

THE MONITORING OF RHINO HEALTH THROUGH BLEEDING AT THE UGANDA WILDLIFE EDUCATION CENTRE.

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Introduction

The future of rhinoceros worldwide is highly threatened. Once roaming freely in Uganda and throughout Africa at large, the year 1979 saw the death of the last rhino in Uganda. Darkness befell this country in terms of wildlife conservation during the 1970s and through the period of the 80s as the country went through a series of political turmoil and lawlessness.

Once roaming freely in Uganda.

Uganda wildlife education centre was the first centre in the country to bring back the rhinos for purposes of conservation education and breeding. This was after more than two decades of local extinction. This marked the turning point in the reintroduction process of these flagship species. The first stage of this process was to bring two rhinos male and female at the Uganda wildlife Education centre for purposes of conservation education and breeding, while the second stage was to have an establishment of a rhino sanctuary for conservation education, tourism, and breeding, and the last stage would be the final release of the rhinos in their natural wild, in the national parks where they once existed before becoming locally extinct.

Rhino status at UWEC

Two Rhinos, Sherino and Kabira have been at UWEC since 2001 for breeding and conservation education purposes. This was an undertaking by the governments of Uganda and Kenya to have them from Solio Ranch in Kenya. They are managed under the mammal section with three keepers in charge. They have been trained to go through a daily routine of being let out to the outside yard (Exhibit) and then being able to return to their holding facility every evening at 6:30pm. Every morning the rhinos go through a body examination exercise where the keepers look out for injuries and any other

abnormalities before they can be released to the outside yard for public viewing.

The outside yard consists of an area measuring three hectares and includes mud wallows, scrubbing posts, and drinking water points. The yard has been partitioned into two paddocks with an access gate for pasture regeneration purposes. The rhinos basically spend most of their time grazing on the short grass that naturally grows in their exhibit. Their diet manual has been designed and includes elephant grass which is produced locally by the horticulture section and is presented to the rhinos on a daily basis. This grass is cut and packed in sacs or bags each weighing on average 30kg and 15 bags are presented on a daily basis. The animals are also presented one bale of hay each, and 9kg each of horse cubes for their evening meal. Approximately each bale of hay weighs 10kg. Mineral supplements are provided on a monthly basis in form of mineral blocks.

At the viewing points, conservation education information panels are well displayed to give visitors more especially the school groups interactive experiences. The rhino exhibit is one of the most popular exhibits at the Uganda Wildlife Education Centre. The rhino represents a symbol to one of the major tribes in northern Uganda. Daily visitation to the exhibit is estimated at 1000 students per day.

INTERVENTIONS:

At the Uganda Wildlife Education Centre which is situated by the shores of lake Victoria, Keen interest has been taken in the monitoring of the presence of tse tse flies for safeguarding the welfare of the rhinos since they are highly susceptible to infections of trypanosomiasis. The rhinos do undergo routine vaccination regimes besides the management of minor injuries as and when they occur. Uganda Wildlife Education Centre is also together with Cincinnati zoo working on a project to reintroduce the rhinos back to the wild with time to come.

This is the third phase of the project which is being implemented in Karuma conservation reserve, part of Murchison falls National Park. The project is concerned with conservation of Rhinos as “flagship” species in this habitat. This area was selected because it was where the Rhinos once existed before they were declared locally extinct in the late 70s.

There is an attempt to reintroduce them back to their natural habitats and before this is done, there is need to sensitize the communities around with the emphasis on the young generation on the importance of conserving this unique specie.

The third phase was successfully implemented between the months of April and June, 2010 in Bobi and Minakulu the last Sub-counties of Oyam district.

BREEDING:

This unfortunately has not been successful. In 2001 when the Uganda Wildlife Education Centre acquired two rhinos male and female from Kenya, the intention was to have them breed naturally. However, there are plans to transfer the female to Ziwa rhino sanctuary for breeding ¹purposes. There is also a plan to contact artificial insemination experts to intervene should the natural means fail.

Problem statement.

There are a lot of tse tse flies around the shores of Lake Victoria where the Uganda Wildlife Education centre is situated. This therefore, exposes our animals more especially the rhinos to the risk of trypanosomiasis infections to which the rhinos are highly susceptible.

Therefore, this intervention gives us the opportunity to identify if the rhinos are infected or not in order to come up with appropriate management schedules.

Aims

Ensure that the rhino health is monitored through bleeding in an ex-situ environment at UWEC.

Objectives:

- To acquaint the rhinos to routine sampling.
- To ensure quality and quantity of the collected samples is maintained.
- To maintain the viability of the sample obtained through collection and storage.

