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A rare species of papyrus (*Cyperus papyrus*) found in Africa and Southern Europe. It is one of the many endangered plant species which WWF/IUCN projects are seeking to protect. (Project 1224 p. 59)
Drawing: Leonie Kreckel-Renner

RHINOCEROS Project 1747 Launching of Rhino Project

WWF GRANT 1979 - \$11,923

In 1979 WWF/IUCN joined forces with African and Asian governments, as well as other leading conservation organisations, in a co-ordinated emergency campaign to save the rhinoceros, all five species of which are in grave danger. The two African species, the black rhino and the white rhino, have experienced a dramatic decline in recent years through poaching for illegal trade in rhino horn. In Asia, the Javan, Sumatran and Great Indian rhinoceros are also threatened by poaching and loss of habitat. Several WWF/IUCN projects are now in full swing to develop a conservation strategy for the rhino.

AFRICAN RHINOCEROSProject 1707 Rhinoceros Survey and Conservation in Africa

WWF GRANT 1979 - \$8,184

Project 1724 Conservation Strategy for Rhinoceros - Kenya Rhino Action Group

WWF GRANT 1979 - \$15,033

Project 1730 African Rhinoceros Conservation

WWF GRANT 1979 - \$14,090 (funded in its entirety by the New York Zoological Society)

Important Note: In May 1979, the New York Zoological Society, in response to a proposal from Dr. Kes Hillman, took the initiative to fund urgent activities identified by the IUCN/SSC African Rhino Group (Project 1730). This later evolved into a collaborative effort with WWF/IUCN to pursue the priority goals for the rhino. WWF/IUCN is grateful for the initiative from and support of the NYZS in this critical programme.

The recently accelerated decline of rhino numbers in Africa has made action imperative to conserve the remaining black and northern white rhinos. The objectives of the WWF/IUCN projects are to initiate and monitor action for rhino conservation, by promoting the establishment of and co-ordinating national working groups; survey the distribution, numbers and status of rhinoceros populations in Africa; review conservation and management options

for rhinos; pin-point priorities for conservation, research and management; provide material for education and public awareness and together with the TRAFFIC group of IUCN and consultants, to gather information on the commercial trade in rhino products.

Ever since the middle of the 19th century when big-game hunters first penetrated the hinterland of Africa, rhinos have been in decline. During the 1970s rates of decline accelerated. As many as 90% of the rhinos have been lost from many East African parks and reserves. Hit by excessive hunting, African rhino populations have also suffered from loss of habitat due to expanding human populations. On top of this there has been a continuous and growing eastern market for rhino products. Apart from the value of the skin for shields, as in Somalia, the use of the horn as a club, and general use of the meat, rhino parts have no special significance in Africa, and the African market makes no great demands. In the East, however, all parts of a rhino are revered for a variety of purpose. This has long since reduced the three species of Asian rhinos to minute relicts of their former populations. The black (Diceros bicornis) and northern white (Ceratotherium simum cottoni) rhinos of Africa are now facing the same threat. But is it due to genuine demand or to the creation and then exploitation of a market?

Rhino horn's reputation as an aphrodisiac seems not only undeserved but largely non-existent. From Dr Esmond Martin's recent investigation of the trade in rhino products it appears that only in India is rhino horn or skin used as an aphrodisiac although occasionally rhino penis is. The horn, however, is prescribed for a variety of ills, such as fevers, headaches, toothache and insanity. (See report below).

The IUCN African Rhino Group is at present assessing the status of rhinos in Africa, and identifying their conservation needs. This is being done by personal visits to countries and through discussions and correspondence including a detailed questionnaire.

Rhino distribution

Black rhinos (Diceros bicornis) occur in Cameroon, Central African Republic (CAR), Chad, Sudan, Ethiopia, Somalia, possibly northern Zaire, Uganda, Kenya, Tanzania, Malawi, Zambia, possibly Botswana, Angola, Mozambique, Zimbabwe, South Africa and Namibia. In many of these countries, however, numbers are in the low hundreds or even tens. Substantial populations are only known still to remain in Luangwa Valley in Zambia, in south-eastern Tanzania, particularly in the Selous Game Reserve, and possibly in northern CAR.

There are probably between 10,000 and 20,000 black rhinos remaining in Africa, but almost everywhere their ranges and densities and overall numbers are declining. In some areas of Kenya remnant individuals are now so scattered that those populations are unviable. The total Kenya black rhino population is estimated to be less than 1500 which is perhaps a tenth of what it was 10 years ago.

The northern race of white rhinos (C.s. cottoni) is reduced to relict populations totalling probably less than 1000 individuals in southern Sudan, Uganda, CAR and northern Zaire. They are badly in need of improved protection. White or square-lipped rhinos (Ceratotherium simum simum) in South Africa were reduced to a single small relict population, but protection since then has led to such healthy increases that nearly 2500 have been successfully translocated to zoos and reserves and approximately the same number remains elsewhere.

