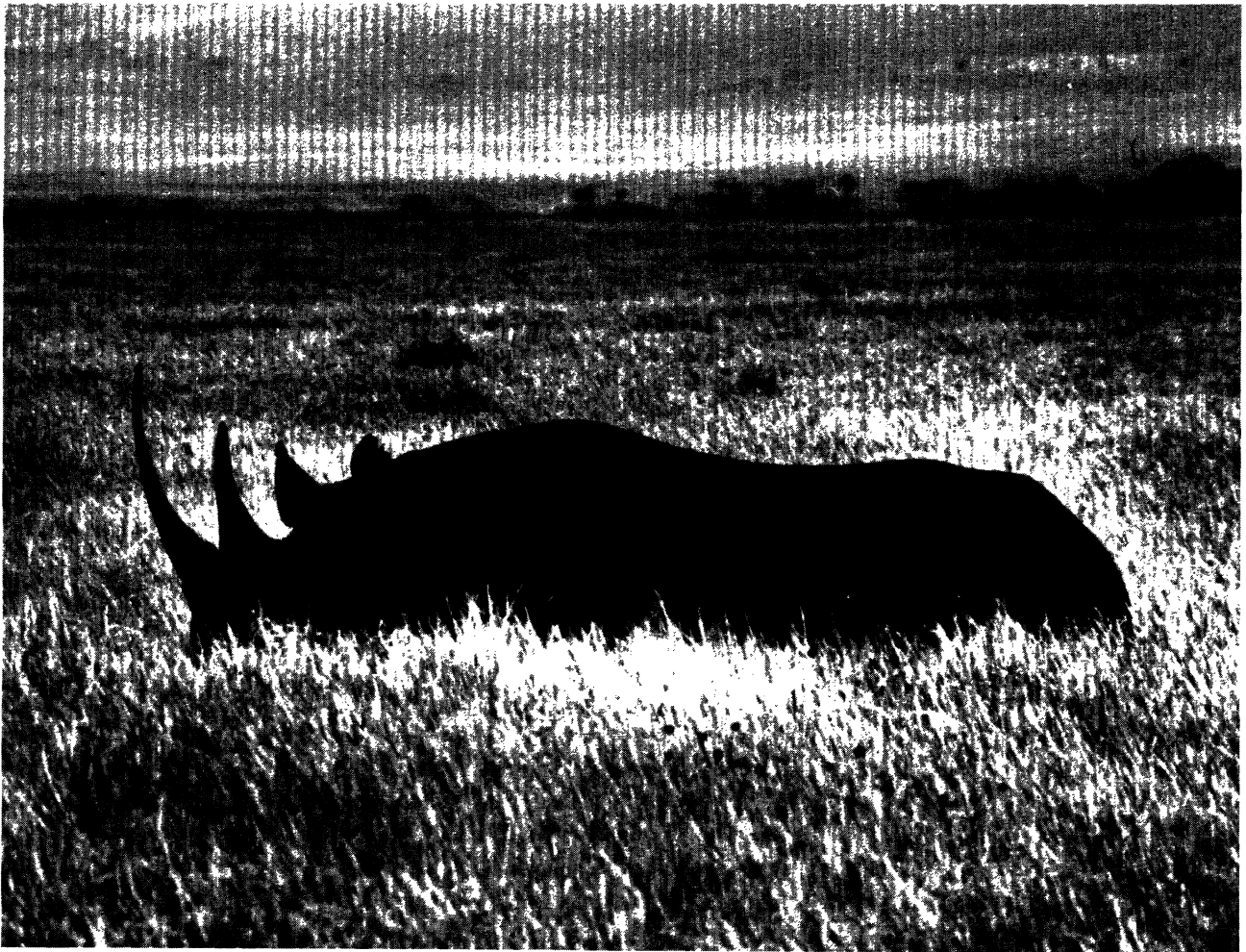


Endangered Species UPDATE

*Including a Reprint of the latest USFWS
Endangered Species Technical Bulletin*

January 1992 Vol. 9 No. 3

THE UNIVERSITY OF MICHIGAN
School of Natural Resources



In this Issue

Elephant and Rhinoceros Conservation in Kenya

Book Review: Game Wars - The Undercover Pursuit of Wildlife Poachers

Remembering Elephants at CITES

The Endangered Species Act - An ESU Bibliography

Elephant and Rhinoceros Conservation in Kenya

by

Stan Braude

Populations of African elephant (*Loxodonta africana*) and black rhinoceros (*Diceros bicornis*) have been steadily decreasing in this century. During the first half of this century the decline was mainly due to hunting for ivory and horn. East Africa is well known for the hunting safaris of the period. However, in 1977 game hunting was outlawed in Kenya in order to stop the decimation of wildlife populations. Ironically, the rate of destruction accelerated severely as illegal poaching replaced sport hunting. East African black rhino are on the verge of extinction (Western and Vigne 1985) and elephants are not far behind.

In 1979 the African elephant population numbered 1.3 million, but by 1989 it had decreased to as few as 609,000. While southern African populations are currently stable, east and central African elephants have been disappearing at an alarming rate. In Kenya, the population dropped from 130,000 in 1973 to 16,000 in 1989 (Brett and Poole 1990). In Ethiopia, Somalia, and Sudan elephants are close to extinction (Largen and Yalden 1987).

Black rhino populations have taken an even more dramatic plunge from 65,000 across Africa in 1968 to fewer than 3,500 in 1989. Tanzania has fewer than 60 black rhino remaining and there are perhaps 10 individuals left in all of Uganda and Somalia. In Kenya, the population has fallen from 20,000 in 1970 to approximately 400 today (Brett and Poole 1990).

These declines have resulted from a combination of factors. A major factor is loss of habitat due to expansion of human habitation and agriculture resulting from the rapidly increasing human population in East Africa (Western 1982). Kenya has the highest birthrate in the world. Free food and medical care provided by international aid organizations over the past 20 years have been



Figure 1. Most of the remaining black rhinoceros in Kenya are being translocated to a few fenced reserves where they can be better protected. Photo by John Blake.

major contributors to this human population growth. The human population increase has serious consequences for the Kenyan people and is bound to destroy the resources upon which they depend.

