

Count-down for rhino in Kenya

RHINO horn is used in India and the Far East as a sexual stimulant; in the Middle East, the horn is carved into ornamental hilts for daggers. And between them, these two bizarre demands have brought the world's remaining five rhino species close to extinction:-

- The Sumatran and Javan rhinos, which fifty years ago were widespread, are down to tiny relict populations — less than 300 Sumatran (*Dicerorhinus sumatrensis*) and about fifty-five Javan (*Rhinoceros sondaicus*).

- The Indian or greater one-horned rhino (*Rhinoceros unicornis*) is reduced to a few populations in small reserves in north-east India and Nepal — probably not more than 1,200 individuals in all.

- The Northern white rhino (*Ceratotherium simum cottoni*) has been more or less hunted out of existence in the last eighty years, with only small populations left in the Central African Empire, Zaire, Uganda and the Sudan. Its southern relative (*C. simum simum*) was just saved, from extermination in South Africa by drastic conservation measures, although it has recovered enough now to over-populate Umfolozi Park in Natal. The Park is in fact translocating animals to stock other reserves.

- Black Rhino (*Diceros bicornis*) are still numbered in the thousands, but in some areas — notably Kenya — the species is seriously threatened. In 1963, the country's Chief Game Warden, Archie Ritchie warned that it was in danger of local extinction and his prediction was almost fulfilled in the last five years, mainly through poaching.

It is difficult to estimate how many are left, however. The techniques of aerial census — the common method of counting mammals in East Africa — are unsuitable for rhino. They tend to occur singly or in twos or threes; their colouration often blends with the background and they generally seek shade or sleep during a large part of the day. Hence most of them are missed from the air.

In 1967, John Goddard tested the accuracy of aerial counting on rhino he knew individually at Olduvai and found that even under the most ideal conditions, at the time of day when rhinos were active, he counted only 50 per cent of them from the air. Once his count was as low as five per cent.

He therefore found it necessary to correct other aerial censuses by multiplying the estimates by anything between two and seven times, depending on counting method and time of day (Goddard 1969). Uncorrected census figures must therefore be considered as underestimates of rhino numbers, and the figures based on long-term ground observations and individual recognition are more accurate (see table).

Nevertheless, trends are discernible from various counts and studies, and it would appear that black rhino losses in Kenya were up to 95 per cent in Tsavo National Park; 85 per cent in Amboseli and over 90 per cent in Meru National Park over the last five to eight years.

In Amboseli, the once famous popula-

tion of long-horned rhinos has been reduced from an estimate of around 52 in 1970 to seven resident and 10 animals occasionally using the lake basin in 1979. The pity of it is that a warning that this would happen was sounded as early as 1970 with a report that Amboseli rhino had been declining at 12 per cent per year for the previous four years (*Western and Sindiyo, 1972*).

Only two years ago, Meru National Park could have been regarded as the last stronghold of rhino in Northern Kenya, but now researcher Patrick Hamilton estimates less than twenty left alive. Most of the die-off was from poaching.

In Tanzania, probable losses of 70 per cent in Ngorongoro, 70-80 per cent in Ruaha, 80 per cent in Tarangire and 80-85 per cent in Manyara over the last ten years are indicated. Twenty-five rhinos were killed in Manyara last year alone and probably less than 12 remain of which perhaps only three or four are reproductive females.

The severe declines cause further anxiety since the densities of these basically solitary animals are so reduced in given areas that the probabilities of reproduction and regeneration may also be greatly reduced.

In addition, they are easy animals to stalk and those that are left are showing evidence of extreme disturbance in response to the harassment. The potential reproductive rate of the decimated populations may therefore also be lowered and some populations face total extinction unless emergency measures are taken to safeguard them.

Obviously, the main reason for the precipitous decline in the East African rhino populations has been an increased demand for rhino horn products in the main markets and consequent sharp price rises. Official export statistics from Kenya show that rhino horn went up from K£ 8.24 per kilo (US\$23) in 1969 to K£44.6 (US\$112) in 1976 a 441 per cent increase.

But from personal investigation, we also know that these figures are probably inaccurate since traders often under-value the prices for tax reasons. We have recently been quoted wholesale prices paid to poachers in East Africa of between K£90, and £100 per kilo (US\$ 240-265) with one unconfirmed quote of K£300 (US\$ 750). Compare this figure with the minimum wage for a ranger in Tanzania of T£22.5 per month (US\$56). And for this he may have to expose himself to considerable danger with inadequate weapons or back up. The temptations are considerable and one could hardly blame rangers if they occasionally feel less than motivated towards rhino preservation.

