

# The studbook of African rhinoceroses in captivity

by Heinz-Georg Klös



Black rhinoceros  
"Kilaguni" with 17  
day old "Saba" born  
on 7 Feb 1991 in the  
Berlin Zoo

Next to the giant panda, the rhinoceros is seen today as a symbol and a flagship for the world-wide protection of endangered wildlife. After the catastrophic decimation of the black rhinoceros population in East Africa from many thousands to just a few hundreds between 1970 and 1993, the situation has become more stable since that time. Thanks to a consistent policy against international poaching and especially by translocating the majority of the available black rhinos from the large national parks into smaller conservation areas and private farms, the numbers in Kenya have grown to over 500 animals. In Zimbabwe, where about 300 animals still exist, a similar policy gives good hope that some increase can be expected. However,

we have to remain watchful, because even on the well-guarded smaller private game farms some poaching is still recorded. We also know that the possibility of political instability of the countries in this region could have a devastating impact on the numbers of rhinoceros.

In the autumn of 1966, on the occasion of the 21st annual meeting of the International Union of Directors of Zoological Gardens (IUZG), held in Colombo, and in accordance with the advice of the International Union for Conservation of Nature and Natural Resources (IUCN), I was appointed the studbook keeper for both the black rhinoceros (*Diceros bicornis*) and the white rhinoceros (*Ceratotherium simum*). As I was the director of the Zoological Gardens in Berlin until

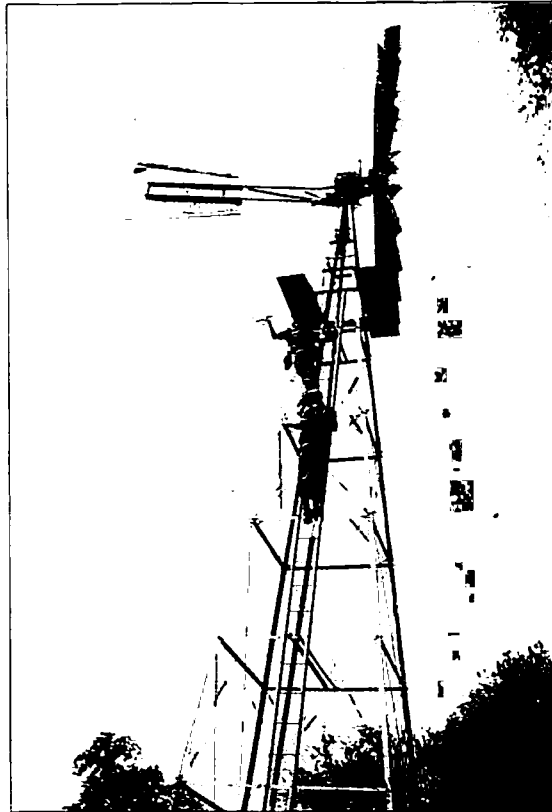
the interlying areas relatively free of elephant impact.

This has major implications if one is managing for biodiversity, since these results indicate that elephant impacts could eventually be evenly spread across landscapes that have closely spaced waterholes.

