

CONSERVATION

RHINOS RETURN

In the 20th century, the black rhino was hunted almost to extinction. But, as poaching is controlled, an ambitious reintroduction programme is taking place in Zambia.

JESSICA GROENENDIJK is on the frontline of conservation efforts in North Luangwa National Park.

The black rhino is one of Africa's most impressive mammals, but it has been ruthlessly hunted for its horns. Now the species must rely on the efforts of dedicated conservationists to prevent it from going extinct.

David Cayless/05f/Photobrain.com



THE EXPERT

JESSICA GROENENDIJK has worked for the Frankfurt Zoological Society for nine years, co-ordinating the Giant Otter Conservation Project in Peru and, since May 2006, monitoring Zambia's reintroduced black rhinos.



THE LOCATION

The black rhino is being reintroduced to Zambia's **NORTH LUANGWA NATIONAL PARK**. The park comprises 4,636km² of riverine forest, grassland and acacia thickets.



Horns raised like periscopes, a group of black rhinos crosses a river in South Africa. Despite their cumbersome size, these giants are good swimmers.



The black rhino has a pointed, muscular upper lip for grasping foliage and pulling it into its mouth.

TIMELINE: THE DECLINE OF AFRICA'S RHINOS

The past 175 years have seen a shocking slaughter of rhinos.

EARLY 1800s Populations of both white and black rhinos are healthy, probably numbering hundreds of thousands.

LATE 1800s Hunters and farmers slaughter white rhinos to clear land for settlement.

1895 Many people believe the southern white rhino to be extinct, but a small population of perhaps 20-50 animals is discovered in South Africa. They are strictly protected and begin to increase.

EARLY 1900s Hunters and poachers turn their attention to the black rhino. Its preference for dense, wooded habitat probably protected it up until now. There's an increase in demand for rhino horn for use in traditional Chinese medicine.

1960 An estimated 100,000 black rhinos remain.

1970 Number of black rhinos falls to 65,000.

1970s Rising oil prices make oil-rich Yemen wealthy, and increase demand for jambiyas – ceremonial daggers made from rhino horn. Catastrophic decline of rhinos. Northern white rhinos reduced to 500.

1980s Black rhinos now rare in Zambia, once a stronghold for the species.

1995 Black rhinos decline to 2,410. Southern white rhinos recovering well.

1998 Black rhinos officially extinct in Zambia. Efforts elsewhere, particularly in South Africa, begin to reverse black rhino decline.

2003 Five black rhinos are reintroduced to Zambia from South Africa. Northern black rhinos down to 50 or fewer individuals.

2006 10 more black rhinos arrive in Zambia from South Africa.

2007 Northern white rhino possibly extinct in the wild. Southern white rhino numbers over 14,500.

MAY 2008 A further five rhinos are expected in Zambia.

2009 A final five rhinos are due to arrive in Luangwa National Park to create a self-sustaining population.

Vivek Menon/naturpl.com

A Yemeni jambiya.

Poached rhino horns, Natal, South Africa.

Anthony Bannister/NHPA

Daryl Balcour/NHPA

CRUNCH, CRUNCH, CRUNCH. Looking up, I see a female black rhinoceros standing on the bank above me, chewing rhythmically on the elongated fruit of the sausage tree. I recognise this individual – we call her Twashuka.

Twashuka's body is obscured by thick vegetation, so Lewis, a Zambia Wildlife Authority (ZAWA) scout, and I inch closer to assess her condition. Busy chomping, she does not notice us until we are just metres away. She pauses mid-chew and peers at us short-sightedly. I freeze. Then she huffs twice and backs out of sight, but I can still hear her pawing the ground – she sounds irritated.

Lewis climbs after her and beckons me to follow. Nervously, I scale the bank and find myself just 15m away from the surprised rhino, while Lewis leans casually against a tree. There's a sheer drop behind me, an angry black rhino in front of me and the only climbable tree is being hogged by Lewis!

