge a rhino's condition, and I have been misled on several occasions. It is better to recommend that under normal South African conditions, it is inadvisable to embark on a capture operation after the end of July. Under the heading 'Transport' there appears to be an error in Table 4 with regards to the Clopixol-Acuphase doses and should probably be read as such: sub-adult 200mg, adult cow 300mg and adult bull 300 to 350mg (even 400mg). It must be mentioned here that this drag does not consistently deliver the desired results. As far as the precautions regarding transport are concerned, the mass carrier pictured on page 37 is designed in such a way that it can and has transported six adult bulls comfortably on numerous occasions. In my opinion, it is inadvisable to spray animals with water during transport. The rhino may slip on the wet floor and not be able to get up, leading to disastrous consequences. Instead, by limiting the number and lengths of the stops, one ensures that there is a regular flow of air over the animals, which should be enough to prevent the rhino(s) from overheating. Pouring water over an animal in aerate whilst the vehicle is stationary, also raises significantly the humidity. As far as 'Boma Management' is concerned, the first point under 'Problems' applies to the 'Release' subsection. Under 'Feeding', mention is made of lucerne- be sure to mix it in gradually with the teff up to a maximum of 10%, as too much can lead to diarrhoea. Constipation may also be due to the fact that the animal does not eat at all for the first few days. Soft stools and even diarrhoea is one of the more common complications - usually due to too much lucerne, too many cubes or both. The problem is usually resolved by feeding exclusively teff for a few days. Under 'Release' I would like to reiterate that it is always better to release a rhino into a temporary holding boma, if at all possible. If not, the advice offered here becomes all the more important.

Chapter 8 deals with mortality and includes some information on the background and intricacies involved in poaching. In Chapter 9, the author briefly goes into the politics of rhino conservation wherein he states that the CITES ban on the trade of rhino products has not been effective in controlling poaching and that the private landowner, in contrast to what 'Green' organisations maintain, should be allowed to do what he likes with his rhino, as they actually belong to him.

Reviewed by PS Rogers-Hoedspruit Research and Breeding Centre for Endangered Species,
PO Box 1278, Hoedspruit, 1380, South Africa

Chapter 10 demonstrates just how expensive it is to properly look after and conserve rhinos, but if one looks at the trend in the selling prices over the last couple of years (the average selling price during 1998 will probably be South African Rand 90 000 [US\$ 15,000] and more), it is obvious that buying and fanning rhinos can be a good investment. There can be no doubt that hunting has contributed significantly to the increased value of the rhino. In this chapter, the author also puts forward arguments for and against legalisation of trade in rhino horn. In my opinion, dehorning rhino will not stop them being poached - the base can surely be cut into blocks and sold as such. Then there is also the revenge aspect - a poacher tracks a particular rhino for days, only to find that it has no horn. More than 95% of the 71 rhino mentioned in the Zimbabwean dehorning operation were shot — and one can only speculate as to the reasons why. I agree with the author when he states that demand exceeds supply and that the poaching efforts will therefore continue until the last rhino is shot. The author also goes through a dehorning costing exercise which is followed by a table showing the sharp increase in the value of rhino horn over the last 10 years or so. It would appear that there is a substantial amount of money to be made out of rhino horn harvesting, if one can accept that a rhino without a horn is still a rhino!

Appendix I lists all the organisations that have been and still are deeply involved in rhino conservation today. Appendix II lists the names of specialists in the various fields of rhino conservation who can be contacted for help and/or advice. Appendix III lists all the Provincial Nature Conservation authorities with whom one needs to work in order to obtain advice and the necessary permits.

To sum up, I believe that every prospective rhino rancher should read this manual and they will not only become aware of all the options open to them regarding the utilisation of the animals, but also the numerous pitfalls that await should they not be adequately prepared. Should the reader wish to get any more information on a particular aspect, the author has included a bibliography at the back stating the sources consulted and suggested further reading. This manual should also be consulted by anyone involved in or interested in rhino conservation as it addresses all of the issues, some of them very controversial, pertaining to rhino ranching and utilisation.