

The Status of Northern White Rhinos

Northern white rhinos (*Ceratotherium simum cottoni*) were discovered for the western world in 1900. At that time the only previously known white rhinos belonged to the southern race, (*C.s.simum*), south of the Zambezi, over 2500 kilometres away. These had been reduced to relict populations once said to number 10 individuals. Now the situation is reversed. There are over 3000 southern white rhinos re-distributed throughout their former range and we are faced with a question for the northern whites: 'Can we achieve a similar conservation success, or do we allow the whole sub-species to become extinct?'

At the start of this century, the northern white rhino probably occurred west of the Nile from the north-western corner of Uganda and north-eastern corner of Zaire, north through Sudan to just above Shambe and west roughly between 5 and 9 to the present Central African Republic and southern edge of Tchad. Throughout this range it had a very patchy distribution, probably determined negatively by the presence of people and positively by the burned riverine grasslands associated with areas of savanna woodland and available water. Areas that were given theoretical conservation status included: Ajai Sanctuary and the forest reserves of Mt. Kei and Otze in Uganda; Parc National de la Garamba in Zaire; Nimule and Southern National Parks and Shambe and Numatina Game Reserves in Sudan; Reserve de Zemonga and Parc National de Goz Sassoulka in C.A.R. and Tchad.

The placid white rhino, grazing in open grasslands and blissfully unaware of what is happening downwind, is easy prey for man. The conservation forces of these countries have often had inadequate resources to protect their vast areas and wars have taken their toll. White rhinos are now extinct in seven, probably eight of the above 'sanctuaries'. Parc National de la Garamba has generally offered the best protection and in 1965 Sidney wrote that ". . .the future of this Reserve is vital to the survival of the northern race in the same way as the Umfolozi Reserve in Natal is the last hope for the survival of the southern race". She was right.

Garamba was well protected after its creation in 1938 and the reported 100 rhinos that existed then had increased to an estimated 1000 to 3000 before Simba guerilla forces occupied the park in 1963. In 1972, Curry-Lindahl estimated that 900 to 1000 had been killed during the disturbances. With regained control of the park, numbers increased again and 490 were estimated to be present by an FAO aerial survey in 1976. Around 1978/81 another wave of poaching hit the park.

The civil war in Sudan also eliminated many rhinos there. The famous rhinos of Nimule were wiped out and most of those near Juba and in Yei district and Numatina have been destroyed. In Uganda, all those in West Nile Province were killed during Amin's time and the subsequent liberation war and only the odd one or two remain of those translocated to Murchison Falls National Park in the 1960s. In 1969/70 Corfield and Hamilton were unable to confirm the existence of white rhinos in eastern C.A.R. though they have since been found in the west. They have almost certainly been lost from Tchad.

As a result of the 1979/80 survey of the status of rhinos in Africa, the northern white rhino was identified as the most endangered of the African rhinos and projects were developed for



Figure 1. An informer shows Gabriel Gurguri, Senior Wildlife Officer in Shambe, a skull of a poached northern white rhino.

their conservation in the then relatively high density areas of Shambe Game Reserve in Sudan and Parc National de la Garamba in Zaire, Funds were not immediately available, however, and a new wave of poaching took hold of both countries around 1979/81 as the commercial value of the horn became more widely realised and arms more easily available, Following the re-affirmation of the northern white rhino as a high conservation priority at the Wankie meeting of the Rhino and Elephant Groups and the A.E.R.S.G. meeting in Nairobi in September 1982, an 'Emergency Mission' went to Kinshasa and Garamba in October/November 1982, consisting of Ian Hughes, Kes Hillman and Paul Dutton, as well as Pat Rogers of FAO and Mankoto ma Mbaelele, Directeur Scientifique et Technique of the Institut Zairois pour la Conservation de la Nature (IZCN). We ascertained that rhinos still exist in Garamba, although in low numbers, and we proposed an initial project for immediate aid for anti-poaching as well as long term assistance.

Starting in January this year, a more detailed survey is being carried out by Kes Hillman, in conjunction, for the aerial work in Garamba, with Markus Borner of Frankfurt Zoological Society (FZS) and with members of IZCN and the Wildlife Dept., Southern Sudan. Funding for the ground work is from World Wildlife Fund. The aerial work is carried out with the support of FZS and the Global Ecological Monitoring System (GEMS) of UNEP.

The overall objective is to find out how many of the northern white rhinos are left and what can be done for their conservation. In Zaire this has involved carrying out aerial and ground censuses and making detailed conservation recommendations. In Sudan the priorities are to assess the situation in the areas most recently known to have had reasonable populations of white rhinos (Shambe Reserve and Southern National Park) and-to follow up leads on other possible populations.

