
Monitor

Police Intercept \$178,000 Ivory

Ivory worth \$178,947 was intercepted by Tanzanian police here on Sunday before being smuggled to Dubai, the authorities said.

A police commander at Dar es Salaam Port said that 68 elephant tusks were stuffed in a container and were to be transferred to a cargo ship leaving for Dubai. A South Korean national, Mr Sung Man Chuo had been arrested for questioning while police are still looking for another South Korean and a Tanzanian freight clerk in connection with the same incident.

According to the police commander, the container belonging to Mr Sung was to have been shipped to Dubai by a German cargo liner *Deutsche Africa*.

Mr Sung entered Tanzania as a tourist and told Port Authorities that the container was stuffed with charcoal. The interception resulted from a tip-off by a person who trailed the container from Morogoro 182 kilometres (120 miles) west of Dar es Salaam, where it was loaded with the ivory.

This is the first incident since the newly-appointed Home Affairs Minister Augustine Mrema, promised to give 50 per cent of the value of the impounded contraband to the person who informs the police.

(AFP) *Daily Nation*, Nairobi, 17th December 1990

Botswana's Problem Elephants

In my article "Botswana's Problem Elephants" I stated that it was not known where a figure of an estimated 20,000 elephants in northern Botswana in 1979 came from. The relevant document (undated) has subsequently been unearthed. In 1977 Sommerlatte² estimated a total of 33,000 elephants in northern Botswana for the Africa-wide elephant survey. Subsequently two other persons considered that Sommerlatte's estimate was too high, claiming that he had extrapolated from high density areas to those of low density. These persons therefore suggested that Sommerlatte's estimate should have been about 20,000 or even, to err on the side of safety, 15,000 to 20,000. A figure of 20,000 was then transposed to the estimate for 1979 although Sommerlatte's original estimate had been for 1977. In fact the original estimate of 33,000 is a remarkably close fit to the 33,272 for that year predicted from the logistic equation given in my article.

That is not to say that the logistic curve that I presented should be taken literally. The object was to provide an illustration of

what might happen at the absolute maximum possible rate of increase of an elephant population; and the observed events appeared to follow this picture.

If one detects a lack of consistency between the suggestion that the numbers might stabilize at some higher level than presently exists, say about 135,000, and the statement that the effects on the environment could be catastrophic, then that is to say that with a total of 135,000 elephants one would expect to have a very different environment within reach of the permanent water than one would have with half that number of elephants, and that this environment on loose Kalahari sands would have very few trees or shrubs, or even perennial grasses.

I had overlooked the map in Smithers³ in which he shows the distribution of elephants about 1969 to extend westwards to the border with Namibia, whereas recent surveys have detected no elephants west of the Okavango River. The increase therefore may be due to an eastwards compression of the population caused by drought, because the area west of the river is waterless, or by interruption to movement due to the settlement that has taken place along the river in recent years. A north-south buffalo fence is to be erected east of the river to control foot and mouth disease which will restrict movement westwards anyway. The logistic curve is of course simply an exercise of the mind and the reflections on possible causes of increase lively speculation.

C.A. Spinage

References

1. C.A. Spinage, "Botswana's Problem Elephants". *Pachyderm* No 13(1990), pp14-19.
2. M.W.L. Sommerlatte, *A survey of elephant populations in northeastern Botswana*, UNDP/FAO Project Bot 72/020, Field Document No 2, 1976.
3. R.H.N. Smithers, *Mammals of Botswana*, Museums Trustees of Rhodesia, Salisbury, 1971.

Riddle's Elephant Breeding Farm and Wildlife Sanctuary, Greenbrier, Arkansas

On a peaceful 330 acre farm dotted with ponds, streams, and surrounded by woods, an unusual new Sanctuary has been established in central Arkansas. The only one of its kind, Riddle's Elephant Breeding Farm and Wildlife Sanctuary, Inc., a non-profit corporation, has been conceived by Scott and Heidi Riddle who between them have been working with elephants for 35 years.

The Riddle's Elephant Breeding Farm is dedicated to preserving both African and Asian elephants and keeping these already endangered animals from disappearing altogether from the face of the earth.

In their native environment, both of these species of magnificent animals have seen their numbers dwindle drastically due to poaching for their ivory but mainly because of local farmers

taking over the elephant's grazing areas which results in a permanent loss of the elephant's habitat.

Riddle's Elephant Breeding Farm and Wildlife Sanctuary, Inc. has many goals. The foremost being the establishment of breeding herds of both African and Asian elephants; building more facilities at our sanctuary for these animals; giving refuge to any needy elephants; and educating the general public about the importance of safeguarding these majestic creatures for future generations.