Country by country, the status, the amount of information and the needs vary considerably. In Angola rhinos probably number in the hundreds and are almost certainly decreasing. The amount of traffic of rhino horn across the border indicates a relatively substantial population but very little is known and a visit by a Portuguese-speaking representative is being negotiated.

In Botswana 50 southern white rhinos, which were introduced into Chobe National Park, are apparently thriving, but less than 20 black rhinos are thought to remain.

In Cameroon there are possibly just over 100 black rhinos, largely in the north. They have been protected from hunting since November 1974, but the Minister for Agriculture is aware that the habitat must be safeguarded as well. Pierre Pfeffer for IUCN is visiting the country in March to discuss the situation.

At least 1000 black rhinos are believed to live in CAR. Less than 50% of them are in protected areas. Northern white rhinos probably exist in the east of the country, but little is known about them and there are no protected areas within their probable range. Very few black and no white rhinos remain in Chad, and the poaching is serious and increasing. In Ethiopia, a few black rhinos were seen during 1979 in the region of the proposed Omo National Park, but none are known from elsewhere in the country.

In Kenya a large proportion of the remaining 1500 (or fewer) are in the more forested areas. Protection policies centre around increased anti-poaching, consolidation of existing conserved areas and translocation to safer areas. Education, research and stricter control of illicit trade are backing up these priorities.

Malawi has between 20 and 50 black rhinos, mostly in Kasungu National Park. They have possibly been increasing in recent years, but the commercial value of horn is less there than in East Africa and the density of rhinos is so low that poaching is barely worth the effort and law enforcement is reasonably effective.

A few hundred black rhinos occur in northern Mozambique, where some of the area is proposed as Rovuma National Park and a survey requested. About 60 southern white rhinos inhabit the Maputo, Manhoca and Cogorongosa areas. Namibia contains about 190 black rhinos. Of these, approximately 140 in Etosha National Park are relatively secure, but the rest in Kaokoland and Damaraland are declining rapidly under large-scale poaching. Between 850 and 1350 black rhinos and 155 to 165 white rhinos exist in Zimbabwe, 95% of them in protected areas. The white are increasing and the black rhinos are stable or have decreased only slowly due to the at war. There is at present no hunting although it could legally be done in safari areas at the discretion of the minister.

In Rwanda there are between 20 and 40 black rhino in Akagera National Park. This population has developed. The main threat is that of problems arising from inbreeding; it is hoped to introduce a few more animals from outside. Black rhinos occur in the south of Somalia, apparently under little poaching pressure, but details await the results of a survey.

Approximately 480 black rhinos exist in South African parks, reserves and private ranches and are increasing. Two-thirds of these are in the Hluhluwe/Mfolozi corridor complex. The population in Hluhluwe and Mkuzi Reserves are apparently not increasing for reasons which are unclear. However, some have been successfully reintroduced to Kruger National Park and further reintroductions are planned. Southern white rhinos in South Africa have been increasing at a rate of 8% - 10% a year and have supplied many zoos and other reserves. The population is estimated at 2200, largely in Natal.

Sudan is one of the few areas where northern white rhinos remain in reasonable numbers - between 500 and 600. But nowhere are they at high densities and improvement in their conservation status is badly needed. It has been suggested that an area close to the Shambe Game Reserve should be developed as a white rhino sanctuary. Much of the present Shambe Reserve has been lost to human settlement driven inland by the rising water, and many of the rhinos have recently been slain by poachers. There are probably well under 500 black rhinos in very sporadic distribution and decreasing numbers.

In Tanzania there are possibly between 4000 and 9000 black

rhinos, of which at least 3000 to 4000 are in the Selous Game Reserve region. Aerial census by Douglas-Hamilton in 1976 estimated 2200 and 2700 in separate counts, and for rhinos such censuses are always low. However, even when numbers are corrected upwards, the density is still less than 0.1 per square kilometre. In northern Tanzania the black rhinos have been hard hit by poaching. In Manyara National Park there were considered to be at least 60 in 1976. Now there are less than a dozen and two have apparently been killed in the last four months. In Tarangire, the population was estimated at 250 in 1974. The current estimate is between 10 and 20.

In Uganda many wildlife species have been hit by poaching followed by the side-effects of the liberation war. Black rhinos numbering in the low tens remain in Kidepo National Park, which has been less affected, but could become the focus of commercial poaching pressure. In Kabalega National Park they have been drastically reduced. A ground-and-air survey is planned for early 1981. Poaching by the armed forces has largely ceased, but as in most countries there is still local poaching for both meat and trophies. Rhinos are at such low densities that they are not the main target. Of the white rhinos introduced to Kabalega, four were seen recently near Paraa. Of the indigenous white rhinos on the west bank of the Nile, it is doubtful whether any exist outside Ajai's sanctuary. Aid in rebuilding the conservation services is the greatest need in Uganda.