Most of the elephants and rhinos, however, have been killed by well armed poachers who, until recently, could sell the horns and ivory for enormous profits. In 1988 ivory was selling at close to \$300 per kilogram and rhino horn could fetch from \$5,000 to \$15,000 per horn on the Hong Kong market. Political instability in the region, with ongoing wars in Uganda, Ethiopia, and Sudan, has increased the availability of guns to poachers and bandits. Guerilla organizations have also been able to use dollars earned from sale of illegal ivory and horn to fund their revolutionary activities (Brett and Poole 1990).

Poaching actually became easier after the Kenyan hunting ban, because professional hunters and their trackers and staff were no longer patrolling their hunting blocks. Tourists and safari guides partly filled this role but only in a few of the most popular game parks and reserves (Western 1982).

Recognizing the precarious position of the east African rhino, veteran park warden Peter Jenkins founded Rhino Rescue in 1984. The goal of Rhino Rescue has been to protect the remaining individuals and to increase breeding opportunities by creating locally higher population densities. To accomplish this Rhino Rescue supported the darting and translocation of rhinos from unprotected lands into fenced sanctuaries. This also allowed the then meager resources available for armed ranger protection to be concentrated on

smaller, more manageable areas (Figure 1).

While the goal was to avoid the extinction of east African black rhinos, critics have worried that mixing rhinos from different populations would lead to outbreeding depression (Templeton 1986). Recent examination of mitochondrial DNA from black rhinos from three east African locations has shown that there is already such little genetic variation that the Kenyan black rhinos can safely be considered a single breeding population (Ashley *et al.* 1990).

"While southern African populations are currently stable, east and central African elephants have been disappearing at an alarming rate."

Elephant populations in Kenya have not reached the point of concern over loss of genetic diversity or breeding opportunities. There are, however, other serious problems caused by poaching. Elephants are long lived, highly social mammals. Old females, which lead the herds have information about the home

range and where to go to find food and water during the frequent but unpredictable droughts suffered in many parts of the country (Figure 2). Old females also have large tusks and are more frequently shot by poachers. After the loss of a matriarch, family groups are left in turmoil and have greater difficulty finding food and water in the large ranges over which they must wander to survive (Figure 3). Thus, drought and other environmental challenges are taking a higher toll on elephant populations than they would otherwise (Moss 1988).