You can be very important in helping to protect these rare and unusual animals. We need your donations. For further information or to answer any of your questions, please contact: Scott or Heidi Riddle, Riddle's Elephant Breeding and Wildlife Sanctuary, Inc., Post Office Box 715, Greenbrier, Arkansas 72058. Tel: (501) 589 3291.

Press release

Reserve for Rare Rhino

In 1989 George Schaller, Wildlife Conservation International director for science, and three Vietnamese researchers found solid proof that the Javan rhino still existed in Vietnam. They estimated that perhaps 10-15 of the animals survived near the Dong Nai river, in the Budang district of Song Be Province. Last year Le Dien Duc, of the University of Hanoi, and other biologists surveyed Budang and two other districts with WCI support to identify the rhino's range and recommend areas for protection. On the basis of reports from local people that five or six rhinos live along the Dong Nai in Budang, the Song Be government has set aside about 66 square miles for a rhino reserve. In the Cat Tien district there are six or seven animals, and Duc and his colleagues are proposing that a reserve be created there too.

The only other place where this most endangered of species is known to exist is Udjong Kulon National Park, in Java, where there are about 50.

Wildlife Conservation International

For White Rhinos, Guarded Condition is Good News

Under the watchful eyes of 180 well-motivated guards, the world population of northern white rhinos jumped nearly 20% last year (1989) with the births of four babies to the rhinos in Zaire's Garamba National Park. Now numbering 26 up from a mere 15 in 1983 this subspecies of the white rhinoceros survives only in the 3,000-square-mile park. It once ranged through five countries in Central Africa.

The heavy poaching that nearly wiped out the sub-species and which together with habitat destruction, disease, and drought, has reduced all rhino populations by 85 percent in the past 25 years, came to a halt in Garamba six years ago when a vigorous rhino protection programme was launched. The Zairean government, with the help of conservation groups, increased the number of

guards, raised their monthly salaries from US\$ 4 to US\$ 16, and provided uniforms, better equipment, and other benefits and pay incentives.

Muhindo Mesi, the park warden, plans to pursue yet another approach to save the rhinos in Garamba: actively courting the support of the 100,000 or so people living around the perimeter of the park, through a conservation education programme and, possibly, by improving goat and sheep herds to reduce the temptations for villagers to come to the park for meat.

The New York Times

Vitamin E Levels Measured in Rhino Browse Plants

Previous work in our laboratory and others has shown differences in plasma alpha-tocopherol levels between zoo (0.2 micrograms/ml) and free-ranging (0.8 micrograms/ml) black rhinos. Because this is a measure of vitamin E activity, the result suggested that many captive animals may be suffering from vitamin E deficiency. The original comparison was made with 31 blood samples taken during a 1988 translocation exercise in Zimbabwe. Later we measured plasma alphatocopherol in samples from 44 free-ranging black rhinos in South Africa, 7 in Kenya, 4 in Namibia, and an additional 24 animals in Zimbabwe. These results averaged 0.6, 0.2, 0.8 and 0.5 micrograms/ml respectively.

Because plasma and dietary levels of alpha-tocopherol are closely correlated, the differences seen among these various rhino populations suggested widely varying diets and/or habitat quality. To investigate this possibility, a collaborative field study with Fred K. Wawereu, Wildlife Conservation International, Kenya, R. DuToit, Zambezi Rhino Project, and R. Brett, World Wildlife Fund, Kenya, was organized to quantify alpha-tocopherol levels in major browse species consumed by black rhinos. Two national parks and two private reserves in Kenya, and the Zambezi Valley, Zimbabwe, were chosen as study sites.

Tocopherols must be extracted from fresh plant tissues, and, to our knowledge, have not before been measured in a field study. In order to do so, a portable laboratory containing necessary chemicals and a hand-held homogenizer, as well as a full-sized tank of nitrogen gas, was loaded into vehicles and taken to makeshift labs. Converted storerooms or kitchens generally met our relative minor requirements of bench space, electricity and water, although we were treated to a proper laboratory at the Rukomechi Tsetse Fly Research Station in the Zambezi Valley! Samples were weighed, homogenized, extracted, evaporated, reconstituted, sealed, and freezer-stored until shipment back to the United States for high-performance liquid chromatography analysis.

The experienced African field researchers identified a minimum of ten species of major food plants for each site. Results indicated wide variation in vitamin E levels in fresh rhino browse plants. Leaves contained two to fifty times more alpha-tocopherol than stem fractions of the same plant; mature tissues had higher concentrations than young, growing tissues. Environmental