The results so far are depressing for Sudan and dangerously low but optimistic for Garamba.

Sudan

Our information to date in Sudan is based on:

- a) Previous knowledge from ground and aerial surveys in the Shambe Reserve and Southern National Park.
- b) Reports from government officials, hunters and local people.
- c) Vehicle and foot surveys.

We identified four areas worth investigating:

- a) Shambe Game Reserve and adjacent areas.
- b) Southern National Park between Sue and Ibba rivers.
- c) The proposed Lantoto National Park, adjacent to Parc National de la Garamba.
- d) The area between Tonj and Meshra.

Starting from the lowest priority:

- d) There have been no confirmed reports since 1976. An aerial reconnaissance is considered necessary and may be carried out in April/May.
- c) The Lantoto area, south of the Yei-Maridi road was covered as part of the Garamba aerial census. It is an attractive, gently hilly area with moderate to thick cover of broadleaved woodland, but very limited availability of water. Almost no animals were seen, apart from an occasional duiker or warthog. Its main value is as a buffer zone to Garamba. It is questionable whether the Sudanese authorities should invest a large part of their limited resources in protecting the area but it is certainly worth improving its legal conservation status.
- b) The situation in Southern National Park represents Southern Sudan's biggest immediate conservation problem. Since the 1980 dry season, the Southern Region has been invaded annually by poachers from the north. Well-armed and mobile, with horses, came Is and pack donkeys, they have caused havoc for wildlife and people alike. They concentrate mainly on elephants but kill anything of value and have almost certainly eliminated the white rhino in the west of the region. Each year the poachers have moved further south and east and this year are in greater force than before. They have completely occupied Southern National Park and in March there were estimated to be between 15 and 30 camps in the Park with 10 to 300 men in each. They are far better armed than the Southern Region Wildlife Department staff that are trying to combat them and are equipped with new G3 automatic weapons, radio communications and helicopter support.

It has not so far been possible to carry out a systematic count over this war zone, which in 1980 was estimated to hold 168 white rhinos, but an intensive count over the rhino area is planned for May when rains have moved the poachers out. So far 220 tusks have been captured from poachers, but it is estimated by one source that 5,000 and by another source that 30,000 elephants have been killed each year. Average tusk weight of elephants shot by one safari company fell from 49 lb to 36 lb from 1980/1 to 1981/2. The large elephants that were easily found 4 or 5 years ago have long gone. Most of the poached tusks weigh only a few pounds each.

This organised poaching has political and military links. Unless stopped, there is no hope for Sudan's northern white rhinos and very little hope for the wildlife as a whole. A well organised, equipped and maintained anti-poaching effort is

needed in the south, but it will have minimal effect unless the central government takes action to stop the poaching and the export of ivory.

- a) Most of the ground work in February was in the Shambe and Alliab Dinka areas, Rhino poaching only started in these regions in the last 2 or 3 years, but in that time it has eliminated, most of the rhinos.

In the Shambe area we worked with the Senior Wildlife Officer, Gabriel Gurguri and his honey hunter 'informers'. They had reported 24 rhino sightings in 4 locations since 1981.

We covered six locations, concentrating on likely areas such as the few water holes and the places where rhinos had been reported. Despite several promising leads, no fresh rhino spoor was seen and it appears that most of the alleged sightings of rhino tracks were of doubtful validity. The most recent reported sighting of live rhino was in July 1982. Most rhino poaching was from late 1979 to 1981, Our preliminary conclusions are that:

1. The Shambe region no longer contains enough northern white rhinos to justify a major investment for their conservation but the limited help promised by IUCN/WWF is still badly needed and will be productive.
2. The proposed full Game Reserve area should be officially gazetted as soon as possible with an initial compromise on limited grazing and watering rights in the south east, but total human exclusion in the north west.
3. The best hope for the area is for an agreement to be made between the Ministry and a reputable safari company for the long-term tourist development and conservation of the Reserve. There has been a preliminary acceptance of this idea and an initial meeting has been held.

Zaire

Garamba National Park (4900km²) in Zaire is now the best hope for conservation of the northern white rhinos in the wild.

Aerial and ground surveys were carried out there in March as follows:

- a) A 10% systematic aerial sample count was made over the whole park and surrounding game reserve and the proposed Lantoto National Park, directly comparable with that carried out by the FAO team in 1976.
- b) A 46% intensive aerial sample count was made over the southern third (1609km²) of the park, during which only rhinos and elephants were recorded,
- c) The park staff carried out their regular ground count, walking transects spaced at 2km intervals over the southern third of the park.
- d) Simultaneous high intensity 'total' counts were made by guards walking 500m spaced transects and by ourselves flying over an 84km² rhino 'concentration' area.
- e) The total number of individually recognised animals was extrapolated.