Activities

To acquaint the rhinos to routine sampling:

- Done once every month.
- The sampling duration for both rhinos is approximately one hour.

¹ Alex Droma – Uganda Wildlife Education Centre.

- This is usually done in the mornings because the animals are usually calmer before the day starts to get too hot.
- The blood sampling schedule is pinned on the rhino holding facility notice board so that the keepers involved are all kept up to date

To insure that quality and quantity samples are obtained:

- Prior to the sampling, the rhinos are each separated into different, but already cleaned holding rooms. This is basically done to avoid interference from the other rhino during the procedure.
- Both keepers wear gloves and disinfect the instruments to be used during the procedure.
- The sample site which is usually the ear is first thoroughly cleaned using water to remove excess mud in case the animal has had a mud wallow previously before finally cleaning it using methanol alcohol 95% and dried.
- The ear vein is exposed as a result. A new set of gloves is worn by one of the keepers who then prepares a syringe ready to enter the vein which should be done with precision to avoid causing pain to the animal during aspiration of the sample.
- At this moment, the second keeper keeps the animal's head low by feeding it with horse cubes as the other goes on about with his sampling.

To maintain the viability of the sample obtained through collection and storage:

- The sample is collected in a 5ml glass vacutainer
- It is then stored for analysis.

Outputs

24 samples are abstained annually.

The rhino are now conditioned to this exercise.

So far no disease causing parasite has been identified in the samples collected.

Recommendations

In tropical countries like Uganda, sample collection can be done twice a month

UWEC should revamp its vet lab for timely analysis of samples.²

Challenges;

- **Lack of appropriate/ enough tools and equipment**
- **Inadequate training and exposure**
- **Sometimes aggression from the animal is encountered**

ACKNOWLEDGEMENTS:

- **Uganda Wildlife Education Centre.**
- **Liz Romer.**
- **International Rhino Keepers Association.**
- **Paul Hause.**

Conclusively, so far the rhino project in Uganda is headed to the right direction and the Uganda wildlife Education centre pledges to work closely with other zoos and stakeholders in the promotion of rhino conservation in Uganda.³

² Alex Droma – Uganda Wildlife Education Centre.

³ Alex Droma – Uganda Wildlife Education Centre.



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Zoo Keeping in Singapore.
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**BY ALEX DROMA
Uganda Wildlife Education Centre**

Introduction

- **The future of rhinoceros world wide is highly threatened.**
- **Once roaming freely in Uganda and through out Africa at large, the year 1979 saw the death of the last rhino in Uganda.**
- **Darkness befell this country in terms of wildlife conservation during the 1970s and throughout the period of the 80s as the country went through a series of political turmoil and lawlessness.**

Cont....Introduction

- **Uganda wildlife Education Centre was the first centre in the country to bring back the rhinos for purposes of conservation education and breeding.**
- **This was after more than two decades of local extinction. This marked the turning point in the reintroduction process of these flag ship species.**

Cont.... Introduction

- **This paper presents an intervention scenario in an ex situ situation, where an attempt has been made to monitor their health through bleeding.**

Why bleed the rhinos?

- To look out for mainly tsetse fly parasites and other pathogens in blood.
- To establish and monitor different blood parameters for any future health related interventions.
- Also done as a routine (twice a month) so that the animals get acquainted to such procedures as and when they are required to do so. This is successfully done without sedating the animal.

How is the bleeding done

- The site (on the ear) where the blood is going to be drawn from is cleaned first
- The vein where blood is drawn is spotted.

Spotting of the vein



Preparation to bleed

- **At this point the assistant feeds the animal with horse cubes**
- **This helps to keep the animal in one position as you prepare to bleed.**

Feeding the Animal



Aspirating blood



Bleeding and Storage

- **Load the blood sample into vaccutainers.**
- **This is for storage and lab analysis**

Loading into vaccutainer



After bleeding

- Applying pressure with gauze at the spot to stop further bleeding



Problems encountered in bleeding

- **Lack of appropriate/ enough tools and equipment**
- **Inadequate training and exposure**
- **Sometimes aggression from the animal is encountered**

Tools and Equipments used in bleeding



Acknowledgments

- **Uganda Wildlife Education Centre**
- **Liz Romer**
- **International Rhino Keepers Association**
- **John Wath**
- **Paul Howse**
- **Wildlife Reserves Singapore**
- **Jurong Bird Park**

Pictorial



Cont.....Pictorial



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THANK YOU FOR LISTENING

For God and My Country