Two major events in 1989 have given the elephant and rhino conservation efforts in Kenya a big boost. In April 1989, Richard Leakey, a strongly patriotic Kenyan and a vocal critic of prior Kenyan wildlife policy and management, was appointed director of National Parks. In October 1989, African elephants were raised from Appendix II protection to Appendix I by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Leakey has begun a complete reorganization of the Kenyan wildlife establishment. He has fired a majority of the ranger force and numerous officers in an effort to purge corruption from the department. He has recruited new, young talent and has raised funds internationally to support the training and equipping of the new, paramilitary ranger



Figure 2. The age structure of the Kenyan elephant population has shifted to include a greater proportion of young individuals. Photo by Stan Braude.

Endangered Species UPDATE

A forum for information exchange on endangered species issues
January 1992
Vol. 9 No. 3

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Instructions for Authors:

The Endangered Species UPDATE welcomes articles related to species protection in a wide range of areas including but not limited to: research and management activities for endangered species, theoretical approaches to species conservation, and habitat protection and preserve design. Book reviews, editorial comments, and announcements of current events and publications are also welcome.

Readers include a broad range of professionals in both scientific and policy fields. Articles should be written in an easily understandable style for a knowledgeable audience. Manuscripts should be 10-12 double-spaced typed pages. For further information, contact the editors at the number listed below.

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Cover:
Black rhinoceros
(*Diceros bicornis*)
Photo by John Blake

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force. His leadership has raised the morale of the department, and the new members seem to have caught his sense of urgency about reversing the population declines of the past 20 years.

Although Kenya's new "shoot to kill" policy for dealing with poachers has been widely criticized, it is essential for maintaining an effective deterrent. In the past park rangers were handicapped by lack of training, outmoded world war II rifles, and lack of transport or air support. They preferred to avoid the poachers, who were armed with AK47s, and who had demonstrated their ruthlessness by killing rangers, local farmers, and tourists.



Figure 3. Old elephants are often the only ones in the herd who know where to find food and water during drought. Photo by Stan Braude.

The 1989 CITES ban on the trade of ivory also has had a major impact on poaching. It has lowered the demand for ivory and thus driven the price from a high of \$300 per kilo in 1988 to \$3 per kilo in 1990. Consequently, while Leakey and Kenya Wildlife Services (KWS) have raised the risk to poachers, CITES has effectively lowered the payoff. As a result, only 55 elephants were poached in Kenya in 1990 as opposed to an average of 5,000 per year in the prior fifteen years (Brett and Poole 1990).

Leakey has said that his efforts have had less of an effect than the CITES ban and points out that poaching has virtually stopped in neighboring Uganda and Tanzania in the past year. However, the trade of rhino horn has been banned by CITES for over 10 years, and the poaching of rhinos continued steadily until Leakey began reforming the Kenya parks department in 1989.

"Leakey has begun a complete reorganization of the Kenyan wildlife establishment."

In spite of the obvious benefits of the CITES ban, many southern African states have declared their desire to reverse the ban on ivory from their populations at the next CITES convention in March 1992. They argue that they are being unfairly denied the revenue from their stable elephant populations and that those populations actually need to be culled. Joyce Poole, however, argues that very little legal revenue was ever earned from the export of southern African ivory and that if the market opens up there will be no way to prevent the

illegal east African ivory trade from reemerging (Figure 4).

The recent official interest in elephant and rhino conservation in Kenya does not appear to stem from a sudden awareness of the ecological, scientific, or aesthetic value of these animals. There are important economic reasons for their continued presence in the wild in Kenya. In 1977 combined coffee and tea earnings in Kenya were six times greater than the foreign exchange earned by tourism. In 1989, tourism was the leading foreign exchange earner for Kenya and was equal to coffee and tea combined (Brett and Poole 1990). Elephants and rhino are a major tourist attraction and without them tourism in Kenya is certain to fall, especially in light of major competition expected from South Africa in coming years and in light of the recent growth of the tourist industry in Uganda and Tanzania. The new political will to protect elephants and rhinos was boldly demonstrated by Kenya's President Moi when he burned 3,000 confiscated tusks on July 17, 1989 and 283 horns on January 25, 1990.