Six rhinos were seen within the aerial sample transects and another five individuals outside. The preliminary estimate from the 46% count was 15. From aerial and ground observations approximately 17 individuals can be accounted for. The results from the high intensity counts indicate that some rhinos

may have been missed from the air, but inconsistencies in the ground counts make it impossible to apply correction factors. Our estimate therefore from a critical examination of all results is that at least 15 to 20, possibly more, white rhinos still exist in Garamba. They are confined to a fairly localised area.

The population is dangerously low but should be viable if a major input is made in Garamba and the northern whites already in captivity are managed to improve breeding with potential for genetic exchange. Garamba is a beautiful, productive and well-watered area with large numbers of other animal species, particularly buffaloes and elephants (of which there are estimated to be 5000 in 1600km²). Another major advantage is the well established infrastructure which can be re-developed.

The park staff lack equipment, funds, vehicles and supplies but IZCN has already taken steps to concentrate on rhino protection and research under Mankoto ma Oyisenzo and has invited an expatriate researcher. Some of the equipment priorities identified during the November mission have already been met. Other urgent requirements are needed immediately. A larger project should be developed to ensure that the rhinos are protected and managed along with the whole ecosystem.

Patrol bases are presently being established in the rhino area for intensive surveillance. Radio collaring is suggested as part of the future programme of intensive protection and management.

Strong possibilities exist for tourist development of the Garamba, which has several unique features, in particular the only African elephant domestication project. Although there are only four surviving trained elephants, there are proposals to catch and train more.

An excellent chance now exists to save the last most viable northern white rhinos in the wild, while conserving and developing a fabulous area. It must be seized.

The results of the survey have emphasised how important it is to develop the breeding and management of the northern white rhinos already in captivity. It was believed that there were only fourteen in captivity but recent information indicates that there are more. The possibility of consolidating these animals into two groups is being considered and the International Union of Directors of Zoological Gardens and American Association of Zoo Parks and Aquariums have agreed to oversee a programme. The largest group at present is the eight in Czechoslovakia which are breeding, but slowly. Artificial insemination is being developed and it is possible that semen could be collected from immobilised wild rhinos in Garamba.

An investment of money and effort is needed now for a co-ordinated programme of conservation in the wild and development of captive breeding to ensure that northern white rhinos and their habitats continue to exist.

Kes Hillman

Selous Aerial Survey 1981

On behalf of the Tanzanian Rhino and Elephant Task Force a census was carried out in the Selous Game Reserve in Southern Tanzania in 1981. About 35% of the 55,000 km² Game Reserve was surveyed and the results were compared with a survey that had been carried out by Douglas-Hamilton in 1976.

The elephant numbers seem to have remained stable between 1976 and 1981. Numbers counted were 82 628 \pm 17% in 1976 and 85 504 \pm 12% in 1981. As data could be compared only for the wet season, when visibility is not optimal, the estimate is conservative. The actual number of elephants is probably nearer 100,000.

Elephant skeleton densities have increased by about 50% from 1976 to 1981 and the ratio of dead to live elephants has risen from 7.8% to 12.3%. This indicates a higher mortality rate in the elephant population. The distribution pattern of skeletons along access routes and close to settled areas indicates that the higher mortality in elephants is due to poaching.

We can conclude that the elephant population of the Selous remained at about the same level between 1976 and 1981, but that poaching in the more accessible areas has markedly increased.

Survey data seem to suggest that the total (corrected) number of rhinos in the Selous has decreased from about 5,000 to about 3,000 animals in the last five years. These figures must however be considered with reservations. Although there were

high 95% confidence limits on both counts (46% and 44% respectively) our ground counts showed clearly that aerial surveys have only limited value for counting rhinos. Using the results of ground counts we worked out a rhino correction factor of $\times 2.55$ in the wet season for that specific area and vegetation cover. We were unable to work out a correction factor for the dry season, due to different behaviour patterns of the rhinos, who concentrate in riverine forest and thickets during this season.

According to professional hunters and Wildlife Division staff, rhino poaching is occurring occasionally but has not yet reached an alarming level.

The 3,000 rhinos estimated make the Selous black rhino population the largest in the world.

Up to date the best protection for the wildlife in the Selous Reserve was the vastness and inaccessibility of the area. SHELL is at present building seismic roads into three quarters of the Selous Game Reserve, thus making it unfortunately also accessible to illegal hunting.

A number of recommendations were made to improve protection and management of the Selous. The AERSG is making a high level approach to SHELL, to assure their cooperation in minimizing the negative effects their present work has in the Selous Game Reserve.

Markus Borner