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ROOM TO BREED

Making space for rhinos

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MAKING SPACE for rhinos

TEXT BY PAM SHERRIFFS

Rhino conservation has had some spectacular ups – and more than a fair share of downs. The southern white rhino's meteoric rise in fortune is countered by the on-the-brink survival of a tiny group of northern whites; the black rhino, having lost 96 per cent of its population to poachers in the 1970s and '80s, is slowly but surely making a comeback. Rhinos need space, though, lots of space, and providing enough for all is the next big challenge.



ANN & STEVE TOOM

MAKING

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SPACE *for rhinos*



ON THE UP

The rhinoceros, in one form or another, has inhabited the earth much longer than we have. Rhinocerotoids, the ancestors of the modern rhino, appeared about 50 million years ago, and rhinos as we know them evolved perhaps 10 million years ago. But then humans came along – and as our fortunes rose, rhino fortunes declined. Humans have killed rhinos for their horns, for their skins, for sport, for space. (In Kenya, one busy game control officer and his colleagues shot more than a thousand of them between 1946 and 1948 on a mission to clear farmland of 'vermin'.) Now there are fewer than 18 000 rhinos left in the wild, divided among five species: three in Asia and two in Africa.



D. & S. BALFOUR/WILDPHOTOS

ABOVE Black rhino numbers bottomed out in the early 1990s, but intensive protection on private and State lands is helping to pull them up again.

OPPOSITE Good mud wallows are an important component in habitat that is suitable for rhinos. Mud helps to keep the animals cool and forms a barrier against irritating flies.

PREVIOUS SPREAD A century ago the southern white rhino was nearly extinct. Now there are more than 11 000 of them, all originating from a small surviving population in northern KwaZulu-Natal, South Africa, where this cow and her calf are grazing.

The two African species are the black rhino (with four subspecies) and the white rhino (with two). The story of the southern white rhino *Ceratotherium simum simum* is told as one of the great conservation successes of the 20th century, and rightly so. In 1895, there were probably no more than between 20 and 50 southern white rhinos in existence, making up a small breeding population in northern KwaZulu-Natal, South Africa. Now there are about 11 320 in the wild, in nearly 400 populations in eight countries. Another 740 animals are in captive breeding institutions worldwide.

This meteoric rise results in part from the development of translocation techniques in the 1960s by Dr Tony Hartoorn and the Natal Parks Board (now Ezemvelo KZN Wildlife). These techniques made it possible to carry

out an aggressive translocation policy whereby new populations made up of surplus white rhinos were set up not only on State, but also on private land. Under good protection, the new populations have increased dramatically.

