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**UNEP FIGHTS
RHINO HORN TRADE**

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Chief, UNEP Information and Public Affairs Branch: Tore J. Brevik
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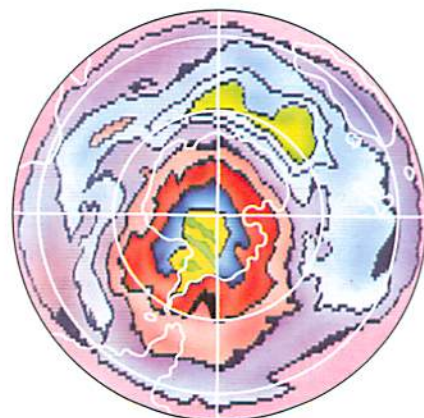
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J. Chamberlain

The diversity of life in Lake Victoria and the livelihoods of local people are being changed by over-development and the introduction of new species: page 9



Parties to the Montreal Protocol have agreed to take further action to reduce the threat to the ozone layer: page 14



Peter Lambert/Tony Stone Worldwide

UNEP FIGHTS RHINO HORN TRADE

by LINE CAOUILLE

The world's five species of rhinoceroses (see box on page 6) have been pushed into a relentless population decline. Since 1970, at least 85 percent of the rhino population has disappeared because of poaching or habitat destruction. Zimbabwe's black rhinos have been most heavily poached for their horn, which is used to lower fevers in traditional medicine in Asia and for dagger handles in Yemen. Scientific tests of powdered rhino horn have found it has some effect in reducing fevers.

In 1970 there were about 65 000, but today there are only about 2500 left. No other large mammal in the world is being so heavily slaughtered, nor heading so rapidly towards extinction. In Zimbabwe, the killing has reached catastrophic dimensions: there are fewer than 500 animals remaining from a population that was said to have exceeded

2000 in 1990. This massive poaching may have disastrous consequences for the country's tourist industry, which generates a revenue of more than US\$100 million a year and depends largely on wildlife, including the rhinos.

In an effort to protect the populations of the five rhino species in the wild, the World Conservation Union (IUCN), the United Nations Environment Programme (UNEP) and the World Wide Fund for Nature (WWF) jointly prepared status surveys and actions plans for the conservation of Asian and African rhinos in 1989 and 1990.

The revelations in Zimbabwe triggered UNEP into further action. In September 1992, UNEP commissioned Dr Esmond Bradley Martin, an expert on wildlife trade, to try and stem the trade in rhino horn. He set out on a three-month mission to persuade governments and local authorities to crack

down on poachers and traders. He travelled to China, Namibia, the Republic of Korea, South Africa, Taiwan*, the United Arab Emirates, Yemen, Zambia and Zimbabwe.

Zimbabwe

Martin's mission took him first to Zimbabwe, where the wildlife authorities were on a virtual war footing in their fight with the poachers.

This land-locked country was formerly a major stronghold for black rhinos. Now the rhino population may have been reduced to the point where it is no longer viable. Rhinos in the Zambezi Valley are particularly under threat from local and Zambian poachers who

*The policy of the United Nations regarding Taiwan is that Taiwan is a province of China. The government in Beijing is the sole legitimate representative of all China.

Dehorning Zimbabwe's rhinos

By removing the rhino's horn, Zimbabwean game authorities hope to remove the huge financial lure the horn represents. But nobody knows what happens to rhinos without their horns; male rhinos use their horns to establish dominance and females use them to defend their young. Rhino horn is composed of keratin, the same substance that forms the basis of hair, hooves and fingernails.

Dehorning is viewed by Zimbabwean authorities as an emergency short-term policy, because horns regrow. Dehorning is also expensive, costing at least US\$1000 to remove the horn from one live rhino. Furthermore, 'it is impossible to remove 100 percent of the horn because the animal would bleed to death,' explains Dr Martin. 'Only 75 percent of it can be cut. And already, six

dehorned rhinoceroses have been killed because 25 percent of the total horn is worth something to the poachers, who are very poor.'

Dehorned rhinos have also been killed, because it is not always possible for poachers to see in the bush whether or not the rhino has been dehorned.

cross the border to kill the animals. With the 1992 drought ravaging the economies of all the countries of southern Africa, the pressure from poaching has increased significantly.

Financial shortages and reforms suggested by the International Monetary Fund (IMF) have also seen Zimbabwe's Department of National Parks and Wild Life Management lay off 264 game scouts. Lacking adequate equipment and salaries, only 100 game scouts now patrol the Zambezi Valley, an area of 12 000 square kilometres, on a full-time basis.