Twashuka suddenly takes two brisk paces towards us. I stop breathing and my heart pounds. "Don't move," Lewis murmurs. Then the one-tonne rhino charges. Just two metres away, she stops short, snorting explosively. We don't move – we can't – and I watch, incredulous, as uncertainty overwhelms her. She wheels round and races into the scrub, her thudding feet fading away.

Our encounter with Twashuka took place

back in October 2006, in North Luangwa National Park, one of Zambia's pristine wildernesses. Lewis was an old hand, having tracked relocated black rhinos since 2003, when the first five individuals were moved here from South Africa. I, however, was a novice, and the experience left me shaking.

I had lots to learn. And quickly. I was in Zambia to help monitor the country's small but growing population of reintroduced black rhinos. To ensure that our pioneering animals

I stop breathing and my heart pounds. "Don't move," Lewis murmurs. Then Twashuka charges.

are safe, healthy and given every chance to live and breed naturally, Lewis and his team track and observe each individual, mostly on foot, every month. And I join them in the field as often as possible.

If I'm honest, before I came out to Zambia, I was worried that rhinos would be rather dull subjects. I'd just finished working with the charismatic giant otter in Peru and feared that black rhinos would be grey not just in colour, but in character, too. However, since moving

here, I have found them to be beautiful and have unexpected personality.

NOT SO BLACK AND WHITE

There are plenty of reasons why it is important to reintroduce the black rhino to its former range states, not least among them to restore a rich biodiversity and create new population 'reservoirs'. But the species' impressive appearance is reason enough for me to want to return it to its former homeland in Zambia.

The black rhino is a truly magnificent beast – four metres of heaving muscle covered in thick hide. Though superficially similar to the white rhino – Africa's other species – the black is a little smaller and lacks the white's pronounced hump on the back of the neck. It also has a triangular upper lip that it uses to strip twigs and leaves from small trees and thorny shrubs. Its cousin, the white, uses its broad, square lips for cropping grass. When a black rhino bites through a woody branch, it leaves a clean, angled cut that is instantly recognisable – a useful sign when you're trying to find one in the bush.

The black rhino's most impressive feature is its horns. The longer front horn averages 40cm in length, but can reach more than 60cm in some individuals. Most of the time, it is used for the peaceful pursuit of browsing, grappling branches down to mouth level. But

when necessary, it can be used as a formidable weapon. Females wield their horns to defend young from predators – in one incident, a single mother apparently fended off a pride of 12 lions. Males, meanwhile, use their horns to lethal effect in jousts over mates – fighting is a common cause of death.

Unfortunately, the black rhino's fabulous horns have proved its undoing. There is a huge international demand for the horn for use in traditional Chinese medicine, and for the

Sadly, to get the horn, you have to kill the rhino, and poachers have virtually wiped out the species.

ornate dagger handles of Yemeni tribesmen, who carry them as status symbols. Sadly, to get the horn, you have to kill the rhino, and over the course of the 20th century, poachers have virtually wiped out the species (see box, right).

In 1970, Zambia was one of the major range states for the black rhino, but in 1998, the species was declared nationally extinct here. Since that nadir, conservationists have taken heart from the recovery of the southern white rhino (another victim of the demand for horn),

whose population crashed to just 20 animals in 1895, but now numbers 14,500. With diligent protection – mostly in South Africa – the black rhino has also increased (from 2,400 in the late 1990s to 3,725 by 2006) and this has encouraged conservationists to plan the species' triumphant return to Zambia.

FIGHTING BACK

The North Luangwa Conservation Programme was launched in 1986 with the Frankfurt Zoological Society. Its first task: to stop poaching in the park. It took almost two decades of strict law enforcement and park management in partnership with the ZAWA to bring the area under control. More scouts and rangers were recruited and, in May 2003, the first five black rhinos – donated by South African national parks – were moved to North Luangwa National Park. Each animal had a transmitter implanted in its horn and its ears notched to enable identification in the field.

At first, the rhinos were released into a vast area surrounded by an electric fence, designed to contain the herd but permit other wildlife to move in and out freely. A reintroduction straight into the wild was considered too risky, since the team needed to be able to check up on the animals' health and well-being regularly.