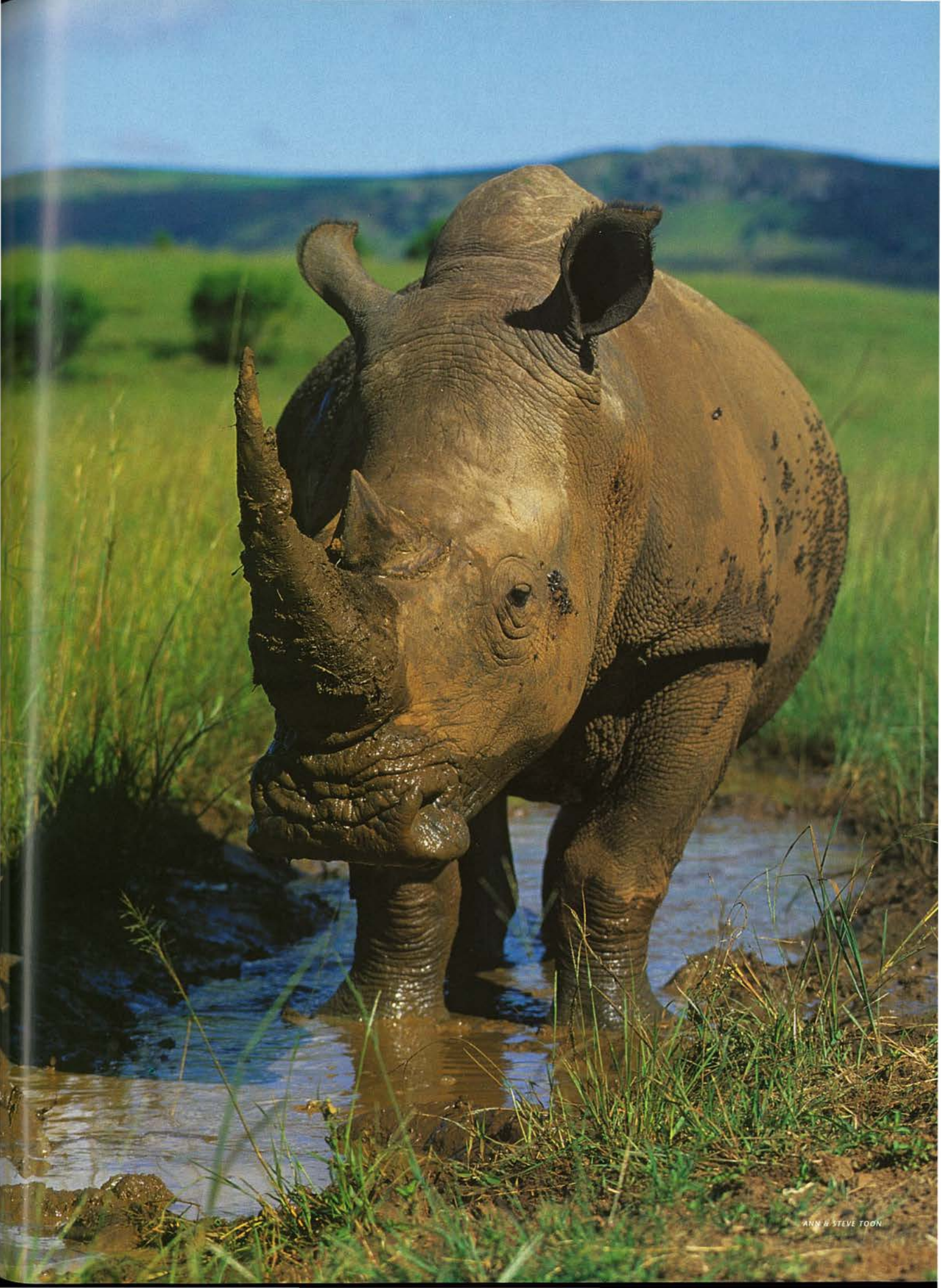
Commenting on the role that private landowners can play in rhino conservation, Dr Richard Emslie, the scientific officer of the IUCN's Species Survival Commission's African Rhino Specialist Group (AfRSG), said, 'Some governments still have a monopolistic mindset regarding "their" wildlife and are resistant to the private sector becoming involved with, or owning, rhinos. But private land has significantly increased the extent of rhino habitat and in some countries the sale of rhinos has provided considerable funds for State conservation agencies. Moreover, private landowners can assist by looking after rhinos on a custodianship basis, allowing the State to concentrate its resources in its own parks where rhinos occur. Such cooperative arrangements in Kenya, Zimbabwe and Namibia have contributed substantially to increasing rhino numbers.'

He added that, in South Africa, more or less all the State reserves that can carry white rhinos have been restocked. Thus if the increase in white rhino numbers is to be maintained, additional habitat for surplus animals has to be found and the bulk of it will have to come from private and communal land.

Although rhinos are always vulnerable and will require intensive protection for the foreseeable future, the southern white rhino is no longer Critically Endangered on the IUCN's Red List of Threatened Species but has been downgraded to Near Threatened. Unfortunately, the same can't be said for the northern white rhino *C. s. cottoni*.

ON THE BRINK

In 1960 there were more than 2 000 northern white rhinos in north-central Africa, but by 1984 poaching had reduced the number to 15, all in a single population in the 5 000-square-kilometre Garamba National Park in north-eastern Democratic Republic of Congo (DRC). The steep decline was the catalyst for the Garamba Project, in which the DRC's Institut Congolais pour la Conservation de la Nature (ICCN) was supported initially by WWF, the Frankfurt Zoological Society and UNESCO, and later by the International Rhino Foundation (IRF) ▶



RHINOS ARE ALWAYS VULNERABLE AND WILL REQUIRE INTENSIVE PROTECTION FOR THE FORESEEABLE FUTURE



Always ready with a helping beak, oxpeckers such as this juvenile red-billed comb the hide of rhinos for ticks and other ectoparasites. Ticks are the cause of much of rhinos' determined rubbing against posts and stones.

and other funders. A World Heritage Site In Danger, Garamba National Park was listed as such in 1980 principally to conserve the rhinos and the Congo giraffe, both of which occur nowhere else in the world. By 1991 the rhino population had doubled, and even when poaching increased again after civil wars in the DRC and neighbouring Sudan, its negative impact was cancelled out by good breeding. In mid-2003, however, heavily armed *Muharaleen* horsemen from Sudan invaded the park seeking ivory and rhino horn, and poaching escalated to an unsustainable level.