In a few cases, the poaching has been carried out by ex-rangers dismissed for malpractice, who know the Parks and may hold grudges.

In the past, spears, traps and poisoned arrows were the poachers' main weapons; but today the rhinos are generally shot. In some quoted examples, the horns are then crudely removed with axes, transported by the poachers and sold to middlemen in the villages and towns.

At present there is inadequate information on the transport routes out of East

Africa, but some leave by dhows and some by aircraft — all illegally.

Examination of the East African statistics on the legal export of rhino horn — from 1950 to 1971 — showed that 1.56 tons were exported annually: 62 per cent from Kenya, 35 per cent from Tanzania and three per cent from Uganda. The main markets over this 22-year period were Hong Kong, the Yemen, China, USA, Japan and the UK.

However, from 1972 to 1976, the statistics show that an average 4.2 tons of rhino horn a year were exported legally from East Africa — a tremendous increase as compared with the earlier period, 98 per cent of which came from Kenya.

During the two-year financial period covering 1975 - 1976 and 1976 - 1977, the official North Yemen statistics indicate that traders imported an average of 7.6 tons per-year of rhino horn (*According to Dr. E.B. Martin's research here in October last year.*) Since the average weight of rhino horn in Kenya is 3.5 kilos per animal, then over this two-year period at least 4,000 rhinos died to provide for North Yemen imports — mainly if not exclusively by a single importer into the capital, Sanaa.

There is however, a discrepancy between the figures for East African exports and North Yemen imports due to smuggling and possible underestimates in the Kenyan export figures. Much of Tanzania's illegal trade in rhino horn passes through Kenya as well.

The main dealer in Sanaa explained that he obtains most of the horn from Somalia and Kenya and sells to at least five merchants at about US\$675 a kilo. Each merchant employs four craftsmen who carve both rhino and cattle horn into handles for traditional daggers.

The chips and powder from the carving are collected and exported from North Yemen since there is no local market for a water-paste of the scourings which in the Far East, is used as an aphrodisiac or to detect poison. The Yemeni exporter gets about \$220 a kilo for this export.

It seems that the main reason for the tremendous increase in the importation of rhino horn into North Yemen, from 233 kilos in 1969/70 to 8,310 kilos in 1975/76, is the fantastic rise in the standard of living of the average Yemeni, which amongst everything else has made it possible for most adult men to purchase expensive *jambias*. These have been a traditional symbol of masculinity in North Yemen so every adult male must possess one and most effectively one made from rhino horn which could cost up to \$11,000. And probably the demand would still be there even if, due to scarcity, the price of rhino horn were to double or even triple in the near future, as may be expected.

Similarly, rhino horn is unlikely to lose its appeal in India where, in a recent visit (by Dr. Martin), it was found that the people of two states still require it for medicinal purposes.

In Gujerat, which has had commercial links for several centuries with Indians in East Africa, traders are still buying rhino horn at a cost to one wholesaler last year of US\$375 a kilo. The horn is made into an