The fenced area was carefully chosen for being ideal rhino habitat. Unlike the open

RHINOS OF THE WORLD

Rhinoceroses have existed in one form or another for at least 50 million years, but just five species remain (here, we have also included the two subspecies of white rhino). All are in danger of extinction, some perilously so.

BLACK RHINO

DICEROS BICORNIS

- » **WEIGHT** 800-1,400kg » **LENGTH** 3-3.75m
- » **HABITAT** Wooded grassland and acacia savannah.
- » **DISTRIBUTION** Kenya, Tanzania, Namibia, Zimbabwe, South Africa, Cameroon, Malawi and Swaziland. Four subspecies.
- » **STATUS** Critically endangered – 3,700 remain.



SOUTHERN WHITE RHINO

CERATOTHERIUM SIMUM SIMUM

- » **WEIGHT** 1,700-2,300kg » **LENGTH** 3.4-4m
- » **HABITAT** Grassland and open savannah with bushy cover nearby.
- » **DISTRIBUTION** Mostly South Africa, though small populations survive in neighbouring states and in Uganda and Kenya.
- » **STATUS** Near threatened – 14,500 remain.



NORTHERN WHITE RHINO

CERATOTHERIUM SIMUM COTTONI

- » **WEIGHT** Up to 2,300kg » **LENGTH** Up to 4m
- » **HABITAT** Grassland and open savannah with bushy cover nearby.
- » **DISTRIBUTION** Just a handful of animals survive in Democratic Republic of Congo.
- » **STATUS** Critically endangered – fewer than 10 survive.



INDIAN RHINO

RHINOCEROS UNICORNIS

- » **WEIGHT** 1,600-2,200kg » **LENGTH** 3.1-3.8m
- » **HABITAT** Lowland grassland and adjacent forest.
- » **DISTRIBUTION** North-east India, Bhutan and Nepal.
- » **STATUS** Endangered – some 2,000 survive in the wild today.



JAVAN RHINO

RHINOCEROS SONDAICUS

- » **WEIGHT** Up to 2,000kg » **LENGTH** 3-3.2m
- » **HABITAT** Dense rainforests with plenty of mud wallows and wetlands.
- » **DISTRIBUTION** Two subspecies spread between Java and Vietnam.
- » **STATUS** Critically endangered – 60 or so survive in Java, 10 or fewer in Vietnam.



SUMATRAN RHINO

DICERORHINUS SUMATRENSIS

- » **WEIGHT** 800-1,000kg » **LENGTH** 2.4-3.2m
- » **HABITAT** From lowland swamps to mountain moss forests.
- » **DISTRIBUTION** Two subspecies cling on in Malayan Peninsula, Sumatra and Borneo.
- » **STATUS** Critically endangered – less than 50 in Borneo, other populations too small to count.



GENTLY DOES IT: HOW TO TRACK A BLACK RHINO

Zambia's rhino wardens track and identify each of the reintroduced black rhinos at least once a month. Here's how it's done:

- » **DRESS IN BUSH COLOURS:** Rhinos have poor eyesight, so wear muted colours and they won't spot you, provided you move slowly.
- » **BEGIN EARLY:** Black rhinos often forage in the early hours when it is easier to approach and observe them. There is also little wind, so fresh dung and browsed twigs have not yet dried out, and footprints are not yet blurred by the passage of other animals.
- » **LOOK FOR SIGNS:** Keep an eye out for fresh footprints, recently-used middens and the moist ends of browsed twigs.
- » **PROD DUNG WITH A FINGER:** If the centre of a dungball feels warm, the rhino is near.
- » **THINK LATERALLY:** When it has not rained for months and the ground is hard and rocky, you must look for stones that have been

- shifted, broken grass stems or the scuff of a single toe in the dust.
- » **STOP AND LISTEN:** The signs become fresher as you close in on your quarry, so stop periodically to listen for sounds of feeding.
- » **STAY DOWNWIND:** Gently shake a small bag of ash to see how the breeze blows. It is crucial to stay downwind of the animal so that it cannot pick up your scent.
- » **WALK CAREFULLY:** Avoid stepping on dry leaves or brittle twigs.
- » **AND IF YOU DO UPSET A RHINO...** If you get too close and a black rhino becomes aggressive, your best option is to scramble up or hide behind a tree. Lewis also recommends dodging sideways at the last minute, matador-style, as a very last resort.