'Rhino numbers plummeted and by the end of 2004 there were no more than 10 animals left. It was now or never,' reported Dr Martin Brooks, chairman of the AfrSG, who led an

international delegation to the DRC comprising UNESCO, the World Bank, Fauna and Flora International, the IRF and IUCN Central Africa. This was to seek political approval for an emergency plan put together by the ICCN and its international partners. The plan, to relocate some rhinos temporarily to a safe haven in Kenya and to increase *in situ* support for the remaining animals, was a good one. Two of the DRC's four vice-presidents supported it, but before the protocol could be signed the issue of translocating the rhinos became ensnared in local and national politics. Some major funders then withdrew or froze their support, and the few rhinos still in Garamba were left to their fate. The northern white rhino, it seemed, would vanish from the face of the earth.



ANN & STEVE TOON



DAVE HAMMAN

All is not yet lost, although an incursion into Garamba by Ugandan guerrillas of the notorious Lord's Resistance Army in September has made the situation suddenly even more dire. Some rhinos apparently survived the main March/April poaching period, during which the normally 10-foot-high grass is short enough to permit visibility. 'There has been a recent report from monitoring staff that rhinos are still present in some parts of the park,' said Dr Brooks. 'A major survey is unlikely before December because of the long grass. But there are still grounds for optimism.' In fact, four rhinos have been seen, and while others are believed to still exist, it is unlikely that more than 10 remain.

A silver lining to the crisis, though, is that lines of communication between

the ICCN and the international rhino conservation community are still open. In June UNESCO and Fauna and Flora International convened another meeting to try to ensure support for Garamba and its white rhinos.

MANAGING FOR MORE

The situation for the black rhino lies somewhere between the success story of the southern white rhino and the extreme precariousness of the northern white. Since the poaching wave of the 1970s and '80s that wiped out 96 per cent of black rhinos in Africa, the species has been on the critical list. At the lowest point, in 1995, there were only 2 410 black rhinos in the wild. They had been virtually eliminated from large, unfenced and unpatrolled ▶

Rhino capture and translocation techniques have become extremely effective with experience and improved drug combinations. The tranquillised rhino's eyes, which can remain open while the animal is drugged, are covered to protect them from dust and glare.

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Famously myopic, black rhinos do, however, have a well-developed sense of smell, and they can use their horn to good effect as a weapon.

ON THE NOSE

Rhino horn is formed from keratin which grows from the skin of the nose on a mound of nasal bone. If the horn is knocked off or removed, it grows again at a rate of about five centimetres a year – assuming, of course, that the rhino has not been killed by humans who want its horn for their own purposes.

A rhino uses its horn as a weapon to defend itself or its offspring, or in a territorial battle. Some humans, following the tenets of traditional Chinese medicine, use it – powdered – to reduce fever. Others, in Yemen and other Middle Eastern countries, fashion it into finely carved handles for their daggers.

areas, and most of those that remained were in sanctuaries where anti-poaching efforts were concentrated enough to be effective. Numbers began to inch up and by the end of 2003 there were an estimated 3 610 black rhinos in the wild, mostly in South Africa, Namibia, Kenya and Zimbabwe.

'The continued increase in black rhino numbers since 1995 is encouraging, but the rate of increase may have been even better if there had been more aggressive biological management,' said Dr Emslie. He went on to explain that estimated numbers of the main subspecies in South Africa, *Diceros bicornis minor*, grew rapidly from 1989 to 1996 at around 6.5 per cent per year. In some parks, however, the population density was allowed to approach the park's carrying capacity, and the numbers of competitive browsers sometimes increased too. So while there was rapid growth in some of the populations that had been re-established, in others the underlying performance was negative.

Between 1996 and 2001 black rhino population growth averaged only two per cent per year, well below the target of five per cent, although where there has been increased focus on biological management, the growth rate has improved to an estimated 4.2 per cent. If the earlier 6.5 per cent level had been maintained beyond 1996 by means of more aggressive biological management, we would have had about 400 more black rhinos in South Africa today.

Rapid population growth not only limits the loss of genetic capital, but also provides a safety margin against natural disaster and poaching, and for an endangered species this can mean the difference between survival and extinction. Dr Emslie explained why it should be a priority. 'The security of existing black rhino populations will always be critical and continued funding for this is essential. But focusing exclusively on keeping existing animals safe at the expense of rapid population growth is like keeping your money under the bed in case you get robbed on the way to the bank. What might seem like a safe, low-risk strategy could be anything but. Ten years down the line, the key question should not be "How many rhinos have been poached?", but "How many rhinos are there?"'