Martin argues that success in combating poaching depends on: improved intelligence gathering; better training, salaries and incentives for staff in the national parks; and moving more rhinos into safe sanctuaries. UNEP has already provided US\$10 000 towards anti-poaching operations, specifically for gathering intelligence. Namibia has caught many rhino poachers and traders through its efficient intelligence system.

To fund these requirements, Martin has suggested increasing park entrance fees from about US\$1 to the US\$10 common in Botswana, Kenya and Tanzania. This would bring in about US\$5 million annually and would be most effective if kept by the parks.

The South African connection

South Africa is a major centre for rhinoceros horn from neighbouring countries, even though it and many of its neighbours are parties to the Conven-

tion on International Trade in Endangered Species of Wild Fauna and Flora (CITES, see box on page 7).

Much of the rhino horn is shipped from South Africa by Taiwanese residents or sailors. Traders from countries such as Mozambique and Zambia are encouraged to trade horn in South Africa because of the country's hard currency, the rand.

In 1989, South Africa set up an Endangered Species Protection Unit, manned by police, which has slowed down the smuggling of rhino horn to Asian destinations. So far this year, the unit has captured more than 75 horns.

China: old traditions die hard

China has been a party to CITES since 1981, but it is still sitting on a rhino

horn stockpile of at least eight tonnes. Until the mid-1980s, the Chinese were buying huge quantities of small pieces of rhino horn left over after making dagger handles in North Yemen. They even destroyed valuable art treasures to respond to the heavy demand for medicines using rhino horn. 'No one can guess how many magnificent rhino horn carvings produced by master craftsmen in the Ming (1368-1644) and Ch'ing (1644-1911) dynasties have already been ground down to powder to make pills and tablets,' says Martin.

The Chinese are still using about 650 kg a year of this stockpile to make traditional fever-reducing medicines. And although Chinese authorities do not allow the import or export of raw rhino products, rhino horn drugs are still leaving the country destined for

Demand is so great among Chinese communities for traditional medicines containing rhino horn that valuable art treasures have been destroyed to meet requirements.



E. B. Martin



Lucy Vigne



The horn quintet

The name 'rhinoceros' comes from the Greek 'rhino' (nose) and 'keras' (horn). Five rhinoceros species survive today. The black and white rhinos are African. The other three, the Indian, Javan and Sumatran rhinos, are collectively known as Asian species.

The black rhinoceros once roamed sub-Saharan Africa in hundreds of thousands, but it has been brought to the verge of extinction; there may be only 2500 left. Today, this species survives in pockets mainly in Kenya, Namibia, South Africa, Tanzania and Zimbabwe. A solitary creature, the black rhino leaves three-toed prints on regular routes, making it easy to track. It has retained the browsing habits of ancestral rhinos. Average height and weight: 1.5 m at shoulder and 1400 kg.

The white rhinoceros, also called the square-lipped rhino, survives in two subspecies. The northern variety was nearly annihilated in Uganda and the Sudan by poaching in the 1970s and early 1980s; the last viable population of 31 individuals remains in Zaire's Garamba National Park. The southern subspecies, on the other hand, has been protected, and its population has increased to about 5700. This subspecies prospers in South Africa. Though called the white rhino, like the black rhino it is actually grey. The name comes from a mistranslation of the Boer word 'widje' (wide), referring to the animal's broad lips. Average height and weight: 1.7 m and 2500 kg.

The lesser one-horned or Javan rhinoceros is an inhabitant of tropical lowland forest and is the rarest large mammal on Earth. It numbers a mere 55 in western Java, plus a newly discovered group of 10 to 15 in Vietnam. The situation in Laos and Cambodia is very unclear. On Java, the rhinoceroses all live in the Ujung Kulon National Park, which was established for the conservation of the species. The main threat to the species is poaching. There are also the threats of habitat destruction and disease. Average height and weight: 1.6 m and 1600 kg.

The Asian two-horned hairy or Sumatran rhinoceros inhabits mountainous rain forests and is the smallest and the only rhino with noticeable hair. There are about 700 of these spread over a large area, primarily on the island of Sumatra and the Malay Peninsula. Scattered often in tiny, unviable populations, these rhinos are difficult to protect. Of all the Asian species, the Sumatran rhinoceros is experiencing the most serious poaching. And like the other Asian rhino species, virtually all parts of the animal are in demand; for instance, the horns and nails are used to reduce fever, the hide to alleviate skin diseases and the blood as a tonic. In many areas, it is also threatened by habitat destruction. Average height and weight: 1.36 m and 900 kg.