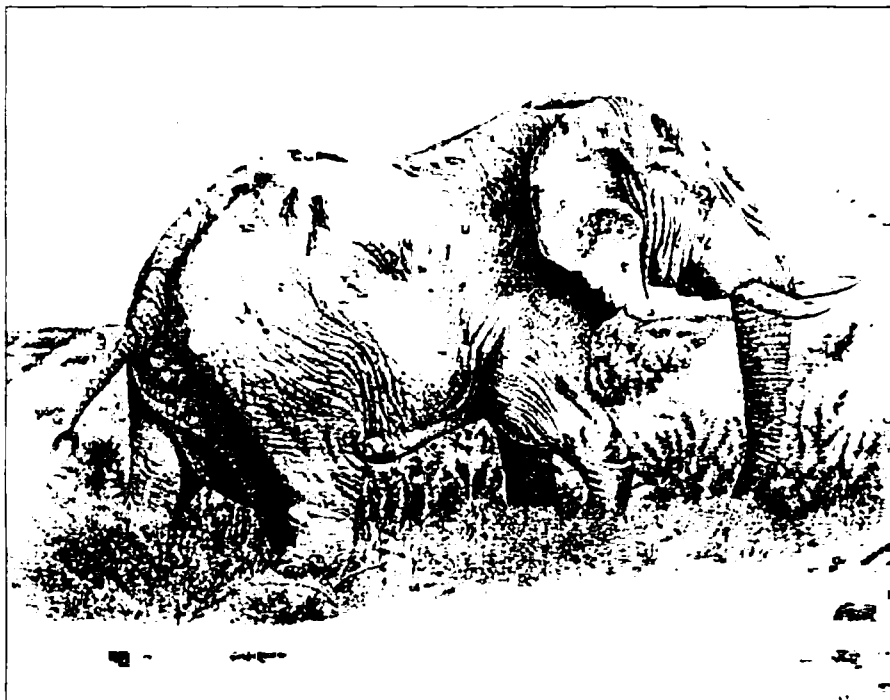
In contrast, in areas that have isolated water points, the waterhole sites would contain tree species that are able to withstand elephant disturbance, while the areas in-between would have species that are unable to withstand elephant disturbance. At the landscape scale, elephant impacts in an area with isolated water points could therefore potentially enhance biodiversity!

But the significance of this finding, in terms of elephant management, is really brought to bare when one compares the old species-approach to the new ecological philosophy of management for variability and biodiversity. Taking the old species approach, elephants would simply be seen as a problem-species when the decline of sensitive trees in high elephant impact areas is noted. Management would then involve keeping elephant numbers at a level that would prevent this from happening.

However, if we are managing for biodiversity through flux or heterogeneity at a park-wide scale, the interpretation is quite different: although the riparian landscapes with isolated water points have lost species that can't cope with elephant disturbance at waterholes, they have gained those that can. In addition, the areas in-between have those species that may not survive under heavy elephant impact. This certainly sheds a different light on the possibilities for elephant management, not only in the Kruger National Park, but throughout the African continent.



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*Drawing by Murray Rolfe  
(1995)*

my retirement in 1991, the data were collected and recorded in the offices of the Berlin Zoo. The studbooks are meant to be a tool for the exact identification of each individual animal kept in captivity, as well as to provide scientific and statistical background for the maintenance of the rhinoceros in zoos, safari parks and circuses. The data are regularly published by the Berlin Zoo and in fact there have been seven issues of all records between 1981 and 1997.