Some of the best growth rates have been achieved where new areas – notably Malilangwe and the Save Valley in Zimbabwe, and Madikwe, the



DAVE HAMMAN (2)

RHINOS DON'T REALLY HAVE ENEMIES – EXCEPT FOR MAN, THE MOST SERIOUS OF ALL

Pilanesberg and the Great Fish River in South Africa – have been stocked with a founder population of black rhinos that, although sizable, is well below the area's carrying capacity. And that is what the Black Rhino Range Expansion Project, a partnership between WWF and Ezemvelo KZN Wildlife with support from the Mazda Wildlife Fund, is aiming to do in KwaZulu-Natal. By increasing the land available for black rhino conservation, it will provide new territory where the animals can rapidly increase in number, and at the same time it will reduce pressure on existing reserves. This is where private landowners come into the picture again. The project is forming strategic partnerships with landowners who hold large areas of good black rhino habitat – ideally at least 20 000 hectares, with a carrying capacity of more than 50 rhinos. Because of the size of the areas required, sites tend to be made up of partnerships between adjacent landowners who are prepared to drop their internal fences.

Once the agreements are in place and internal fences are down, then founder populations of up to 20 unrelated black rhinos are released into the new site. The first project site is Munyawana Game Reserve in northern KwaZulu-Natal, which comprises four adjoining properties: Phinda Private Game Reserve, Zuka, Bumbeni and Phumalanga. In October 2004 they became the custodians of 15 black rhinos, courtesy of Ezemvelo KZN Wildlife, and so far the translocation has been a great success. 'They settled very well, without fighting or falling down dongas, and were seen mating within a few weeks, so we're looking forward to lots of calves,' said WWF's project leader, Dr Jacques Flamand. 'The first calf was born in July 2005. As black rhino gestation is about 15 months, the female would have been pregnant when she arrived at Munyawana, but the successful birth is a very good sign.'

The next release site, Zululand Rhino Reserve, is made up of more than 20 private properties whose owners have ▶

ABOVE Well-trained and well-equipped anti-poaching patrols are essential for effective rhino protection and will remain so for the foreseeable future.

PREVIOUS SPREAD Namibia's black rhino population is increasing, helped by custodianship agreements between government and private landowners and by community-based projects.



THE LONG-TERM SUSTAINABILITY OF RHINO HINGES ON ENGAGING LOCAL

Rhinos are remarkably agile and will always outrun a human. White rhinos can achieve a speed of 50 kilometres per hour and black rhinos about five kilometres per hour faster.

taken down the fences between them. But, explained Dr Flaman, it is not only private landowners who have a role to play in rhino conservation. 'We hope in the next phase of the project to put rhinos on community land. We are already working with community landholders who have good black rhino habitat.'

The long-term sustainability of rhino conservation hinges on meaningfully engaging local communities so that they benefit from it, elaborated Dr Teye Teferi, until recently the coordinator of WWF's over-arching programme to

increase rhino numbers across Africa. 'If local people do not see rhinos as assets, why should they worry about their conservation? They don't have the luxury of being emotionally attached to species that are nice to see. If you don't address their primary priorities of feeding and sheltering their families, you are not likely to get their support, no matter how advanced your environmental education programmes might be.'

A case in point is the community-based approach to conserving the desert-adapted black rhino *D. b. bicornis* in the



RICHARD DU TOIT

CONSERVATION COMMUNITIES

arid north-west of Namibia, the result of a collaborative effort between local communities, government and NGOs, including the Save the Rhino Trust. The communities manage the black rhinos on their lands, employing their own game guards, and are linked to ecotourism systems. 'There are conservancies and concessions on communal land and the rhinos have done well. It shows that when local communities are empowered, given capacity and a share of benefits, they can take care of their natural resources,' said Dr Teferi.

ON THE BRIGHT SIDE

Keryn Adcock, the rhino ecologist who compiled the latest SADC Rhino Management Group's Black Rhino Status Report Summary, gave the following overview. 'The Namibian population has done fairly well, with steady increases in the main source populations and even better performance among the custodianship populations on private conservancies. In Zimbabwe, the underlying breeding performance is excellent but heavy poaching in some areas and land occupations in others have increased mortalities, making overall growth very low. In South Africa, the arid-adapted *D. b. bicornis* subspecies has shown the best performance, having been largely consolidated into Addo Elephant National Park. Although some populations are doing very well, the eastern subspecies *D. b. minor* continues to show a growth rate below the targeted five per cent per annum, primarily because introductions to new areas with potential to hold large black rhino populations have been limited. The extralimital East African *D. b. michaeli*, which was held at Addo, has been translocated to a private property where it is doing well.