There has been some criticism of the disproportionate conservation efforts to save elephant and rhino. It is argued that conservation organizations should spend as much effort to protect less charismatic endangered rodents, lizards, and insects. This criticism fails to recognize

"Although Kenya's new 'shoot to kill' policy for dealing with poachers has been widely criticized, it is essential for maintaining an effective deterrent."

Continued on UPDATE page 4

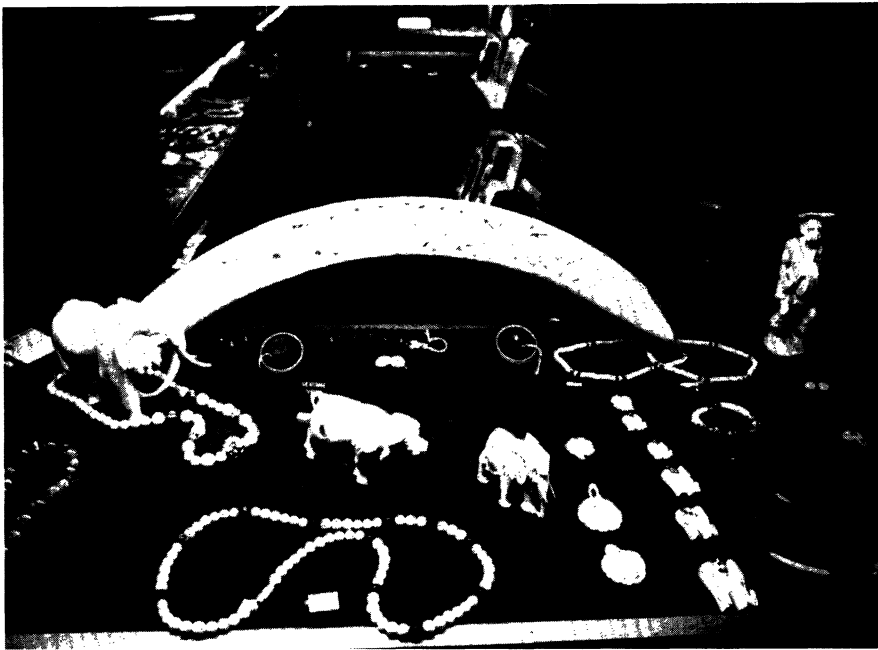


Figure 4. Although export has been banned, ivory is still sold in southern Africa. Carved ivory is displayed in the giftshop of the Gabarone Sun Hotel. Photo by Steve Tomey.

the trickle-down consequences of large mammal conservation in Africa. Elephants and rhinos bring in the tourist income that provides incentives to the government to maintain parks and reserves where other species are *de facto* protected. In Tanzania, where protection has been relaxed, poachers have shifted to meat poaching now that there are fewer elephants and rhinos left for them to hunt. An estimated 156,000 metric tons of illegal game meat is sold there per year (Friends of Conservation 1991). In addition, grazing and browsing by large mammals is a major force in maintaining open savannah grassland habitat (Norton-Griffiths 1979, Pimm 1986, Weiss *et al.* 1991).

"In spite of the obvious benefits of the CITES ban, many southern African states have declared their desire to reverse the ban on ivory from their populations at the next CITES convention in March 1992."

The explosive human population in Kenya is the most powerful threat to their wildlife. There will be growing political pressure for the government to allow grazing and watering of livestock in the parks and for the parks eventually to be carved up into garden plots for landless citizens. Continued CITES protection and continued support for Leakey's efforts to reform his department are crucial to the short term protection of all wildlife in Kenya. Full integration of parks and wildlife into the Kenyan economy, conservation education, effective population policy, and heightened national consciousness of wildlife and conservation are essential for lasting protection.

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Bulletin Board

US Fish & Wildlife Endangered Species Technical Bulletin

As described in our last issue (Nov/Dec 1991; Vol. 9 No. 1&2), production of the Technical Bulletin is running behind schedule. We will include the Technical Bulletin again as soon as it is available.

Endangered Species Act: An ESU Bibliography

Interested in brushing up on your history of the Endangered Species Act? The following bibliography contains related articles published in the *UPDATE*. Just dig out your old issues, head to the library, or give us a call to order back issues (313 763-3243).

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