Protected in wildlife reserves in India and Nepal, the greater one-horned or Indian rhinoceros is noted for its armour-plated appearance and single horn and is the least threatened of the three Asian species; in fact, it has been increasing in numbers. In India there are now 1600 and in Nepal 400. Average height and weight: 1.75 m and 1800 kg.

Chinese people overseas. However, in response to UNEP's initiative and the efforts of the CITES secretariat, the Chinese authorities have agreed not to export manufactured drugs containing rhino horn.

Taiwan has become the major importer of rhino horn in the world. In 1991, investigators with the Trade Records Analysis of Flora and Fauna in International Commerce (TRAFFIC) discovered that the island was sitting on perhaps five to ten tonnes of rhino horn. Some Taiwanese businessmen see horn as good investment; they are counting on the extinction of the rhinoceros to drive up prices of horn still further. Investors think that if the rhino becomes extinct, they will be sitting on a gold mine.

The TRAFFIC team also found out that almost 80 percent of the herbal medicine shops surveyed in Taiwan sell horns from Asian and African rhinos. In the city of Taipei, Martin found African horn selling retail for US\$4221 per kg in 1990. Thought to be more potent, the retail price of Asian horn was approximately US\$54 000 per kg.

The island of Taiwan is not eligible to accede to CITES and although local Taiwanese authorities banned rhino horn imports in 1985, the ban has not been well enforced, according to Martin and international environmental organizations. This claim is denied by the island's authorities. About US\$8.8 million worth of seized rhino horn and other wildlife products have been publicly burned in Taiwan since 1990, but Martin says very few traders have been dealt with by the local authorities on the island. He says that local authorities have come up with neither any new strategies nor commitments to catch illegal dealers. 'From my point of view and from UNEP's point of view, it was disappointing.'

Republic of Korea

In 1988, TRAFFIC conducted a market survey of oriental medicine clinics in Seoul. It discovered that 86 percent of the retail outlets visited offered rhino horn or rhino horn products. The research team identified 16 different



This collection of confiscated rhino horn and toe nails was originally destined to be ground into powder for medicinal use in Asia.

medicines that included rhino horn as an ingredient.

A series of legal measures has restricted rhino horn trade in the Republic of Korea; measures include its prohibition as an ingredient in manufactured medicines since 1983, and a total import ban since 1986. However, Korean authorities have never conducted a registration of existing stocks and, as they are not a party to CITES, refuse to ban the domestic sale of rhino horn as recommended by a CITES resolution passed in 1987. The Ministry of Health and Social Affairs indicated to Martin

that it did not intend to try and register old stocks of rhino horn. Martin attributes the reluctance of the government to enforce sales restrictions and monitor stockpiles to the lobbying power of the local pharmaceutical industry.

Official trade statistics in the Republic of Korea indicate that no rhino horn has been officially imported since the 1986 ban. Government officials also told Martin that, because rhino horn was no longer for sale in the shops, there was no longer any problem. 'My feeling is that there is still some rhino horn available in the Republic of Korea,' says Martin, 'but it is my word against theirs, since no survey has been done during the past four years. Although the authorities have stated for at least six years that the country intends to join CITES, they still refuse to say exactly when.'

Yemeni daggers still threaten rhinoceroses

In the late 1970s, when Martin started investigating the rhino horn trade, he found some answers in the colourful market-place *suq* of San'a in North Yemen. Martin estimated then that North Yemen was importing 40 percent of all the rhino horn in the world in order to make dagger handles. At that time, most Yemeni men wore these daggers, called 'djambia'. It was the Yemeni demand for rhino horn which drove the import price up from US\$35 per kg in 1974 to US\$1000 today.



During 1990-92, some 260 black rhinos died for just one Yemeni dagger producer to make traditional 'djambia' using 750 kg of horn.

Since 1978, Martin has travelled several times to Yemen in an effort to close down that market, with some success. The government has banned both the import and export of rhino horn. During 1985-90, the country imported about 250 kg per year, down from 4000 kg per year in the 1970s.

Effective enforcement has been helped by a downturn in the Yemeni economy. Higher prices offered by Taiwanese buyers have forced Yemeni men to use water buffalo horns, yellow plastic and even camel nails instead.