RHINO POPULATION ESTIMATES FOR KENYA			
Location	Date	Area(sq. Kms.)	Pop. est.
Aberdares Park and Forest	1978	2,000	600
	1979	2,000	200
Source: Wardens Woodley and Snyder.			
Amboseli N. Park	1965	844	60
	1971	844	34
	1979	844	10
Source: Western and Sindiyo, 1971; and Warden Oguya, 1979			
Boni Forest/ Lower Tana River Forest	1976	50,437	1,000-1,300
	1978	50,437	650-950
	1979	90,000	c.75.
Source: Bunderson (FAO to 1978); and Smith, 1979			
Laikipia	1979	—	200
Source: various reports			
Maasai Mara G. Reserve	1973	1,530	108
	1977	3,800	101*
	1978	1,530	50
	1979	1,530	34
Nguruman Plateau	1979	—	15
Source: Warden: E. Goss; various reports; and IUCN			
Meru N. Park	1973	844	43*
	1976	844	29*
	1976	2,575	127*
	1977	844	77*
	1978	844	55*
	1979	844	15*
Source: Warden P. Jenkins and P. Hamilton.			
Nairobi N. Park	1968	122	27-33
	1979	122	18-30
Source: Hamilton & King, 1969; and Warden S. Ngethe.			
Samburu G. Reserve	1973	—	69*
	1979	—	2-10
Source: Barkham & Riddens, 1973; and Warden E. Goss.			
Tsavo N. Park & environs	1969	40,000	6-9,000
	1973/4	43,300	5,000
	1978	43,300	97*
	1979	43,300	50-200
Source: Goddard, 1969; Cobb; IUCN project; Wardens Goss/Woodley			
COMPARATIVE ESTIMATES OF KENYA'S RHINO POPULATION 1969..... 16 - 20,000 1979..... less than 1,500			
RHINO POPULATION ESTIMATES FOR TANZANIA			
Arusha N. Park & Von Nagy's Concession	1978	118	4-5
	1979	250	2-3
Source: Von Nagy			
Manyara N. Park	1965	79	20*
	1966-70	79	23*
	1975	79	35*
	1976	79	19*
	1979	79	12
Source: Watson/Turner; Douglas-Hamilton; Mwalyosi; TNP.			
Mkomazi	1972	—	45
Ngorongoro C. Area	1966	261	90-100
	1978	261	23
Source: Goddard; Makacha			
Olduvai	1966	435	70
	1979	435	0
Source: Goddard; Estes.			
Ruaha N. Park (Hunting area)	1973	10,000	447*
	1977	10,200	94*
	1977	5,900	31*
Source: Norton-Griffiths; IUCN project			
Rungwa G. Reserve	1977	15,400	375*
Selous G. Reserve	Mar. 1976	86,300	2,108*
	Aug. 1976	86,300	2,728
Serengeti N. Park	Jan. 1977	18,500	550*
Tarangire G. Reserve	1977	3,600	55*
	1978	3,600	0*
Source: IUCN/ESCP			
TOTAL ESTIMATE OF TANZANIA'S PRESENT RHINO POPULATION: 2,000-5,000.			

ointment in Gujerat for application to the testicles which, in theory, increases a man's sexual potency.

In Bengal, which is not traditionally linked with East Africa, the Indian rhino is killed illegally, especially in the neighbouring state of Assam. Since there are less than 1,000 Indian rhinos remaining in the country, the value of the Indian horn is far higher than the African; in early 1978 wholesalers in Bengal paid US\$875 a kilo.

In Singapore, Hong Kong and China, the horn and skin from the African, Indian, Sumatran and Javan rhinos are still being used for medicinal purposes. However, in early 1979, the Hong Kong government with the full support and backing of local traders banned all imports.

All this external demand, especially from North Yemen is now so strong that it is a reasonable assumption that the decline of black rhino in Africa will continue. The continental estimate now is a total of about 15,000 black and possibly 5,000 white rhinos.

Compared with this, the African elephant is in relatively good shape since the continental population is probably around 1.3 million.

Rhinos exist naturally at much lower densities than elephants, but nevertheless in Tsavo in the late sixties the rhino population was about 20 per cent of that of the elephants in the same area.

In Kenya today there are probably considerably less than 2,000 black rhinos in the entire country, as compared with an estimate of 6,000 to 9,000 for the Tsavo ecological unit alone in 1969. The present rhino population of Kenya constitutes less than one year's supply of horns to North Yemen.

Not that all the Yemeni imports are from Kenya of course, and the law of diminishing returns means that the likelihood of every single rhino in Kenya being eliminated is extremely low. But if the poaching continues at the 1978 rate, there will be very few black rhinos left in East Africa in a year's time.

There is no doubt that the problem is serious. Officials of the Kenya National Parks and now of the Wildlife Conservation and Management Department have been fighting the poaching for years, but acknowledge now that this is not enough and that co-operative action in a number of different fields is needed.

There is no immediate and obvious answer, but there are various possibilities for at least easing the situation and working towards controlling it. The IUCN (*International Union for the Conservation of Nature and Natural Resources*) is re-establishing its African Rhino Group with a base in Nairobi. Working groups to carry out action in the fields of practical conservation strategies, public awareness, control of the trade and the poaching, and fund-raising have been set up. The group is essentially non-organisational, with the aim of maximising co-operation among Governmental, local non-Governmental and International bodies.

We hope that some of these efforts will be effective in stopping the decline in rhino populations in East Africa. For both the short and long term conservation of the species, the demand for rhino products must be severely reduced in the Middle East, India and the Far East. Only through the co-operation of various governments, conservation bodies, and traders, can the rhinoceros have a future in the wild state.

*The figures in the table marked with an asterisk refer to uncorrected aerial census estimates.