No black rhinos have been reported from Zaire since 1954. The main concentration of northern white rhinos is in Garamba National Park and surrounding areas. In 1976 an expanding population of 400 was estimated in the park, but it is likely that this has declined since.

In Zambia an aerial census was made last September. Correcting for inevitable undercount and then extrapolating we estimated that there are at least 3500 to 4500 rhinos in the Luangwa Valley, probably more. There are possibly between 350 and 800 rhinos in the rest of the country. Rhinos and other species have long been poached for meat there, but commercial poaching is beginning to take hold. A small but very effective anti-poaching force is being established in Luangwa Valley funded by the Rhino campaign.

The types of conservation measures needed vary between countries according to the problems, policies, resources and the national rhino situation. A comprehensive strategy is being pursued with priority ratings. In some cases these are worked out in detail by working groups in the countries concerned - as with Kenya, Tanzania and Zambia. In other cases they are put together through visits and correspondence by myself and the Major Ian Grimwood, who is WWF Honorary representative to the Rhino campaign.

Consolidation of rhinos into parks and reserves - removing them from areas where they are particularly vulnerable - is occasionally necessary. This is happening in Kenya. However when the local population is minute the operation is not very cost-effective. A higher priority must therefore be improved protection for rhinos already existing in conserved areas and the creation of new conserved areas.

Sometimes the solution may be to upgrade existing reserves. In Sudan, for example, which is one of the few countries where northern white rhinos remain in any numbers, it is suggested that the Shambe Reserve become a rhino conservation area. This would involve giving it national park status, redefining boundaries and building up an effective management unit.

Simply increasing anti-poaching equipment in many areas, though necessary, is not enough. More staff and equipment are needed but so is more effective use of existing equipment. Back-up maintenance cannot be ignored.

Motivation and leadership have also proved to be vital. When it is possible for one kilo of rhino horn to fetch the equivalent of eight years' minimum wages, the men who are policing the situation need to be highly motivated. They also need proper support in the courts. In some cases corruption, or merely a feeling that wildlife offences are not really important, can lead to ludicrously small sentences for arrested poachers. For example, a Zambian poacher arrested with six tusks was fined less than one-third of what he had sold the tusks for, while another who sold tusks for several thousand dollars was fined \$154. Stern sentences and strict control of exports are therefore an integral part of prevention of poaching.

Despite the urgent need for conservation action, the value of research should not be ignored. Apart from providing the information necessary for wise conservation and management, the presence of a researcher constantly in contact with rhinos or other wildlife has in itself a policing effect, and his interest can centre attention on the specific needs in an area. For these reasons the warden of Serengeti National Park gives high priority to finding a researcher on rhinos.

Studies with a practical orientation could aid development of Shambe National Park, Sudan. Research in Luangwa Valley Zambia would also be valuable. We know very little of the far-reaching effects on population dynamics of reduction of rhinos to very low density.

Finally one of the most important tasks is to attack demand and its exploitation. Ratification and enforcement of CITES by countries such as Japan, China and Yemen would help to

reduce the trade in rhino products. At the present level of trade rhinos will be virtually eliminated within 10 years.

Curbing deeply held beliefs is a huge problem, but much of the increased demand in the Middle East is recent rather than traditional. In the Far East, approaches to the doctors, to the Chinese institutes examining the use of natural medicines, to the retailers and to the users will be made.

An average rhino has three kilos of horn. This means that with some 8000 kilos a year on the market we are annually losing over 2500 rhinos. There are signs, though, that the tide is now turning. Over one million dollars will soon have been raised by WWF and other organizations, and allocated to IUCN projects.

Public awareness is increasing and many governments have committed themselves to protective measures. Lets us hope that an all out approach on all aspects of the problem will save the rhino.

Dr. Kes Hillman
Chairwoman, IUCN/SSC
African Rhino Group

The International Trade in Rhinoceros Products

From 1970 to the present approximately 90 per cent of the rhinoceros in Kenya, Uganda and northern Tanzania have been killed. Rhinos in these three East African countries constituted at the beginning of the decade the world's largest concentrations. Today prospects for their very survival are shrouded in pessimism. Official statistics, which exclude smuggling, show that a total of almost 24 tonnes of rhino horn was sent overseas from East Africa between 1970 and 1976. This represents approximately 8,280 rhinos; the entire rhino population of Africa is now estimated between 14,000 and 24,000 animals. In Asia, there are only about 2,000 Indian, Sumatran and Javan rhinos left.

The main reason for the accelerated killing of rhinos is due to the strong demand for rhino products, especially the skin and horn, in the Yemens, India, Singapore, China, Hong Kong, Malaysia, Taiwan, South Korea and Japan. Moreover, despite the fact that the quantity of rhino horn available on the market has increased in the 1970s decade, prices have risen to an all-time high.

The total number of rhinos killed annually in the wild from 1972 to 1978 produced 7,970 kilos of horn, or about eight tonnes for the world trade. This is roughly the same amount