During 1991, rhino horn imports in Yemen nearly doubled, rising to approximately 430 kg. Martin suspects that some traders are choosing not to send all Zimbabwean horn through South Africa to eastern Asia, but are opting for a less risky route: from Zambia to Tanzania, and then to the Arabian peninsula. Since the unification of North and South Yemen in May 1990, the country's land borders have greatly increased in size and are largely uncontrolled, which makes smuggling relatively simple.

Innovative policies have been implemented. After many discussions between officials and Martin, Yemen's religious leader, the Grand Mufti, issued an edict stating that it was

What is CITES?

One of the world's most important conservation agreements, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), came into force in 1975. Today, 117 countries are contracting parties to the convention, which prohibits international commercial trade in endangered species (listed in Appendix I) and regulates trade in less threatened species (listed in Appendix II) by means of a permit system. UNEP pro-

vides the secretariat for the convention.

All five rhinoceros species have been listed in Appendix I since 1977. Dr Martin, UNEP's special envoy, visited eight countries during his fact-finding and lobbying mission. Of these, only the Republic of Korea and Yemen have not ratified the convention.



Conservation success stories

Many domestic markets for rhino products have been closed: Brunei, Hong Kong, India, Indonesia, Japan, Malaysia, Nepal and the Philippines. Japanese pharmacists, for example, were major users of rhino horn when Japan joined CITES in 1980. The Japanese government, which was the target of strong international criticism for its trading in rhino horn, successfully encouraged the use of substitutes.

Some Asian and African countries have managed to protect their rhinocer-

oses by establishing rhino sanctuaries. In Africa, for example, white rhino numbers are rising, and the number of black rhinos in Kenya, Namibia and South Africa has also been slowly increasing. These successes are due to sufficient numbers of motivated staff enforcing laws backed by a committed government.

against the will of God for rhinos to be exterminated for their horns. Martin also provided advice to Yemen's Foreign Minister on a decree that would ban the possession and sale of raw rhino horn. 'If that legislation is enforced,' says Martin, 'it will practically shut down that illegal market.'

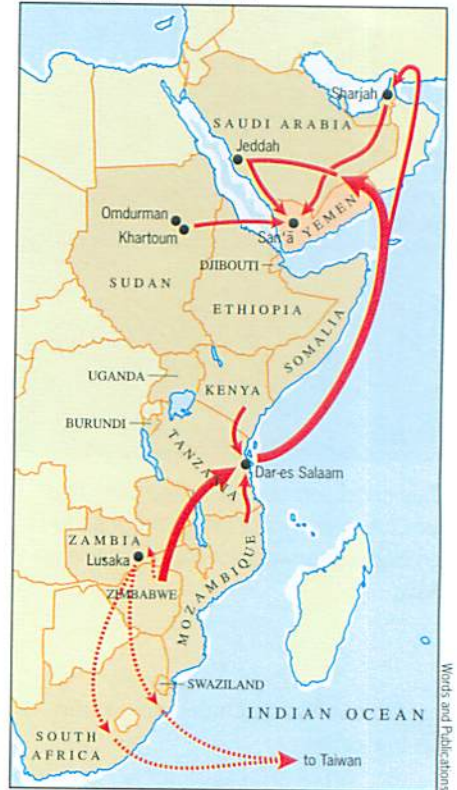
United Arab Emirates

During the 1980s, the Emirate of Dubai was a major centre for rhino horn coming from East Africa on its way to Yemen. Since 1989, however, the amount of wildlife and wildlife products imported both legally and illegally into the United Arab Emirates has declined significantly, according to Martin. The Emirate's ruling families

have shown their disapproval of the trade, feeling that it gives the country a poor international image.

The Emirate of Sharjah, however, was still heavily involved in the illicit trade of wildlife products until recently. In 1991, 200 kg of rhino horn passed through Sharjah on their way to Yemen. The situation changed this year: in October 1992, just prior Martin's visit, the Emirate's ruler, Sheikh Sultan Bin Muhammed al-Qasimi ordered the municipal authorities to crack down on the sale of endangered live animals in Sharjah. The sheikh indicated to Martin that his field staff will not only regularly inspect the markets that sell live animals, but will also check the sale of products from endangered wildlife.

Probable pathways of smuggled rhino horn



Despite trade bans, rhino horn still finds its way into those countries where there is a market.

To bring the plight of the rhino to the attention of the public, UNEP initiated extensive news coverage of the rhino issue and contributed financially to the production of a Television Trust for the Environment documentary about the illegal rhino horn trade. A film crew also travelled with Martin during his mission.

E. B. Martin



The African black rhinoceros is as endangered for its horn as the elephant is for its tusks; numbers of black rhinos have been cut to about 2500.