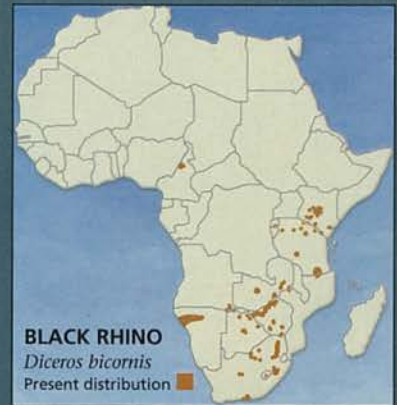
'In Kenya, 86 per cent of *D. b. michaeli* is found in heavily protected sanctuaries which are near saturation, but there is an active programme to find new safe areas for them. In Tanzania, which holds seven per cent of the *D. b. michaeli* population, there are also active plans for its expansion, possibly by bringing in animals from Kenya and South Africa. A small number of *D. b. minor* occurs in the south of Tanzania, and with better protection now in place it seems to be increasing.'

The SADC Regional Programme for Rhino Conservation is actively promoting cross-boundary black rhino translocations to repopulate good habitats within the historic range of the subspecies, and collaboration between regional agencies has led to the re-introduction of founder populations in Zambia and Botswana.

MAN: MAKING OR BREAKING?

What of the future for rhinos? The growth in numbers is encouraging, but there is no room for complacency. Some of the greatest threats to rhinos arise from social and economic conditions: human population growth, poverty, political instability and the ►

WHERE ARE THEY NOW?



- *D. b. minor*, the most numerous subspecies, is slightly smaller than the others and is found mainly in South Africa, Swaziland and Zimbabwe.
- *D. b. bicornis* is large and adapted to arid and desert conditions. Its stronghold is Namibia, with some small populations in south-western South Africa.
- *D. b. michaeli*, recognised by rib-like corrugations down its body, once ranged throughout eastern Africa but is now concentrated in Kenya.
- *D. b. longipes*, the rarest of the black rhinos, was found throughout the savanna zones of Central and West Africa. Now only a few scattered animals are thought to remain in northern Cameroon.



- *C. s. simum*, the southern white rhino, is now the most abundant rhino subspecies, numbering more than 11,000 in southern and East Africa.
- *C. s. cottoni*, the northern white rhino, used to range over parts of north-western Uganda, southern Chad, south-western Sudan, eastern Central African Republic and north-eastern DRC. It was poached out of most of this range, with only a few remaining in the DRC, and possibly a few isolated survivors in Sudan. The fate of those in the DRC is uncertain.



D. & S. BALFOUR/WILDPHOTOS

RAPID POPULATION GROWTH CAN MEAN THE DIFFERENCE BETWEEN SURVIVAL AND EXTINCTION

Rhino cows are fiercely protective of their calves, which stay with them for several years.

AFRICA *Geographic online*

Daryl Balfour's personal view of rhinos featured in Vol.9 No.1, while Michael D. Kock described his efforts to trace elusive black rhinos in Cameroon in Vol.10 Nos.

1 & 2. Wayne Linklater explored rhino 'psychology' in Vol.12 No.2, and Esmond Martin and Lucy Vigne discussed the rhino horn trade in Vol.12 No.3.

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proliferation of weapons. Civil wars and insurgencies can undo decades of hard-fought gains in no time. Laws can change: in Zimbabwe the punishment for rhino poaching may now be little more than a slap on the wrist, whereas it used to be a mandatory jail sentence. (In South Africa, Namibia and Swaziland some rhino offenders have been jailed for five to 20 years.)

And then, of course, there is poaching, the ever-present threat. The demand for rhino-horn products continues, and for as long as it exists there will be people prepared to exploit it, for reasons of greed or economic necessity. Conserving rhinos in the wild requires a sufficient density of well-trained, well-equipped manpower, and for that government commitment is essential. With declining State budgets for conservation in real terms, the input from NGOs is

becoming more important to help rhino conservation efforts.

Black rhinos in the wild can live to the age of about 40. Very young calves are vulnerable to attack by lions and hyaenas, but their mothers defend them ferociously. Adult males sometimes fight over territory and females, and in some areas there are rhinocidal elephants. Otherwise, rhinos don't really have enemies – except for man, the most serious of all. But they also have friends among us, and while that remains the case, they may survive.

'Perhaps, as conservationists, we're beating against thunder, this growing tide of humanity,' commented Dr Flamand. 'But we do what we can with the means at our disposal, in the hope that future generations can find other solutions which leave space in the world for wild and wonderful things.'