If you're searching for a black rhino in the hottest part of the day, head for the nearest mud wallow.



plains-dwelling white rhino, blacks prefer dense, woody bush with access to water, where they wallow away the hottest parts of the day.

The first five animals settled in quickly and, in 2005, a calf was born. We called it Buyantanshi, meaning 'progress'. In June 2006, we welcomed a further 10 black rhinos, again from South Africa. I was there to witness their arrival – the sight of the gigantic Hercules C130 landing on the dusty airstrip with its precious cargo was thrilling. The new animals were then released into a separate enclosure to acclimatise.

One female, Buntungwa, was never happy until she had us climbing trees.

Not everything went as planned. One day, we discovered that the newly-arrived Twashuka had slipped into the original fenced area in an attempt to accelerate her integration with the first herd. Concerned that the other animals might be hostile to her, we had a panicky time tracking Twashuka down, sedating her and returning her to her rightful home.

Another female, Chikuse, never really settled in and seldom strayed far from the area where she was released. She was one of the first rhinos I encountered when I arrived in North Luangwa and I was instantly charmed by her impish curiosity and habit of tiptoeing towards my car whenever I stopped to watch her. Sadly, she became ill and, though they tried hard, the vets could not save her. A second female suffered the same fate.

Happily, two new calves arrived – one to a 2006 arrival who was already pregnant, the other born and bred in Zambia. We named the latter Twatasha – 'thank you' – in gratitude to South Africa. Today, our black rhino population numbers 16 and we are expecting more new recruits in May. I'm looking forward to meeting the newcomers.

GETTING TO KNOW YOU

The more time I spend in the field, the more I grow to understand our rhinos. Though my research had led me to expect them to be sulky loners, I have found that social relationships play an important role in their lives. The appearance of a strange rhino may provoke aggression, especially between males, but individuals that share part or all of their territory are easy-going towards each other.

Cows and their calves form enduring bonds that can last up to four years, and mothers and daughters stay close long after the female has given birth to a new calf.

And I have discovered that far from being boring, black rhinos differ greatly in temperament – some, like Twashuka, are relatively placid, while others are highly strung and liable to charge at the drop of a hat. One female, Buntungwa, was never happy until she had us climbing trees. And it is unfair to say that they are cantankerous by nature – they're really only grumpy if you surprise them.

Through my close contact with the rhinos, I've been lucky enough to learn their extensive repertoire of vocalisations: from growls, grunts, sneezes and a high-pitched contact squeak – which sounds ridiculous coming from such a large animal – to explosive snorts and bellows. Rhinos also communicate through scent-marking, spraying urine and vigorously scraping their hindfeet through piles of fresh dung at communal sites known

as middens. I've no doubt I will learn even more about these surprising creatures in the year ahead.

FACE THE FUTURE

For now, I am optimistic about the black rhino's future in Zambia. But while poaching is being kept at bay in North Luangwa National Park, there is no room for complacency. In June 2007, Zambia's only two white rhinos were killed in Livingstone, in the south, so we must always remain vigilant.

One recent moonlit evening, I was enjoying a cup of tea in camp in the middle of the park when I heard a familiar crunching noise. A rhino? Surely not, so close to the tents? Investigating with a torch, I discovered the visitor was Twashuka. For once, I was able to enjoy her company without having to charge off into the bush or climb a tree. And she looked perfectly at home in Zambia to me.

A rhino calf walks in the shadow of the protective bulk of its mother. Young rhinos may be targeted by lions and hyenas, but the adults are too big and well-armoured to fall victim to these predators.