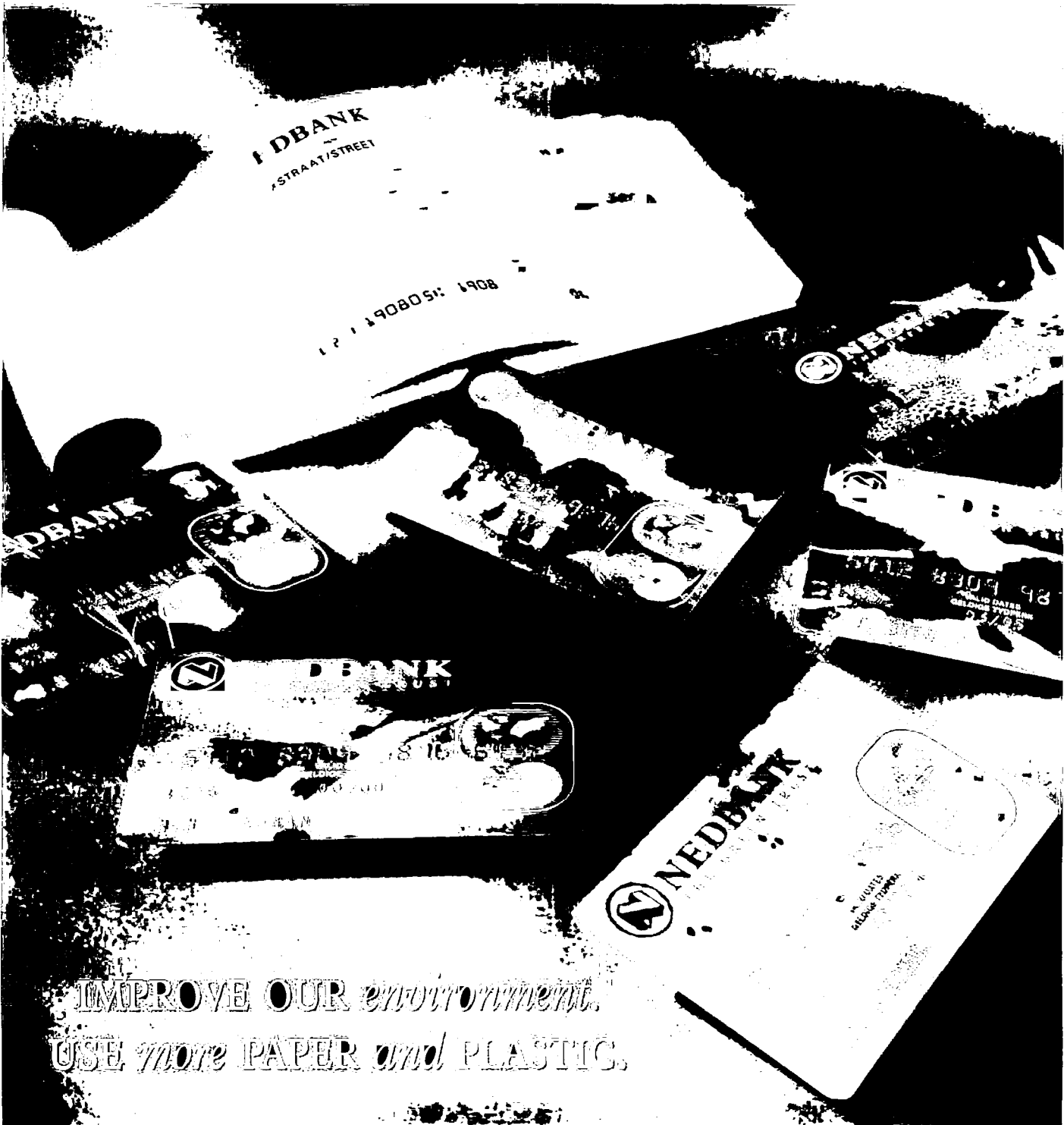
The number of specimens of rhinoceros recorded in the studbooks has shown a steady increase, for black rhino from 144 in 1969 to 238 in 1997, and for white rhino from 86 in 1969 to 697 in 1997. This increase of rhinoceroses in captivity shows that there may be cause for careful optimism. While for many years in the past, the percentage of rhino death calculated around 5,6 % was rather higher than the 4,7 % of births, it is nice to report that during the last ten years this has shown a reverse situation. Since 1965 the number of individuals taken from the wild has declined continuously and since 1991 has gone down to almost zero.

An important indicator for the evaluation of an animal population is its age structure. With a strong foundation of younger animals combined with a reduction of elderly specimens, this shows a favourable picture in the captive population. This means that in the next few years we expect that an increasing number of black and white rhinos will be of the right age to breed. Concerns for the healthy development of black rhinos kept by humans still include some undefined Rhinoceros-Syndromes, like a number of diseases without obvious causes, and a phenomenon seen in the American captive population where more male than female calves are born. With this note of caution, it can be said that zoos are able to maintain their rhinoceroses at the same level and thereby ensure that the species can continue to exist.

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*Black rhino mother  
"Tbeluji" with her  
daughter "Sita" (born  
12 Oct 1990) when it  
was 45 days old, in  
the Berlin Zoo*





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